# **Eco-products**



- 1 Home electric appliances/lighting
- 2 Carriers/automobiles
- 3 OA/IT equipment
- 4 Office supplies/furniture
- 5 Apparel/textiles
- 6 Household goods and equipment
- 7 Building and civil engineering
- 8 Machines and equipment
- 9 Others

Eco-products are environment-friendly products. In this section, they refer particularly to "finished products" to differentiate them from "eco-materials" and "eco-components." Like eco-materials and eco-components, eco-products include "products that help clean and conserve the environment" and "products with high performance, yet creating a low environmental impact." The latter come in a wide variety. The first stage of eco-product development is eco-design. Eco-design proceeds based on the evaluation of three factors: 1) effective and efficient use of materials, 2) energy saving, and 3) toxicity.

Characteristics of eco-products, including the environment-friendly aspect, are determined during the design stage, and evaluation factors are therefore crucial. These three product evaluation factors differ from the six criteria for eco-materials (see the page titled "Eco-materials"). This is because eco-products involve consumers more directly than eco-materials, and the environmental aspects of eco-products are appropriately evaluated from the consumer's viewpoint.

To help consumers understand eco-products better, environmental labels are widely used in Japan. It is hoped that an ideal cycle to support a low environmental-impact society will develop, where more consumers are encouraged by environmental labels to buy eco-products so that manufacturers make further efforts in eco-product development and the provision of environmental information in response to consumer demand.

# Dishwasher:NP-TR1

### Environmental performance

Because our unique "Power sterilizing mist" technology has achieved adequate washing power even with water of low temperature and enabled a reduction in power consumption,the energy saving of this dishwasher is top ranked in the counter top category.

By having two different types of sensors (an optical and a thermal) working for our unique "Eco-Navi" function, this dishwasher automatically selects the most effective operating mode, detecting the quantity of dishes and how dirty they are, to further save water and energy.

# Product performance

- (1) The "Eco-Navi" function adjusts the operating conditions depending on the quantity of dishes and how dirty they are.
- (2) Our unique "Power sterilizing mist" and strong water stream nozzle have achieved effective washing and top class energy saving.
- (3) The wide opening door makes it easier to load and unload dishes, and contains a window to allow users to view the water flow.



2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan

Tel +81-77-561-2060 Fax +81-77-561-6749

URL http://panasonic.net/ URL http://panasonic.jp/dish/ URL http://panasonic.net/csr/

Available in: Japan





EP-1-002

# Home electric appliances/lighting

dishwashers

# Washing and dish-drying machine, saving water

# Environmental performance

This washing and dish-dryng machine is equipped with a bowl which makes the spout narrow in the nozzle, and it realize high-pressure washing. Consequently, the quantity of water used for washing and rinsing is 10 liters, accomplishing significant saving water compared with 70 liters of hand washing.





2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan Tel +81-3-5451-1110 Fax +81-3-5451-1049 URL http://www.toto.co.jp



Available in: Japan

# Home electric appliances/lighting

food waste disposers

# **Garbage Disposer**

### **Environmental performance**

- No lead solder using printed wiring board as the environmental safeguards.
- Dries kitchen garbage and decrease it's size to 1/7 (weight is decreased to 1/5).

### Product performance

Maximum 3.0kg of kitchen garbage can be processed at once.



# Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL http://www.hitachi-ap.co.jp/



ECO-V30

LC

Stage

Available in: Japan

# EP-1-004

# Home electric appliances/lighting

Material

End-of-life

food waste dryers

Production

# Food waste dryer, free-standing type kitchen gadget

### Environmental performance

Harmful germs & fungus live in food waste if it goes to decay and malodors are generated too basically due to moisture contained in the food waste.

Before food waste goes rotten, by drying it up, no germs & fungus lives and malodors are eliminated. After being dried, food waste shrinks, loses weight as much water is evaporated and this means food waste is reduced before it goes to a landfill site or is incinerated but most ideally before it goes to a recycling facility.

It not only supports people to keep nousehold circumstances clean & hygienic but also saves cost, time, and energy by reducing volume of food waste to be transported.

### Product performance

It is very easy accessible for common householders. People can place it everywhere a plug-in is available and just put food waste in the basket of machine inside and power on and forget it. Machine automatically dries up food waste by keep circulating hot air (around 50  $\sim$  60 °C) inside of chamber of machine and malodors are eliminated by an activated carbon filtration system. Machine stops working automatically after the drying and deodorizing procedure is completed. Energy consumption is around 60W per hour. The machine has 4-way self-check safety system to confirm the most safe use. The machine is made in Korea.

# Loofenlee Co., Ltd.

11F, Plaza Bldg., 654-3, Yoksam-dong, Gangnam-gu, Seoul, 135-080, Korea Tel +82-2-557-4488 Fax +82-2-557-4490

E-mail smkim@loofen.com URL www.loofen.com



Food waste dryer model No. LF07

Available in: Worldwide

Eco-product // Home electric appliances/lighting

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# Home electric appliances/lighting

food waste dryers

# Food waste dryer (machine)

### Environmental performance

Food waste volume is reduced to one-tenth.

Eco-friendly business, reduced food waste, leaves a clean environment for our children and grandchildren.

The product is made of stainless steel which is rustless over long-term use.

### Product performance

- 1. The first in the domestic market as a free-standing type for business users
- Complete elimination of food odor by employing an active carbon filter exchange method.
- Free-standing design allows the product to be installed anywhere to suit your convenience.





Industrial food waste dryer machine

# Ecowell Co., Ltd.

808-4, Dohwa-Dong, Namgu, Incheon, 402-060, Korea Tel +82-32-582-6688 Fax +82-32-582-6622

E-mail xiaoyan@ecowell.net URL www.ecowell.net

# EP-1-006

# Home electric appliances/lighting

food waste dryers

# Commercial application food waste dryer

### Environmental performance

Eco-friendly business, reduced food waste, leaves a clean environment to our children and grandchildren.

# Product performance

- 1. Food waste volume is reduced to one-tenth
- 2. The first in the domestic market as a free-standing type for business users
- Complete elimination of food odor by employing an active carbon filter exchange method
- 4. Free-standing design allows the product to be installed anywhere to suit your convenience
- 5. Mode selection options available based on the amount of food waste
- 6. When the operation is over, you can use the automatic discharge function to automatically discharge the contents
- 7. The product is made of stainless steel which is rustless over long-term use.

# Ecowell Co., Ltd.

808-4, Dohwa-Dong, Namgu, Incheon, 402-060, Korea Tel +82-32-582-6688 Fax +82-32-582-6622 E-mail xiaoyan@ecowell.net URL www.ecowell.net





# Home electric appliances/lighting

signal analyzers

# Efficient Use of Space, Down to the Millimeter "MS2690A/91A/92A"

### Environmental performance

We digitized the circuit into a single LSI (large-scale integrated circuit), which previously required one complete board, and achieved efficient use of space down to the millimeter mainly by employing state-of-the-art memory technologies. As a result, these analyzers have three slots for expanding future functions, and an additional signal generator enables both transmission and reception tests with a single unit. With these improvements, we not only achieved higher frequencies and wider bandwidths, but also reduced  ${\rm CO}_2$  emissions by 7% compared with a conventional model.

### Product performance

The MS2690A/91A/92A Signal Analyzers are signal-measuring instruments utilized for such applications as transmission tests during development of next-generation mobile phone terminals.

# **Anritsu Corporation**

5-1-1,Onna, Atsugi-shi, Kanagawa, 243-8555, Japan Tel +81-46-223-1111

URL http://www.anritsu.com/

URL http://www.anritsu.com/en-US/About-Anritsu/Environment/index.aspx/





MS2690A Signal Analyzer

# **EP-1-008**

# Home electric appliances/lighting

starters

# Longer Lamp Life & Eco Lighting: Digital Starter Pro

# Environmental performance

Have you got the problem of frequent fluorescent lamp/starter replacement in your buildings?

Longer lamp life directly leads to protecting the environment by minimizing the amount of toxic mercury contained inside fluorescent lamp waste. Moreover, Digital Starter Pro facilitates the diligent turn on/off of lamps to achieve greater energy saving.

### Product performance

Digital Starter Pro has a built-in microcomputer chip for minimization of emitter diffusion in starting the fluorescent lamp. It provides maintenance-free benefits by extending lamp service life up to 30 times longer than a glow starter.

### Features

- 1. Advanced digital ASIC assures the best optimized lamp start sequence for longer lamp life
- 2. Longer starter life
- 3. Multiple pulse lighting system for reliable lighting performance
- Quick lamp start
- 5. Automatic re-start function
- 6. Safety protection system

# DCT Co.,Ltd

3-15-6, Higashi Shibuya-ku, Tokyo, 150-0011, Japan Tel +81-3-5468-7131 Fax +81-3-5468-7399 E-mail info@dct-web.co.jp URL www.dct-web.co.jp

Available in: Japan, Asia, Europe, North America





Digital Starter Pro series: FDS-1E, 1P and 4P/5P

# Home electric appliances/lighting

Energy saving

LC

Stage

Global

Material

rice cooker & warmer

Production

Transport

Use/repair

# Steam IH Rice Cooker & Warmer - High-quality taste due to steam function

### **Environmental performance**

The achievement of energy saving standard rate based on the energy saving law: 105% (SR-SJ101)

Standby energy: 0.1W

Standby energy using timer function: 0.13w

These values mark industry leader level.

# Product performance

Panasonic original thermal power made high quality cooked rice

Keep strong thermal powers to heat rice at higher temperature avoiding dryingout of cooked rice by superheated steam.

Fine particles of steam fully diffused into an inner pan bring rice original taste, wrapping every grain without any damaged to it.

Original fan mix overheated steam and air to avoid overheated steam coming out from the rice cooker. Received the 3rd Kids Design Award (Safety design division)

# **Panasonic Corporation, Home Appliances Company**

5,Saho,Kato City,Hyogo, 673-1447, Japan Tel +81-795-42-7000 Fax +81-795-42-7015

URL http://panasonic.net/

URL http://panasonic.jp/cooking/products/suihan/

URL http://panasonic.net/csr/

SR-SJ1 series - Steam IH Rice Cooker & Warmer



EP-1-010

Available in: Japan

Home electric appliances/lighting

rice cooker & warmer

# **Induction Heating Steam Rice Cooker**

### Environmental performance

Energy saving by steam recycling as well as thermal insulation, and special iron inner pot which achieves efficient induction heating.

Energy saving standard achievement level: 105% (2008 target base)

Power consumption: 80KWh/year

# Product performance

Cooks delicious rice with 1.3 air pressure and high temperature steam. Warms rice for 40 hours with steam keeping delicious taste.

Not necessary to worry about damages to wall or furniture as only a small amount of steam will come out.

Energy saving by steam heat recycling, as well as thermal insulation and iron inner pot which achieves efficient induction heating.

# Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410. Japan

Tel +81-3-3502-2111

URL http://www.hitachi-ap.co.jp/





Available in: Japan

RZ-JV100K

3 4 5

Eco-product // Home electric appliances/lighting

6 7

# Home electric appliances/lighting

rice cooker & warmer

# **Double Vacuum & Engine, Rice is Tastier Than Ever**

### Environmental performance

 Mitigation of climate change: Energy-saving-standard achievement rate of 100%. Annual power consumption of 92.8 kWh/year

### Product performance

- Permeation and water absorption in a double vacuum: 70% increase in the tasty elements of the rice surface by soaking the rice in water at 30°C
- Keeping rice warm and white in a double vacuum: Cooked rice is kept warm and tasty for up to 40 hours.







Vacuum Pressure IH Rice Cooker RC-10VGC

LC

Stage

# TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan Tel +81-256-53-2545 Fax +81-256-53-2776

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

Available in: Japan

# **EP-1-012**

# Home electric appliances/lighting

steam microwave ovens

Production

Transport

# Energy saving Highly efficient Steam microwave oven: NE-R3200

### Environmental performance

- $\cdot \text{About } 20\%$  in energy saving is realized. "83.7kWh/y to 66.5kWh/y" compared with FY 2000 model (NE-J30) .
- By "quick-high power light type heater" loading, a maximum of about 40% of time shortening can be performed in baking, such as chicken and pork, dropping fat effectively.
- Cooking oil usage is reduced to 1/25 from deep fryer cooking at "Healthy fly" menu which newly installed. Moreover, cleaning up time at after cooking can be reduced greatly because less use of cooking oil.
- ·It conforms to the EU RoHS directive.

# Product performance

Incorporates quick-high power light type heater and rotated wave guide which controls microwave energy. Provides delicious and fast "healthy cooking" that reduces fat. Moreover, performance to bake back side of hamburgers steak is improved 1.7 times from previous model so, it can be cooked quickly and nicely brown.

# **Panasonic Corporation, Home Appliances Company**

800, Tsutsui-cho, Yamato-Koriyama-shi, Nara-ken, 639-1188, Japan Tel +81-743-56-9883 Fax +81-743-56-4040 URL http://panasonic.net/csr/



Available in: Japan

Steam microwave oven NE-R3200

# Super heated Steam/Microwave Oven

### Environmental performance

Shortened cooking time by double quick heaters and 4 layered insulation. Heat efficiently by PAM inverter and rotating antenna control.

Most suitable cooking according to the acutual weight of food using triple weight

Realized around 17% energy saving compared with 2006 model (MRO-BV100) by zero consumption of power at stand-by mode. (81.2kWh/yr→67.4kWh/yr)

### Product performance

Cooks fast while reducing fat and salt for your health by combinating 5 kinds of heating functions. (Microwave, oven, grill, steam and super heated steam) Possible to cook with oven even articles are on the top of the product.

If you want to put articles on the product, you may install the product in front of left or right 1 side wall and back side wall without space. If no article is on the product, you may install the product left, right and back 3 side wall without space.

# Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

Available in: Japan

URL http://www.hitachi-ap.co.jp/





MRO-FV300

# EP-1-014

# Home electric appliances/lighting

microwave ovens

New Oven with curved ceiling and side hot air system improve delicious cooking with 350C high temperature, rapid temperature rising, and even temperature.

### Environmental performance

- Temperature rising in Oven is only 5 minutes to reach 300°C by rapid and even supply of Hot Air with new system, and Delicious Cooking is acquired by 350°C Hot Oven.
- Microwave performance is improved by high efficient Magnetron and bet impedance matching.
- Then electric power consumption of the appliance is saved by 6% comparing to base model last year.

# Product performance

- Ishikama tornade engine: Supply Hot Air by Heater with fin and double plate fan brade sysytem
- Dome Stone Oven: Curved ceilling of Oven make Convection of Hot Air
- Side Hot Air: Supply Hot Air also from side of Oven By these system, High Temperature Hot Air supplied to Foods even.

# TOSHIBA HOME TECHNOLOGY CORPORATION

2570-1. Urasuda, Kamo-shi, Niigata, 959-1393, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Microwave Oven with Steam Function ER-GD500

Available in: Japan



# Home electric appliances/lighting

Global warming

Material

LC Stage

refrigerators

Production

Transport

Recycled materials

# **Refrigerator with Plasmacluster**

- High-end compressor, wide linear inverter and high-end vacuum insulation panel realize No.1 energy-efficiency\*<sup>1</sup>. Flexible power saving mode is also equipped.
   \* As of January 20, 2010, for CFC-free residential-use refrigerators in Japan in the over
- (2) Recycled plastic through Sharp's closed-loop material recycling technology is used for
- (3) Applied Non-CFC refrigerant R-600a, zero ODP (ozone-depleting potential), approx. 1/400 of GWP (global warming potential) of conventional CFC substitutes.
- (4) Complied with RoHS Directive and J-Moss (Utilizing lead free solder boads and abolishing bromine fire retardant, etc.)

- (1) The high-density Plasmacluster Ion eliminates bacteria and controls adhesion bacteria inside. It quickly removes adhesion bacteria inside on the upper case in the vegetable room within a day.
- (2) The mist cooling system prevents dryness and keeps food fresh.
- (3) Both express freezing and low temperature freezing functions keep food delicious and nutritious.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



Refrigerator with Plasmacluster SJ-ZF52S

# EP-1-016

# Home electric appliances/lighting

refrigerators

# Non-freon Inverter refrigerator :+STYLE VEGERATOR

### Environmental performance

Energy consumption of this refrigerator has been significantly reduced by adopting both the non-freon inverter compressor and also the strengthened insulation of door gasket.

This refrigerator obtains the energy ranking 4 tick in Singapore.

### Product performance

This refrigerator has adopted such functions as "Moisture Vegetable case" and "Vitamin safe" to keep foods fresh for a longer period of time.



# Panasonic Corporation, Home Appliances Company

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan Tel +81-77-563-3619

URL http://panasonic.jp/reizo/ URL http://panasonic.net/csr/

Available in: Singapore, Thailand



NR-BY601V

# Home electric appliances/lighting

refrigerators

# Refrigerator: R-Z6200

### **Environmental performance**

Hitachi has developed a new large-sized refrigerator series "Vacuum Compartment S with Frost Recycle Cooling System" featuring Hitachi's original "Vacuum Sub-zero Compartment (approx.-1°C)" which is suitable for storing meet and fish.

This refrigerator as a new energy saving technology, employed the "Frost Recycle Cooling System" which utilizes the cold air made from the frost, adhering to the cooling device located in the freezing compartment, and cools the refrigerator and vegetable compartment. With the conventional refrigerator, to cool the compartment, the compressor must run, however, in the "Frost Recycle Operation Mode", cooling with cold air from frost is possible even when the compressor is stopped. Thus, the energy consumption to operate the compressor can be saved. With these energy saving technology, approximately 10% of energy consumption was saved with model R-76200

- \*1 Vacuum designates the space whose air pressure is lower than one of the normal atmosphere (0.8atm).
- \*2 Comparison was made between the new model R-Z6200 (360kwh/month) and the previous model R-Y6000 (400kwh/month).
- \*3 The annual energy consumption was measured according to JIS C9801 (2006).

# Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL http://www.hitachi-ap.co.jp/



R-Z6200 (XT)

Available in: Japan

# **EP-1-018**

# Home electric appliances/lighting

refrigerators

Refrigerator-Freezer which realized large capacity, energy saving, clean and usability. GR-B50F

### Environmental performance

- Mitigation of climate change: Adoption of R600a refrigerant whose ozonedepleting potential and global warming potential are both low.
- 219kg/year (60%) reduction in CO<sub>2</sub> by "i-twin" and 2 zone layout.

### Product performance

- Keep cold and freshness by "i-twin cooling".
- Keep clean inside by "Picoion unit".

# Global Chemical substances saving Material Design Production Transport Use/repair

# TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Large capacity, energy saving and clean GR-B50F

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# Home electric appliances/lighting

refrigerators

# **Energy and Material saving Refrigerator "MR-E50R"**

### Environmental performance

- ----< M : Material · Resource saving >>--
- Refrigerator parts are reused by promoting self-recirculated recycling of plastic (polypropylene, polystyrene) from end-of-life refrigerators at recycling plants.
  - ---<< E : Energy · Energy saving >>-----
- The unit employs a nanoporous condenser, which employs condenser fins that are porous
  to increase surface area, making frost formation more uniform. Condenser pipes employ
  heaters externally and internally. This use of hybrid defrost heaters raises efficiency and
  conserves energy during defrosting.
- An Eco-Monitor indicates operating conditions by displaying a number of leaves (zero to three), encouraging an awareness of energy conservation.
- ----<< T : Toxicity · Chemical substances reduction >>----

No use of Substances governed by the EU's RoHS Directive or J-Moss substances.

### Product performance

Using the power of light, this refrigerator prevents frost formation and discoloration, as well as bacteria and smells.

# **Mitsubishi Electric Corporation**

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





Evaluates temperature settings, frequency that doors are opened and close overall refrigerator operating conditions.

 When settings are: refrigerator (medium), freezer drawer (medium) and versa drawer (set to soft freeze, medium) (may vary depending on conditions of use and ambient temperats.

Refrigerator MR-E50R

# **EP-1-020**

# Home electric appliances/lighting

cooking heaters

# **Induction Heating Cooking Heater: KZ-FT75VS**

### Environmental performance

high thermal efficiency: enamel-coated pans approx. 90%, aluminum pans approx. 78% in water-heating mode. Minimal stand-by power consumption. Non-use of lead, mercury, cadmium, hexavalent chromium, and specific bromine fire retardant (Except the lead of sealing agent of sheathed heater)

# Product performance

All metallic pots can be used at both sides of the IH heater, and power is highly enhanced. And more-advanced optical sensor allows customers to cock deep-frying with only 200g oil on any kinds of metallic pots. and reduces amount of use and waste oil.

The simple design front cover beautifully matches with any kitchens.

# Global Air/Water/Soil High quality Energy saving Material Design Production Resource Stage Transport End-of-life Use/repair

# **Panasonic Corporation, Home Appliances Company**

1-5-1 Takatsukadai, Nishi-ku, Kobe, Hyogo, 651-2271, Japan Tel +81-78-992-9468 Fax +81-78-992-9494

URL http://panasonic.net/ URL http://panasonic.net/csr/



Available in: Japan

Induction Heating Cooking Heater: KZ-FT75VS

# Home electric appliances/lighting

cooking heaters

The suitable temperature is kept by detection of bottom temperature of pan, using DSP & infrared sensor. All of three heaters are using IH heater, without conventional heater.

### Environmental performance

 Mitigation of climate change: Heat efficiency of 85% is achieved by the adoption of a high-efficiency inverter and improved heating coil. Auto power-off function achieves zero stand-by power consumption.

### Product performance

- Large buttons: Universal design with large operation buttons and large letters, numbers etc. for easy operation.
- Low-noise design: Improved cooling fan performance for quiet operation (25 dB) at a gentle heat.
- Smooth open/close: Counter-top heater equipped with a slide rail door open/close mechanism.



# **TOSHIBA HOME TECHNOLOGY CORPORATION**

2570-1, Urasuda, Kamo-shi, Niigata, 959-1393, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



IH Cooking Heater BHP-V731S

# EP-1-022

# Home electric appliances/lighting

air conditioners

# Air Conditioner with High-Density Plasmacluster 25,000 Technology

### Environmental performance

- (1) Sharp's one-of-a-kind technology which is applied to in-door and out-door units achieves No.1 energy-saving performance\*: In-door unit includes an airflow control technology 'Long panel, upward-or-downward opening system' applied 'Fluid mechanics technology' and out-door unit includes a fan with 'Bird's wing shape' applied Biomimetics.
- \* As of December 1, 2009, for 5.0 kW-class residentioal air conditioners in Japan.
- (2) For further energy saving, 'Enewaza driving mode' cuts 48% of power consumption at the maximum.

### Product performance

The high-density Plasmacluster 25,000 ions enhances to inactivate airborne mold fungi and harmful bacteria and to eliminate airborne house dust in interior spaces.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





Air Conditioner with Plasmacluster AY-Z50SX

Eco-product // Home electric appliances/lighting

# Home electric appliances/lighting

air conditioners

# Air Conditioner: energy-saving, air-cleaning: CS/CU-S12KKT

### Environmental performance

Energy saving is achieved by top class EER advanced inverter technology. Save more energy by ECO patrol sensor with local-oriented control, which gives energy saving (maximum 20%) by detecting the human presence.

### Product performance

This air conditioner has many functions such as clean room air by advanced e-ion air purifying (AP) system. It also has mild dry cooling function (Panasonic unique function). This improves comfortable level of user.



# **Panasonic Corporation, Home Appliances Company**

Lot 2, Persiaran Tengku Ampuan, Section 21, Shah Alam Industrial Site, 40300 Shah Alam, Selangor, Malaysia
Tel +603-5891-4000 Fax +603-5891-4001
URL http://phaam.panasonic.com.my/



Available in: Thailand

Model:CS/CU-S12KKT

# EP-1-024

# Home electric appliances/lighting

air conditioners

# **Room Air Conditioner**

### Environmental performance

A Compact-size room air conditioner with reduced electricity consumption.

· Energy saving standard achievement rate: 128% (based on 2010 standard)

# Product performance

- · High Efficient Motor: Operates with little electricity and improve energy efficiency.
- · CV-PAM Control\*: Even during high-speed rotation of motor, the rotation is stable which realizes high performance. \*Cascade Vector PAM control
- Area-Eco Operation: In addition to amount of person's movement, the product also measures temperature around remote controller to realize both energy saving and comfortable area air conditioning.
- Lithium & Solar Remote Controller: Rough electricity expenses and CO<sub>2</sub> emission amount are indicated on LCD of remote. (electricity expense: calculated based on ¥22/1kWh. CO<sub>2</sub> emission: calculated based on the coefficient 390g/kWh.) A lithium ion battery and a solar panel are installed.



# Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL http://www.hitachi-ap.co.jp/



Available in: Japan

"Stainless Clean SHIROKUMAKUN" PAM air conditioner RAS-S40Z2

# Home electric appliances/lighting

air conditioners

# High performance, energy-saving air conditioner

### Environmental performance

Features such as the new swing compressor and reluctance DC motor provide energy efficiency, achieving high COPs.

### Product performance

Daikin's Ururu Sarara series of air conditioners is the first in the world\* to offer humidifying and drying functions for humidity control along with fresh air supply ventilation.

It provides advanced climate control for an optimally comfortable indoor environment.



# DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp

URL http://www.daikin.com

URL http://www.daikin.com/global ac/products/

URL http://www.daikin.com/csr



FTK (X) S-D Series

# **EP-1-026**

# Home electric appliances/lighting

air conditioners

Comfort, Energy Saving, and Compactness Equipped with the Industry's First Energy Monitor (displaying power comsunption)

### Environmental performance

- Mitigation of climate change: Equipped with a dual compressor, cooling and heating is done with only 45W power consumption (equivalent to a fan). 22% reduction in annual power consumption.
- Efficient use of resources: Maintenance-free air purifying method has eliminated the need for disposable replacement parts.

### Product performance

- Energy monitor: Display of power consumption during operation and electricity charge on the main unit to guide energy-saving operation.
- Comfortable heating: Comfortable air conditioning of the entire room or the targeted area by the touch of a button.
- Fully automatic cleaning: Fully automatic cleaning maintains excellent energy-saving performance.

# Global Resource High quality Energy saving Material Design Production Resource Stage Transport Use/repair

# **Toshiba Carrier Corporation**

Shinagawa Center Building, 23-17, Takanawa 3-chome, Minato-ku, Tokyo, 108-0074, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm



Room Air-Conditioner "DAISEIKAI UDR Series" RAS-402UDR

# Home electric appliances/lighting

air conditioners

# Room Air Conditioner with "Notice Navi" Function to Encourage Energy-Saving Operation

### Environmental performance

- ----< M : Material · Resource saving >>---
- Our selection technology allows three major types of plastic to be separated from the mixed plastic that results from end-of-life home appliances.
- Our unique coating technology effectively reduces the adhesion of contamination to 1/10 the normal level.
- Existing piping can be reuses, substantially lowering emissions.
- ----< E: Energy Energy saving >>-----
- The Move Eye senses floor and wall temperatures, as well as people's locations and movements, automatically adjusts its direction and temperature according to individual body temperatures while achieving an energy savings of up to 65%.
- The "Notice Navi" function provides energy-saving advice during operation.
- The amount of electricity and CO2 emissions are displayed.

----<< T : Toxicity · Chemical substances reduction >>----

Emits no substances defined in the EU RoHS directive, Japanese Industrial Standards (JIS) or J-Moss.

# Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan

EP-1-028



# Home electric appliances/lighting

air purifiers

# Air Purifier with High-Density Plasmacluster

### Environmental performance

- (1) DC motor and inverter control contribute to saving energy consumption. The maximum power consumtion is 29W.
- (2) Standby power consumption is 0.3W.
- (3) The specific bromine flame retardants, which may produce poison gas, are not used.
- (4) Soy ink and recycled paper are used for the operation manual.
- (5) Lead-free solder is applied to the basal plate.

### Product performance

- The high-density Plasmacluster Ion enhances to inactivate airborne mold fungi and harmful bacteria and to remove airborne house dust in interior spaces.
- (2) A bicapsular cabtyre cord allows the product to be placed on the floor.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



Room Air Conditioner ZW Series (MSZ-ZW400S)



Air Purifier FU-Y53CX

# Home electric appliances/lighting

searchlight

# Rechargeable LED Searchlight NL-SL1 (K)

### **Environmental performance**

- 1. 30% reduction of annual power consumption compared to old model NL-S1 (annual power consumption 1.83kWh)
- 30% increase of brightness and 50% increase of operating time compared to old model NL-S1 (brightness 40lm, operating time 90min)

### Product performance

- 1. Three adjustable head positions for changing the angle of light
- 2. Direct plug in recharging



# SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan



Available in: Japan

Rechargeable LED Searchlight NL-SL1 (K)

# **EP-1-030**

# Home electric appliances/lighting

searchlight

# Rechargeable LED Searchlight NL-SL2 (K)

### Environmental performance

- 1. 30% reduction of annual power consumption compared to old model NL-S2 (annual power consumption 1.85kWh)
- 2. 30% increase of brightness and 50% increase of operating time compared to old model NL-S2 (brightness 40lm, operating time 190min)

### Product performance

- 1. Three adjustable head positions for changing the angle of light
- 2. Direct plug in recharging



# SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan



Available in: Japan

Rechargeable LED Searchlight NL-SL2 (K)

Eco-product // Home electric appliances/lighting

# Home electric appliances/lighting

searchlight

# Rechargeable LED Searchlight NL-SL3 (G), NL-SL3 (H)

### Environmental performance

- 60% reduction of annual power consumption compared to old model NL-S2. (annual power consumption 1.06kWh)
- 30% increase of brightness and 150% increase of operating time compared to old model NL-S2.

brightness 40lm (standard mode)

operating time 330min (standard mode)

# Product performance

- Two stage slide switch for selecting High Power / Low Power for brightness
- 2. Three adjustable head positions for changing the angle of light.
- 3. Direct plug in recharging.



# SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan



Available in: Japan

Rechargeable LED Searchlight NL-SL3 (G) , NL-SL3 (H)

### **EP-1-032**

# Home electric appliances/lighting

washing machines with drier

LC

Production

# Fully Automatic Washer/ Dryer Combo with Plasmacluster

### Environmental performance

- (1) Recycled plastic through Sharp's closed-loop material recycling technology is used for a washing tub and a bottom stand.
- (2) Green material: Main board uses lead-free solder.
- (3) A hole-less stainless steel tub for washing and spinning enables energy efficiency and the highest water savings.\*
  - \* As of November 2009, for washer / dryers with 8 kg wash load and 4.5kg dry load. Since water does not pour into the outside of the tub due to its hole-free design, the amount of water and detergent is reduced. This tub also keeps heat inside, and the temperature of inner tub rises in a shorter time, thus it achieves energy saving.
- (4) Stand by power consumption is 0W.

### Product performance

Sharp's air purification technology 'Plasmacluster Ion Technology' is installed. Exactly the same as the positive and negative ions that exist in the natural world are released during operation. These ions keep a wash/spin tub clean by inactivating and eliminating bacteria and mold fungus.

# Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



Fully Automatic Washer/Dryer Combo ES-TG830

# Home electric appliances/lighting

washing machines with drier

# **Full Auto Washer Dryer with Heat Pump System**

### Environmental performance

Heat pump dry system : The heat pump dry system replaces the traditional waterusing dryer. It reduces the running cost by 33000 yen per year as well as  $\text{CO}_2$  emission reduction by 467kilograms in comparison to the conventional washer and dryer systems which we produced in 2004. The energy-saving performance is the one of the top-level in this industry.

### Product performance

The "Double Jet-Dancing" wash technology

The machine discharges strong water flow from the two directions to penetrate the detergent through the fabric.

In addition to traditional tumble washing, "Double Jet-Dancing wash technology" gets your clothes very clean and reduces energy and water.

The industry's first "eco navigation system" is equipped to determine dirt and quantities of the fabric to reduce approx. 10% of energy and approx. 7% of water. Nano tech deodorizer

"Nanoe" is the microscopical particles that can penetrate through the fabric. "Nanoe" prevents the unpleasant smell and bacteria, also helps to wash stain away easily.

# **Panasonic Corporation, Home Appliances Company**

2-3-1-2 Noji-higashi, Kusatsu City, Shiga, 525-8555, Japan

Tel +81-77-561-2062 Fax +81-77-561-6749

URL http://panasonic.net/ URL http://panasonic.jp/wash/ URL http://panasonic.net/csr/

ONE http://panasonic.neves





Available in: Japan

# EP-1-034

# Home electric appliances/lighting

washing machines with drier

# Energy and water saving, drum-type electric washer dryer with heat pump

### Environmental performance

- Mitigation of climate change:75% reduction in power consumption by the variable magnetic flux motor and the optimized control of heat pump unit.72% reduction in  $\rm CO_2$  emissions in comparison to the conventional model TW-F70 ('00 model) .
- Efficient use of resouces:65% reduction in water consumption to wash & dry 6kg of laundry by the high-pressure double shower and heat pump unit in comparison to the conventional model TW-F70 ('00 model).

### Product performance

- Water-saving "ZABOON"washing: By the high-pressure double shower, it washes firmly and can rinse with fewer water.
- Disinfection and deodorization: It is possible to prevent both unpleasant smells and bacteria by "pico ion" ,so that the drum and tub can be kept clean

# TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 489-8610, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Heat Pump Drum-type Electric Washer-dryer"ZABOON" TW-Z9000

**Eco-product** // Home electric appliances/lighting

# Home electric appliances/lighting

vacuum cleaners

# Jet Spin Cyclone Vacuum Cleaner: MC-JC20WX

### Environmental performance

\* Infrared ray sensor detects minute house dust of about  $20\,\mu$ m. Power is controlled in four levels depending on quantity of dust. Power is automatically changed to Energy Saving Mode where there is little dust, and it is additionally reduced in two steps when nozzle is away from the floor surface. 50% of energy can be saved by those functions as compared with models not using it.

\* Suction power of more than 99% can be maintained by "Jet Spin Cyclone System" that reduces power loss.

# Product performance

More than 99% of power can be maintained with the industry's first "Jet Spin Cyclone", and 50% of energy can be saved with the "House Dust Detective Censor" which is equipped with the new idling function.

# Panasonic Corporation, Home Appliances Company

1500 Hayashida-cho, Higashiomi City, Shiga, 527-8501, Japan Tel +81-748-23-5621 Fax +81-748-24-1385

URL http://panasonic.jp/soji/ URL http://panasonic.net/csr/





Electric Vacuum Cleaner: MC-JC20WX

# Available in: Japan

EP-1-036

# Home electric appliances/lighting

vacuum cleaners

# Equipped with Automatic Filter Cleaning and Air Purifying Functions. A Cleaner of the Low Noise.

### Environmental performance

- Mitigation of climate change: A muximum of about 65% reduction in power consumption in Eco Automatic Mode compared with a power mode.
- Efficient use of resources: Recycling rate of plastic parts is 90.9%.

### Product performance

- Low noise: Vibration control structure is strengthened with using a spring for keep of motor.
- Self-propelled head: Power big brush and mega wheel for smooth movement of the head. Dust near the edge is captured at once.
- Long-lasting:Power lasts by automatic filter cleaning and air purifying functions.



# TOSHIBA HOME APPLIANCES CORPORATION

991, Anada-Cho, Seto-Shi, Aichi, 259-1393, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Silent Drive Sound "Quiet SYSTEM" -mounted Vacuum Cleaner VC-3000X

# Home electric appliances/lighting

alkaline ion water purifiers

# Alkaline ion water purifier with low standby power consumption

### Environmental performance

Reduction of Standby power consumption by 50% compared with the conventional model\*. 0.8W to 0.4W

\* Comparison with the PJ-A37

Water-saving design reduces drainage by 44%  $^{\star}$ , and saves 1.07t of water annually.

\* comparison with the PJ-A37 when using 12,000L

### Product performance

- Five types of water are available from alkaline to acid-simply choose the desired type.
- The high-efficiency purifier cartridge removes 13 substances regulated by JIS S 3201.





Alkaline Ion Water Purifier TK7408P-S

# Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL http://panasonic-electric-works.net/

URL http://panasonic.jp/alkaline/

URL http://panasonic-denko.co.jp/e/corp/csr/index.html

# **EP-1-038**

# Home electric appliances/lighting

massage sofa

# Massage sofa with drastically reduced standby power consumption

### Environmental performance

- \* The electrical switch (relay) cuts power supply to the motor when on standby, reducing standby power consumption by approximately 95% (7 W → 0.3 W) compared with conventional models (\*1).
- \* All parts of the product, including electronic components and their electrodes, soldered portions and harnesses, are lead free.
- \*1. Compared with the company's 2002 model, EP 2200 (7W)

# Product performance

[Compact but reliable massage sofa]

- \* The round form of the sofa allows a total massage from the neck and shoulders to the waist.
- \* Includes an in-built foot massager
- \* Enjoy changing the look of the sofa with 10 differently patterned covers. (sold separately)

# Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL http://panasonic-electric-works.net/

URL http://panasonic.jp/massage\_chair/sofa/

URL http://panasonic-denko.co.jp/e/corp/csr/index.html

Available in: Japan

Massage Sofa:EP-MS40





Eco-product // Home electric appliances/lighting

# Home electric appliances/lighting

car navigation system

Not only highly efficient and user-friendly, but also ecologically sound (prevention of global warming) and economical car navigation system

### **Environmental performance**

The AV all-in-one high quality HDD Car Navigation RAKU NAVI (which means "easy operating navigation system" in English) AVIC-HRZ900 is equipped with a variety of functions, in addition to the fulfillment of navigation functions, to support eco-friendly driving

The original "Smart Loop Traffic Congestion Information" function enables the user's driving history to be collectively shared via mobile communication, expanding areas to almost all roads (\*1) to achieve optimum route guidance quality, contributing to the reduction of carbon dioxide emissions and gasoline consumption.

In addition, equipped with Pioneer's exclusively developed fuel-consumption-estimation algorithm feature, "Eco Status" allows drivers to measure the speed and slope angles of cars to calculate fuel expenses in real time, enabling to check the eco-driving result level as we go along on displays. Furthermore, displays and voice-activation let drivers know of sudden acceleration (\*2) to support eco-friendly driving.

- \*1 Except roads narrower than 5.5 m
- \*2 If the car accelerates to 41km/h within 5 seconds, the device will deem the car to have accelerated too quickly.

# PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031, Japan Tel +81-44-580-3211

URL http://pioneer.jp/

URL http://pioneer.jp/carrozzeria/rakunavi/

URL http://pioneer.jp/corp/csr/index.html

Global Resource Energy saving High quality

Material Design Production

Resource Stage Transport

End-of-life Use/repair



Available in: Japan RAKU NAVI AVIC-HRZ900

# EP-1-040

# Home electric appliances/lighting

solar lighting systems

# **Solar Lighting Systems**

### Environmental performance

We are a company involved in the production, installation and commissioning of Solar Photovoltaic Systems. We undertake projects right from the stage of conceptualization to the final stage of installation and commissioning of systems and maintenance of systems there after.





Solar Street Lighting System

# **Espee Solaar Pvt Ltd**

2/5, Sumana Halli, Sajje Palya, Viswaneedam Post, Magadi Road, Bangalore, 560091. India

Tel +91-80-23586031 Fax +91-80-23587592

E-mail info@espeesolar.com URL www.espeesolar.com URL www.espeesolar.com

Available in: ASEAN

### Environmental performance

A pocket sized solar power station designed for charging AA/AAA batteries, and the batteries of small mobile applications, such as cellular phones, PDAs, digital cameras, portable audio/visual devices, and portable games. A long life and evergreen product awarded GOOD DESIGN AWARD 2001-2002, Small and Medium Enterprises Prize.

### Product performance

Designed for charging 2 pieces of AA or AAA (sold separately) Violetta Ni-MH rechargeable batteries at the same time by sunlight. The batteries can be charged in shorter time by interconnecting 2 or more units with DC Power Cables (sold separately).

Designed for charging the batteries of DC4V-6V appliances, such as cellular phones, PDAs, and audio/visual devices with USB Power Adaptors (sold separately) and with widely available USB charger cables.

Designed for powering DC3V appliances, such as audio/visual devices with DC Power Cables.

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan Tel +81-3-5423-6801 Fax +81-3-5423-6802

E-mail info@violetta.com URL http://violetta.com/ URL http://violetta.com/ URL http://violetta.com/

Available in: Japan, Worldwide

STUDIO DEL SOLE INC.





Violetta Solargear VS01

LC Stage

# EP-1-042

# Home electric appliances/lighting

Global

End-of-life

solar lighting systems

Production

Transport

. Use/repair

# Mobile solar power station: Violetta Solargear VS12

### Environmental performance

IP67 dust and waterproof mobile PV systems with the world's first\* commercial spherical silicon flexible solar panels designed for powering a broad range of appliances. Composed of a combination of a ultrathin, light and flexible solar panel and a compact, lightweight yet rugged battery compartment for the ultimate portability, reliability, safety, impact resistance, weather resistance and ruggedness in business, disaster prevention, leisure and everyday living.

\*As of 1/10/2009, source by STUDIO DEL SOLE INC.

### Product performance

Charging the built-in 12V batteries by sunlight, and powering a broad range of appliances through AC100V, DC12V and DC5V output.

# STUDIO DEL SOLE INC.

1-101, City Court Meguro, 2-10-34, Kamiosaki, Shinagawa-ku, Tokyo, 141-0021, Japan Tel +81-3-5423-6801 Fax +81-3-5423-6802

E-mail info@violetta.com URL http://violetta.com/ URL http://violetta.com/ URL http://violetta.com/

Available in: Japan, Worldwide

Violetta Solargear VS12

# Home electric appliances/lighting

electrical signal

# **Solar Street and Traffic Lights**

### Environmental performance

The solar street/traffic light series uses integrated solar panels to charge a deep cycle battery which provides power for LEDs. The operation of the lights do not contribute to any carbon emmissions.

### Product performance

The products are completely maintenance free and can continue operating for up to 300 hours without sunlight. The light is compact and can be easily transferred to any new location without hassle. They carry an Ingress Protection rating of 66, CE and IEC 60598-1 certifications. They are most suitable for electrification projects worldwide.

# Global Resource Long-life High quality Material Design Production Transport End-of-life Use/repair



Solar Street Light (Entry Level)

# **JEMEC Japan Limited**

Ueda Bldg. Rm. 701, Yamashita-cho 25-1, Naka-ku, Yokohama, 231-0023,

Japan

Tel +81-45-662-7047 Fax +81-45-662-4050

E-mail sami@jemec.jp URL www.jemec.jp URL jemec-japan.com

Available in: Worldwide

# EP-1-044

# Home electric appliances/lighting

street light

# The WINPRO hybrid street light

### Environmental performance

The WINPRO hybrid street light feature clean hybrid power generation systems incorporating both wind and solar power generation modules. As long as the hybrid power generation system can produce electricity by

As long as the hybrid power generation system can produce electricity by utilizing such natural energies as wind and sunlight, it can supply sustainable electric power. Therefore, it will be a suitable power supply system for disasters and the like.

# Product performance

WINPRO vertical axis three blades can start rotation at the lowest wind velocity of 1 m/s, and the blades can continue stable rotation with the wind coming from any direction.

The WINPRO wind power generator produces almost no noise at low speeds and thus will not cause any noise pollution. In addition, it will not cause such trouble as vibration, resonance, and electromagnetic interference.

# WINPRO CO.,LTD.

Publicity Flex Building, Shinko-cho 19-8, Chuo-ku, Niigata-shi, Niigata-ken, 950-0965, Japan

Tel +81-3-5464-8657 Fax +81-3-5464-8757

E-mail sano@winpro.co.jp URL http://www.winpro.co.jp URL http://www.winpro.co.jp

Available in: Japan, Worldwide





"SAIL" "LANCE"

# Home electric appliances/lighting

LED solar power lighting

# Solar powered LED Light

### **Environmental performance**

(1) The solar powered LED lighting system is a self-generation system which does not require any utility power supply. It is a clean generating system with no CO2 emissions.

### <mechanism>

This lighting system directly converts solar energy to electric energy, which is stored in its equipped batteries. When it gets darker outside and solar battery voltage output gets lower, the electric energy stored during the daytime turns the LED lights on. When it gets bright and solar output voltage gets higher, the lights are automatically turned off.

(2) The mercury-free LED light lasts approx. 40,000 hours.

- (1) The system achieves the industry's brightest flux and the longest intervals for solar LED lights at 1,800lm.
- (2) Equipped with a seismoscope, the system provides light for two nights at full mode when it detects seismic intensity of level 5 (130-200gal) or stronger.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



# EP-1-046

# Home electric appliances/lighting

solar power lighting

# **EsoLit solar lighting system**

### Environmental performance

EsoLit is fully autonomous as it will automatically turn on/off the lamp according to the daylight condition. The default setting is dusk-to-dawn operation. Other operational modes such as dusk on, midnight off can be programmed as well.

### Product performance

EsoLit Lighting System is the ideal solution for streetlights for parks, junctions, factories, housing estates and other common areas that require reasonable illumination. It operates at a low voltage level which is safe for public use.



# Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561 E-mail info@grenzone.com

URL www.grenzone.com



**EsoLit Street Light** 

# Home electric appliances/lighting

solar power lighting

# Nebulae garden light

### Environmental performance

We understood the importance of energy efficiency, reliability, and durability in a solar product. Nebulae Garden Light is specially designed to meet these criteria. Apart from the superbly designed smart electronics function, we by no means forgot about being environmental friendly. We take great care to do away with environmentally unfriendly materials. Examples include using NiMH batteries instead lead acid; recycled composite materials for the Nebulae body that are durable and cost effective; and a high-quality solar panel that will last for many years to come.

### Product performance

Light up your garden, pathway, patio, park, or common areas with our truly solar garden light that lasts and lasts. The Nebulae lights, Grenzone's newest line of garden lights, are carefully designed and crafted with artistic workmanship for your garden, your security, and your wish to do your part for the environment.

# Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com





Nebulae Garden Light

Available in: Worldwide

# **EP-1-048**

# Home electric appliances/lighting

**LED** arrays

# Energy-saving and long service life, Environment-friendly LED bulb

### Environmental performance

- (1) Designed life time is 40,000 hours\*1. It is approx. 40 times longer than an incandescent bulb. No replacement is necessary for more than 10 years.
- (2) Low power consumption reduces CO<sub>2</sub> emission and electricity expense.
  - DL-L401N and DL-L401L with 4.1W power consumption: Approx. 11 hours\*<sup>2</sup> of use for one yen
  - DL-L601N and DL-L601L with 7.5W power consumption: Approx. 6 hours\*<sup>2</sup> of use for one yen
- (3) Mercury-Free
- \*1 A time that takes luminous flux to drop to 70% of initial brightness.
- \*2 Calculated at the rate of approx. 22 yen/kWh including tax.

### Product performance

The color turning and dimming functions are equipped for the first time in the industry (DL-L60AV). With the enclosed remote control, you can change the color from warm-white to neutral-white, as well as dimming the light.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





LED bulb DL-L60AV (a total of 9 models)

# Home electric appliances/lighting

Global

Material

End-of-life

LED arrays

Production

Transport

. Use/repair

Long-life

LC

Stage

# Panasonic Screw-in LED "EVERLEDS"

### Environmental performance

- 1. Realized top class energy saving in industry. (Efficacy 82.6lm/W in case of LDA7D-A1)
- 2. Realized most light weight in industry 1 Approx.100g light weight and resource saving.
  - \*1: As a standard type LED bulb, as of 10th September 2009, researched by Panasonic.

### Product performance

- 1. Realized approx.40,000 hours super long life, contribute to reduce maitenance.
- 2. Realized most compact size in industry Major improvement in application for lighting fixtures which never fit in due to the size of lamp.
  - \*2: In terms of length and diameter as of 10th September 2009, researched by Panasonic.

# **Panasonic Corporation, Lighting Company**

1-1 Saiwai-cho Takatsuki Osaka, 569-1193, Japan Tel +81-72-682-7924 Fax +81-72-682-7039 URL http://panasonic.net/csr/

Screw-in LED: LDA7D-A1

Available in: Japan

# EP-1-050

# Home electric appliances/lighting

LED arrays

# LED Lamp"PARATHOM A55"

- 1. Energy saving
- This lamp is the same luminance as 60W incandescent lamp. (1 meter just below lamp) Consumption energy is about one seventh of 60W incandescent lamp.
- Long lifetime
   The lifetime is 40000 hours.
- It's 40 times of incandescent lamp.
- 3. Mercury free
- LED lamp doesn't contain mercury.

### Product performance

The illuminance of this lamp is the same level as 60W incandescent lamp. (1 meter just below lamp) Energy is one seventh of 60W incandescent lamp.

Lifetime is 40000 hours.

Color rendering index is Ra82 and it's good color reproducibility. Compact size like incandescent lamp is realized.

Run-up speed and on-off cycle is the same level as incandescent lamp.

In PARATHOM series, chandelier and reflector lamp types also are lined up.

# MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama, 220-0004, Japan

Tel +81-45-323-5187 Fax +81-45-323-5156

URL http://www.mol-oml.co.jp

Available in: Japan





# Home electric appliances/lighting

Global

warming

Material

End-of-life

Long-life

Production

Transport

. Use/repair

# Enargy saving and long service life, Environment-friendly LED downlights

### Environmental performance

- (1) DL-D008N realizes almost as bright as a 60W incandescent lamp, with approx. 1/7 of power consumption.
- (2) Designd product life time is 40,000 hours\*, approx. 40 times longer than that of an incandescent lamp.
- (3) Mercury-free
- (4) Lead-free solder
- \* A time that takes luminous flux to drop to 70% of initial brightness.

### Product performance

It can be used for more than 10 years, with 10 hours a day. We recommend using at places where longer lighting hours are required or where it is difficult to change lamps.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



LC

Stage

LED downlights DL-D008N (a total of 10 models)

# EP-1-052

# Home electric appliances/lighting

LED arrays

# **OPJ-1200N**

Straight tube fluorescent lamp type LED light
Few hazardous substances are contained in this product since it meets the RoHS Directive.
Thanks to the AC/DC power switch (on-off power switch), harmonics are reduced, minimizing the influence on electronic and medical devices.
Recyclable by leasing and renting the products

- Using the latest LED packages of Cree Inc., the luminance efficiency against power consumption has been dramatically improved. In addition, we have signed a contract with Cree to allow the Cree logo to be used on
- Shock-resistant light polycarbonate is used, realizing the lightest product (275 g) in this light class.

  \*Its effective heat dissipation structure brings high efficiency and a longer operating life.

  \*A one-side power-distribution structure is adopted to realize safety and easier attachment.

  \*[Product Specification]

  \*Product name: OPJ-1200N

Length: 1,198 mm Tube diameter: Ф26 mm

Tube diameter: "926 mm Weight: 275 pg
Power consumption: 22.5 W
Operating time: 40,000 hours
Total luminous flux: 1,300 lm
Color temperature: 4,500 - 6,500 K
Color rendering properties: 72
Others: 20-W and 110-W alternatives are also available.

# **OPTILED JAPAN Ltd.**

2F SANRITSU-DC KOHNAN, BLDG., 4-27, 3-CHOME, KOHNAN, MINATO-KU TOKYO, 108-0075, Japan

Tel +81-3-5715-3699 Fax +81-3-5462-1134

E-mail info@optiled.co.jp URL http://www.optiled.co.jp/

URL http://www.optiled.co.jp/product/

Available in: Japan





# Home electric appliances/lighting

**LED** arravs

# **Epoch-making LED Downlight with the Industry's Top Level Efficiency**

### Environmental performance

- Mitigation of climate change: Power consumption and  ${\rm CO_2}$  emissions slashed to 1/3  $\sim$  1/6.
- Management of chemicals: Mercury-free LED light source

### Product performance

- Increased illuminance: 2000 lumen series has top level luminous flux of 2080lm and integrated efficiency of 80lm/W..
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.
- Dimming function: 0-100% continuous dimming function to suit user preference.



# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



High-efficiency LED Downlight "E-CORE Series" 2000lm class LEDD-20001W-LD9 and 67 more models.

# **EP-1-054**

# Home electric appliances/lighting

LED arrays

# **LED Bulbs that Can Replace Incandescent Lamps Directly**

### Environmental performance

- Mitigation of climate change: Power consumption and  $CO_2$  emissions slashed to  $1/8 \sim 1/6$  of those of incandescent lamps
- Management of chemicals: Mercury-free LED light source

### Product performance

- Industry's No.1energy-saving performance: 8.7W type LED lamp with incandescent bulb shape has 810lm/W and 93lm/W.
- Long life and maintenance saving: Long life of 40,000 hours (40 times longer than an incandescent lamp) greatly reduces the need for replacement.
- Easy replacement: Replacement of an incandescent lamp with this low-power consumption LED lamp is simple because this lamp's cap is the same as that of an incandescent lamp.

# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





High-output LED Bulb "E-CORE Series" Incandescent Bulb Type LEL-AW8N and 9 more models. (non-dimming and dimming models)

# Home electric appliances/lighting

LED arrays

# **Erosi Wood tin LED lighting**

### Environmental performance

Recycling of salvaged wood and driftwood into lighting products with LED illumination.

Long lasting lamp up to 10,000 hours.





# PT. EPOS MODERN INDONESIA

Jl.Rava Ngabul KM.8 Tahunan, Jepara, Central Java, 59428, Indonesia Tel +62-291-596454 Fax +62-291-593104

E-mail eposjepara@yahoo.com URL http://www.treecycled.com

# EP-1-056

# Home electric appliances/lighting

**LED** arrays

# EcooLED<sup>™</sup> LED lamp

# Environmental performance

EcooLED™ is the new extension of our DC lighting series. EcooLED™ is specially designed to provide basic lighting needs in rural areas at an affordable price.

# Product performance

EcooLED<sup>™</sup> provides efficient and low power consumption LED that goes below 1 watt. It has low heat loss, and a robust, sturdy body with non-glass cover that will not be easily broken during handling and transportation. The bulb does not produce strong glare that is harmful to users' eyes. EcooLED™ has wide illumination angle compared to existing LED lamps in

the market. EcooLED  $^{\rm TM}$  is designed to last and easily achieves more than 30,000 operating hours. The EcooLED<sup>TM</sup> carries a 2-year warranty.

# Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com

Available in: Worldwide









EcooLED LED Lamp

# Flat type LED unit with GX53-cap

### Environmental performance

- Mitigation of climate change: Power consumption and  ${\rm CO_2}$  emissions slashed to 1/8.
- Management of chemicals: Mercury-free LED light source

### Product performance

- Flat thin-model: LED unit with GX53-cap, ligft colors and angles are selected.
- Long life and maintenance saving: Long life of 40,000 hours greatly reduces the need for replacement.



# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

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LED Unit ,flat type LEL-FW6L-GX53 and 3 moer model

# EP-1-058

# Home electric appliances/lighting

lighting fixtures

# **LED Spot Light**

### Environmental performance

- 1. Its spot effect is equivalent to that of low-volt halogen lamp 35W/50W and its CO₂ reduction rate is 68-78%.
- Its life time is from 10 times to 13 times longer than that of a low-volt halogen lamp. Approximately 40000 hours of the life time through rearranging its heat radiation structure enables maintenance-free use at retail stores where the spot is used for a long time.
- UV and IR radiation, which causes color fading or damage, do not exist. The spot light does not harm objects because the light does not contain harmful components and heat.
- 4. Thin and soft innovative form utilizing LED feature.

### Product performance

This spotlight is the lighting fixture with 4 LEDs (11W) realizing energy saving and long life and having brightness equivalent to low-volt halogen lamp 35W/50W.

# Mitsubishi Electric Lighting Corporation

2-14-40, Ofuna, Kamakura-shi, Kanagawa, 247-0056, Japan Tel +81-467-41-2724 Fax +81-467-41-2788

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://www.mitsubishielectric.co.jp/group/mlf/

URL http://global.mitsubishielectric.com/company/csr/index.html





Available in: Japan

LED spot light

# Home electric appliances/lighting

Global warming

Material

End-of-life

fluorescent lamps

Production

Transport

Long-life

LC

Stage

# Pa-look Premier LS

# Environmental performance

- 1. Realized approx. 5% energy saving<sup>\*1</sup>, first in industry<sup>\*2</sup>
- \*1: Compare with "Pa-look" circular fluorescent lamp in use with electronic ballast.
- \*2: In circular fluorescent lamp (starter type) as of 24th April 2009, researched by Panasonic.
- Realized No.1 long service life pprox.15,000 hours. 2(2.5 times longer compare with conventional type) 3 to contribute saving resource by reduction of waste materials.
- \*3: Compared with conventional "Pa-Look" rated life 6,000 hours.

### Product performance

- Realized No.1 long service life approx.15,000 hours. <sup>2</sup>
   years <sup>4</sup> service life based on 5.5 hours on per day. Reduce lamp replacement.
  - \*4 : Based on 365 days use per year.
- Long lasting brightness, friendly for eyes. Maintain 80% brightness as the end of 15,000 hours life.

# **Panasonic Corporation, Lighting Company**

1-1 Saiwai-cho Takatsuki Osaka, 569-1193, Japan Tel +81-72-682-7924 Fax +81-72-682-7039 URL http://panasonic.net/csr/



Pa-look Premier LS: FCL30ECW/28LS

Available in: Japan

EP-1-060

# Home electric appliances/lighting

fluorescent lamps

# Screw-in Fluorescent Lamp "spiraLUPICA mini"

# Environmental performance

- 1. Energy saving
- Consumption power is from one quarter to one fifth compared to an incandescent lamp (40 W, 60 W).
- Long lifetime
- The lifetime of "spiraLUPICA mini" is 6 times longer than that of an incandescent lamp.

# Product performance

SpiraLUPICA mini is a compact screw base fluorescent lamp. Its small spiral shaped inner bulb and compact inverter give it its compact size. Consumption power is from one quarter to one fifth compared to an incandescent lamp (40W, 60W). Therefore, it enables energy saving and a reduction of greenhouse gas. In addition, the lifetime of "spiraLUPICA mini" is 6 times longer than that of an incandescent lamp.Run-up speed is fast, so it's bright even right after switching on a light. The ON-OFF cycle is up to 20,000 times. (Cycle is 10 seconds on and 170 seconds off.) This new product is also suitable for places where you frequently repeat switching on and off.

# MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No. 3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama, 220-0004, Japan

Tel +81-45-323-5187 Fax +81-45-323-5156 URL http://www.mol-oml.co.jp

Available in: Japan



spiraLUPICA mini

# Home electric appliances/lighting

fluorescent lamps

# Compact fluorescent lamp"FHP Platinum""DULUX T/E Platinum"

### Environmental performance

Longlife time

-Long lifetime of 20000 hours leads reduction of maintenance cost and discarded lamp.

### Product performance

The lifetime of "FHP Platinum" is 1.6 times and "DULUX" T/E PLATINUM" is twice longer than conventional products. They enable users to reduce maintenance cost and lead to the efficient use of resources.

Other specification such as lighting color variation and lumen are the same as conventional products.

# 

FHP Platinum and DULUX T/E Platinum

# MITSUBISHI ELECTRIC OSRAM Ltd.

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Available in: Japan

# **EP-1-062**

# Home electric appliances/lighting

fluorescent lamps

# Self-ballasted Fluorescent Lamp Offering Energy-saving Performance and Long Life

### Environmental performance

- Mitigation of climate change: 15% reduction in power consumption compared with the previous year's model.
- Efficient use of resources: Rated life has been doubled to 12,000 hours, which means a reduction in waste lamps. Weight has also reduced.
- Management of chemicals: Lead-free glass and soldering.

### Product performance

- Easy replacement: Replacement of an incandescent lamp with this lamp is simple because it is virtually the same size and shape as an incandescent lamp.
- UV-cut: 99% ultraviolet protection. Less attraction of bugs. 58% reduction of color fading.
- Plastic globe: Plastic globe means no scattering of glass if the lamp gets broken.

# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Compact Self-ballasted Fluorescent Lamp "NeoBall Z Real PRIDE" EFA15EL/10-PD and two other models

# Home electric appliances/lighting

Long-life

LC Stage

fluorescent lighting

Production

Transport

. Use/repair

# **Automatic dimmer Twin Pa**

### Environmental performance

- Approximately 50% of electricity bill cuts compare Twin Pa 100 type "normal 100% lighting".
- Longer life No.1 rating lamp life 16000 hours.

### Product performance

- A brightness sensor detects the brightness of the room, and is automatic dimmer.
- Twin palook premier fluorescent lamp.
   An exclusive wireless remote
- controller transmission device.
- Consumption efficiency 122.2lm/W 9760lm 87W.



Material

Global

# Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan

Tel +81-6-6908-1131

URL http://panasonic-electric-works.net/

URL http://panasonic-electric-works.net/corp/bis/lp/index.html

URL http://panasonic-denko.co.jp/e/corp/csr/index.html



Available in: Japan

HFAZ8300 and 6 more models

# **EP-1-064**

# Home electric appliances/lighting

fluorescent lighting

# Dimming Functions to Fine-tune the Lighting According to User Preference plus Greater Energy Saving

### Environmental performance

- Mitigation of climate change: 10% reduction in power consumption.
   Dimming control to suit user preference allows a maximum of 40% reduction
- Efficient use of resources: Two lamps achieve illumination equivalent to that of three conventional lamps.

### Product performance

- Dimming function: 1-100% dimming function to suit user preference.
- Various timer functions: Morning timer, night timer, on/off timer for security, and fade-in and fade-out lighting function.



# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Fluorescent Ceiling Light "NeoSlim V Digilx" FVH16700TRUEN and 1 more model

### Environmental performance

----< E : Energy Energy saving >>----

As for the high frequency inverter-type lighting equipment, the illumination that 1.2 times as bright is provided with about 80% electricity in comparison with the conventional magnetism-type appliance.

"Easyeco" - more eco - series is high frequency inverter-type lighting equipment that enables regulating brightness to three phases by simple operation of the wall switch.

The three phases are 100%: Bright mode, 85%: eco mode, and 70%: more

You do not need light control machinery nor wiring work for the signal line when introducing light control.

The brightness under the "eco mode", which is about 30% energy saving, is equal to that of the conventional rapid-magnetism-type appliance.

### Global High quality Energy saving warming Desian Material Production LC Stage Transport End-of-life . Use/repair



# Easyeco Co KV4382EF VPTN

FHF32W for two lighting: KV4382EF VPTN

# Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan

# EP-1-066

# Home electric appliances/lighting

tube light

# LED Tube Light TL-\*\*\*-G13 series

1) Low Power Consumption

Compared with straight tube fluorescent lamps, power consumption is reduced by roughly 50%, cutting approximately 4 tons of CO<sub>2</sub> emissions a year (\*1).

\*1. Compared with 100 40-W fluorescent lamps (lighting for 16 hours per day, 240 days a year); Sanyo survey

2) Weight Saving

A reduction in size and weight has been achieved. The device weights approximately 400 g, including the special control power unit, reducing the risks caused by the product weight.

3) Longer Operating Life
The heat sink and radiation design reduces the burden on the LED packages, realizing an approximately 5x longer operating life (40,000 hours <sup>2</sup>) compared with straight tube fluorescent lamps.

\*2 This is not the guaranteed figure but the typical value estimated according to a forecast curve. The estimated time under 70% of the lumen maintenance factor at the normal temperature and the usual

humidity.

1) Alternative straight tube fluorescent lamp for 20 W and 40 W lamps
\* Straight tube fluorescent lamp type LED with G13-type caps
2) The high-luminance-efficiency small LED chip contains three middle-power-type elements.
3) The special control power unit drives 40 packages of 20-W lamps and 80 packages of 40-W type.
4) Three different types of chromaticity (3,000 k, 4,200 k, 5,000 k) can be used depending on the purpose, and three different tube shapes for the body (clear, frost and milky) are prepared.

# SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan





Available in: Japan

LED Tube Light TL-\*\*\*-G13 series

Eco-product // Home electric appliances/lighting

# Home electric appliances/lighting

halogen lamps

# Halogen Lamp "Halogen Energy Saver"

# Environmental performance

- 1. Energy saving
- 25% energy saving compared with an incandescent lamp (Our white bulb lamp 60 W)
- 2. Long lifetime
- Twice the life time compared with an incandescent lamp (Our white bulb lamp 40 W, 60 W)

### Product performance

This halogen lamp is our original product which has outer glass and an E26 base like an incandescent lamp.

It is more energy saving and has a longer lifetime than an incandescent lamp. It can be used in dimming fixtures. It also has the same quality of light, shape and size as an incandescent lamp.

# MITSUBISHI ELECTRIC OSRAM Ltd.

Tobu Yokohama Bldg. No.3, 8-29, Kita-Saiwai 2-chome, Nishi-ku Yokohama, 220-0004, Japan

Tel +81-45-323-5187 Fax +81-45-323-5156 URL http://www.mol-oml.co.jp





Halogen Energy Saver

# **EP-1-068**

# Home electric appliances/lighting

lamps

# Linelight

### Environmental performance

Compared with conventional one-point lighting fixtures, these installations require fewer light sources, and because only one or two light sources need to be changed, maintenance is also simplified.

### Product performance

Linelight maximizes the illumination potential of artificial lighting by efficiently channeling the illumination of a single or two light sources along a certain length of line. Linelight comprises a highly reflective aluminum mirror housing with a total reflection rate of 98%, fronted by an acrylic sheet for even dispersion, all contained within an aluminum frame.

Linelight accepts 35- to 150-Watt light sources and will project bright light 9 meters or more using only one or two lamps. It boasts a versatile design and abundant powers of expression, while saving energy particularly if used for indirect lighting.

# Materialhouse Co.,LTD

1-19-3, Naka-ikegami, Ota-ku, Tokyo, 146-0081, Japan Tel +81-3-3751-5158 Fax +81-3-3755-0065 E-mail h.arai@materialhouse.co.jp URL http://www.materialhouse.jp/



Material

Production

# EcooLite<sup>™</sup> long-life lamp

#### Environmental performance

EcooLite<sup>™</sup> is a long-life lamp that has low heat loss resulting in energy saving and is safe to touch during operation, unlike conventional CFL and incandescent bulbs.

As a result, a greater operating lifespan is achieved at more than 10,000 hours.

#### Product performance

A patented, superb high-quality lamp that is designed to fill the gap of low power consumption bulbs below 4 watts and yet deliver highly soothing

Its external non-glass cover provides a greater safety factor during use and handling.

#### Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com



EcooLite<sup>™</sup> Long-life Lamp

Available in: Worldwide

#### EP-1-070

#### Home electric appliances/lighting

ceramic metal halide lamps

## Ceramic Metal Halide Lamp, Giving an Energy-saving High-grade Illumination Space

#### Environmental performance

- Mitigation of climate change: Power consumption slashed by about 64% from 400W to 145W.
- Efficient use of resources: External tube diameter is reduced from 116mm to 40mm; the slimmer tube saves resources.
- Management of chemicals: Mercury content cut to less than one fifth.

#### Product performance

- Beautiful and bright: Dramatic improvement in efficiency from 55lm/W to 130lm/W, the industry's best performance. Color rendering index (Ra) doubled from 40 to 80 for higher color performance.
- Quick start-up: Start-up time slashed from around 4 minutes to 2 minutes.

# **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Neocera "PRIDE" MT145CHE-W

Eco-product // Home electric appliances/lighting

## Home electric appliances/lighting

natural light systems

#### **Mirror Ducts**

#### Environmental performance

A mirror duct is a piece of equipment that contributes to the reduction of  $\rm CO_2$  emissions by lowering electric power usage for lighting, as well as creating an environment more comfortable than that of artificial lighting.

#### Product performance

This system brings daylight indoors for lighting purposes, and its thorough diffusion and control of light during the receiving and conducting processes makes it easy to use. It was adopted by Toyako Summit heid in July,2008, and this prominent technology was introduced for the whole world.

- 1. simple structure allowing the economical utilization of abundant light;
- 2. high energy efficiency due to its direct use of natural light;
- collection and diffusion of light without the consumption of kinetic energy due to the absence of driving parts such as sun-trucking devices;
- low maintenance due to a simple, sealed structure that protects it from failure and deterioration.

## Materialhouse Co.,LTD

1-19-3, Naka-ikegami, Ota-ku, Tokyo, 146-0081, Japan Tel +81-3-3751-5158 Fax +81-3-3755-0065 E-mail h.arai@materialhouse.co.jp URL http://www.materialhouse..jp/



#### EP-1-072

## Home electric appliances/lighting

security lighting

## LED Security Light with Sufficient Luminance but Minimal Electricity Charge

#### Environmental performance

- Mitigation of climate change: 70% reduction in power consumption and CO<sub>2</sub> emissions.
- Efficient use of resources: Optimum design to secure a distance of 35 m between lamps (\*) to minimize the number of lamps required.
- \* Class B illumination recommended by the Japan Security Systems Association
- Management of chemicals: Mercury-free light source.

#### Product performance

- Economical: Possible to lower the electricity contract category for greater economy.
- Long life and maintenance saving: Rated life of 40,000 hours means no need for replacement for 10 years.
- Compact and lightweight: Easy installation and difficult to break without glass bulbs

#### **TOSHIBA LIGHTING & TECHNOLOGY CORPORATION**

1-201-1, Funakoshi-Cho, Yokosuka-Shi, Kanagawa, 237-8510, Japan Tel +81-46-862-2153 Fax +81-46-860-1200

URL http://www.tlt.co.jp/tlt/index\_e.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





High-efficiency LED Crime Prevention Light "E-CORE Series" LEDK-70941-LS8 and 3 more models

## Home electric appliances/lighting

amalgam lamps

## gpLiCHT 55W Amalgam Lamp

#### Environmental performance

gpLiCHT amalgam lamps use a low mercury content alloy. The lamp remains more stable over a wide temperature range, has higher lumen output (80lm/W) and smaller size. This lamp also achieves superior colour rendering (CRI >80) and wide range of color temperature.

This lamp can be used widely for energy saving for indoor and outdoor use. It is particularly suitable for enclosed outdoor luminaries like 3-4 M post top luminaries, 6 M streetlight, wall security light, floodlight and pendant light.



## **Golden Pace Enterprise**

Block 2 Defu Lane 10 #03-519 . 539183. Singapore Tel +65-6289-2787 Fax +65-6289-6529 E-mail gpent@singnet.com.sg



Available in: Asia

Model No: gp-SFL-55W/HPF amalgam 840HT (Design Patented)

#### **EP-1-074**

## Home electric appliances/lighting

televisions

#### The Viera Z1-series full hi-vision plasma TV (46/50/54-inch models)

#### Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 40% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-50PZ800)

Chemical substances & recycling:

Non-use of lead for plasma panels (a world first)

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires and power cords

Recovery of CRT-based televisions and recycling of some plastic parts

Long-life design:

Approx. 100,000 hours of life for plasma panels

Large screen, enabling space saving and high-quality images

Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals

from HDMI cables SD card slot

Environmentally friendly bamboo-fiber diaphragm speaker

## Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/

Available in: Japan





Plasma-TV VIERA TH-P50Z1

161

## Home electric appliances/lighting

Global

Material

End-of-life

Production

Transport

. Use/repair

High quality

LC

Stage

#### The Viera V1-series full hi-vision plasma TV (42/46/50/58/65-inch models)

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx, 49% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-50PZ70)

Chemical substances & recycling:

Non-use of lead for plasma panels (a world first)

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires and power cords Recovery of CRT-based televisions and recycling of some plastic parts

Long-life design: Approx. 100,000 hours of life for plasma panels

Large screen, enabling space saving and high-quality images

Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables

SD card slot

Environmentally friendly bamboo-fiber diaphragm speaker

## Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

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URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/

Available in: Japan Plasma-TV VIERA TH-P50V1



#### EP-1-076

## Home electric appliances/lighting

televisions

#### The Viera G1-series full hi-vision plasma TV (42/46/50-inch models)

## Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 46% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-46PZ800)

Chemical substances & recycling:

Non-use of lead for plasma panels (a world first)

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Recovery of CRT-based televisions and recycling of some plastic parts

Long-life design: Approx. 100,000 hours of life for plasma panels

#### Product performance

Large screen, enabling space saving and high-quality images

Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables

SD card slot

# Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/

Available in: Japan





Plasma-TV VIERA TH-P46G1

Global

Material

#### Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 62% due to higher luminance efficiency of panels and energy-saving design (compared with the TH-42PX300)

Chemical substances & recycling:

Non-use of lead for plasma panels (a world first)

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

Recovery of CRT-based televisions and recycling of some plastic parts

Long-life design:

Approx. 100,000 hours of life for plasma panels

#### Product performance

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## **Panasonic Corporation, AVC Networks Company**

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URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/

Available in: Japan Plasma-TV VIERA TH-P42X1



High quality



#### EP-1-078

## Home electric appliances/lighting

End-of-life

televisions

Production

High quality

LC

Stage

## The Viera R1-series hi-vision LCD-TV (20/32-inch models)

#### Environmental performance

Energy & resource saving:

Annual power consumption achieved 90kWh/year due to the energy saving design (TH-L32R1)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

#### Product performance

IPS-alpha panels (TH-L32R1)

Wide viewing angle with high-quality images

Internal 250GB hard disk drive

Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables

SD card slot

Environmentally friendly bamboo-fiber diaphragm speaker

## **Panasonic Corporation, AVC Networks Company**

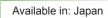
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URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/





LCD-TV VIERA TH-L32R1

Eco-product // Home electric appliances/lighting

4 5

7

#### Home electric appliances/lighting

televisions

#### The Viera TH-L17F1 hi-vision LCD-TV

#### Environmental performance

Energy & resource saving:

Annual power consumption (kWh/year) reduced by approx. 23% due to energy saving design (compared with the TH-17LX8)

Chemical substances & recycling:

Non-use of specific chemical substances (compliant with the EU RoHS directive)

Non-use of lead-solder circuit boards

Non-use of vinyl chloride (PVC) resin for internal wires

#### Product performance

IPS panels with LED back light system Wide viewing angle with high-quality images With 4 diversity antenna

Viera Link, enabling remote control of Panasonic DVDs and AV amps using control signals from HDMI cables

SD card slot

## **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cho, Kadoma, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/avc/viera/

URL http://panasonic.net/csr/

Available in: Japan





LCD-TV VIERA TH-L17F1

#### **EP-1-080**

#### Home electric appliances/lighting

televisions

## LED AQUOS, Digital High-Definition LCD TV (60/52/46/40V-inch)

#### Environmental performance

(1) Industry's lowest level of energy consumption in Japan\*1

The combination of the newly developed panels which has high level of use efficiency of light and the LED backlight which offers highly precise control of the light output gives this product both high image quality and high energy efficiency.

product both high image quality and high energy efficiency.

\*1 As of September 29, 2009. Though the LX Series is exempt from Japan's Low Conceiving the Rational use of Energy, comparison was made using measurements for annual power consumption, compliant with this low, under standard conditions with AV position switch set to "Standard"

2) Backlight longevity is about 60,000 hours.

(3) Closed-loop material recyclable rear cabinet is adopted.

(4) Green materials: halogen-free cabinet, halogen-free power cord and interior wiring, circuit board with lead-free solder, stand that uses resin blended with recycled material and packaging buffer material that adopts recycled polystyrene foam

#### Product performance

(1) High image quality (TV contrast \*2 of 2,000,000:1)

 AQUOS High-Picture-Quality Master Engine' and 'Preferred Image Sensor' for automatically adjusting to viewers' preferred image and sound settings.

\*2 The maximum contrast level a TV set is capable of achieving.

## **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





LED AQUOS LC-60LX1

## Home electric appliances/lighting

televisions

## **Energy Saving Digital LCD Television: <BRAVIA> V5 Series**

#### Environmental performance

The world's first (\*1) Presence Sensor and Energy Saving Switch equipped with a newly-developed low-power-consumption backlight (\*2). V5 series with large-sized, high-definition and energy-saving screens.

If the sensor doesn't sense anyone (you leave the room while the display is on; or when sleeping) then the display will go dark to reduce electricity.

[Energy Saving Switch]
By pressing the Energy Saving switch you turn the set off completely so it uses almost zero watts (\*3). You can save energy without pulling the plug.

- \*1 Among consumer televisions, as of February 2009.
  \*2 HCFL backlight is used and optical films are improved.
- \*3 Slight electrical power not metered by common watt meters.

- Motionflow 120 Hz
- Corresponding to Full HD
  Has brought vividness, gradation expression and resolution with high-quality picture processing
- technology, BRAVIA Engine 2. S-Force front surround digital amplifier creates a sound field like that in a theater.

# **Sony Corporation**

1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

URL http://www.sony.net/eco/

URL http://www.sony.com/

URL http://www.sony.net/SonyInfo/csr/environment/





<BRAVIA> KDL-46V5

#### EP-1-082

## Home electric appliances/lighting

televisions

#### LCD TV equiped with Clear frame by 120Hz & Energy-saving LCD panel (52V) .

#### Environmental performance

- Mitigation of climate change: 77% reduction in annual power consumption by optimization of image signals and backlight control.
- Efficient use of resources: 62% reduction in weight by adoption of a lightweight stand and lightweight metal parts.
- \* comparison with model of 2003

#### Product performance

- High-definition recording function: recordable LCD TV by connecting to **USB External HDD**
- Automatic picture adjustment: Automatic picture adjustment optimized for the viewing environment.
- Full HD Energy saving LCD panel: Over 2 million pixels for high-quality reproduction of high-definition images

## **TOSHIBA CORPORATION Digital Media Network Company**

1-1, Shibaura 1-chome, Minato-ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Digital high-definition LCD TV "REGZA" 52R9000

Eco-product // Home electric appliances/lighting

#### Home electric appliances/lighting

televisions

## **Plasma Display TV**

#### Environmental performance

- "Lower power consumption mode" decrease electric consumption realizing suitable brightness.
- · "Automatic power off" function automatically turns off the electric power after certain period of no operation or no signal.
- "Intelligent sensor" detects the degree of brightness and the colour type of lighting in the room, produces suitable pictures and decreases electric power consumption.

#### Product performance

- · High resolution full HD panel for digital HD broadcasting.
- Removable HDD "iVDR-S" set into "iV- pocket" in the TV set increases capacity of recording.
- · "Smooth cinema" function produces smooth, natural pictures.

## Hitachi Consumer Electronics Co., Ltd.

Shin-Otemachi Bldg, 2-1, Otemachi 2-chome, Chiyuoda-ku, Tokyo, 100-0004, Japan





P50-XP035

LC

Stage

#### **EP-1-084**

## Home electric appliances/lighting

End-of-life

televisions

Production

Transport

. Use/repair

## DC appliances

#### Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stake-holders in the global solar power market.

Phocos is strongly committed to developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology in all our products.

Phocos' TV07 is a 7" TFT-LCD color TV receiver/monitor. Because of very low power consumption, it can be used directly with a 12V automobile battery or standard 220V electricity (by use of AC adapter).

Another Phocos product is the DC Fridge/Freezer. These ultra high efficiency refrigerators and freezers have exceptionally low energy consumption requiring smaller, less expensive power systems and low operating expense.

#### Phocos SEA Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0598 Fax +65-6579-0599

E-mail info-sea@phocos.com URL www.phocos.com



Available in: Worldwide

Phocos DC Appliances

#### Home electric appliances/lighting

liquid crystal television receivers

#### **LCD Television**

#### Environmental performance

The body design increased transport efficiency by about 38%\* reduces of wrapping mass compared to the the current model and cosequently reduced the CO<sub>2</sub> emissions.

\* compared to UT42-XP770 (2008 model)

#### Product performance

The UT series is desinged to free customers from restrictions of where to place the TV. The monitor of the UT series, which is 35mm thin, is more than just a TV suitable to be hung on a wall.

By separating the Wooo station from the monitor, the UT series provides consumers with a range of options for placement throughout the home, as well as ease in connecting with other consumer electronic equipments.



## Hitachi Consumer Electronics Co., Ltd.

Shin-Otemachi Bldg, 2-1, Otemachi 2-chome, Chiyuoda-ku, Tokyo, 100-0004, Japan



UT42-XP800

#### EP-1-086

#### Home electric appliances/lighting

HDD & blu-ray disc players

## HDD Blu-ray Disc/ DVD recorder BDZ-RS10

\*Automatic power-off function to conserve electrical power

If the television device is not operated for a certain period of time, the display goes dark (\*1). The function
saves you some energy costs even if you forget to shut off the power.

\*Low power consumption design to operate with less energy Annual electrical energy consumption is reduced by approximately 40% compared with conventional TVs (\*2) by shutting off display tubes when the electrical source is turned off. The lowest annual energy consumption in the industry (\*3).

\*Reduction of standby power consumption Standby power consumption is reduced by approximately 70% compared with conventional TVs (\*4).

- \*1 When the automatic power-off function is turned on.
  \*2 Conventional model (BDZ-T55): Approximately 62.4 kwh, New model (BDZ-RS10): Approximately 37.2 kwh
- \*3 As of October 20, 2009 on Blu-ray Disc Recorder
  \*4 Conventional model (BDZ-T55): Approximately 0.65 W, New model (BDZ-RS10): Approximately 0.18 W

#### Product performance

- X-omakase/Maruroku, a function for searching for TV programs and recording them automatically.
- Equipped with high-quality picture processing technology CREAS 2.

# **Sony Corporation**

1-7-1 Konan, Minato-ku, Tokyo, 108-0075, Japan

URL http://www.sony.net/eco/

URL http://www.sony.com/

URL http://www.sony.net/SonyInfo/csr/environment/





BDZ-RS10

Eco-product // Home electric appliances/lighting

## Home electric appliances/lighting

HDD & blu-ray disc players

## Blu-ray Disc recorder with HDD: DMR-BW970/BW870/BW770/BW570

#### Environmental performance

Achieved power consumption of approx.29W (DMR-B970)/approx.26W (DMR-BW870,BW770,BW570) due to low power circuit technology.

Circuit is highly integrated to conserve energy.

Resources saving design employed for circuit boards and key components.

Standby consumption :approx.0.1W

Non-Use of Specific Chemical Substances. \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

Blu-ray Disc recorder with 2TB (DMR-BW970) ,1TB (DMR-BW870) ,500GB (DMR-BW770) ,320GB (DMR-BW570) HDD.

High quality Digital Audio & Video and UniPhier<sup>™</sup> Technology.

Digital duble Tuner.

BD-Live, Act Vila.

## **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/csr/





Available in: Japan

Blu-ray Disc recorder DMR-BW970

#### **EP-1-088**

#### Home electric appliances/lighting

**HDD & DVD recorders** 

High quality

LC

Stage

Production

## DVD recorder with HDD, DMR-XP200/XE100

#### Environmental performance

Achieved power consumption of approx.27W (DMR-XP200)/approx.25W (DMR-XE100) due to low power circuit technology.

Circuit is highly integrated to conserve energy.

Resources saving design employed for circuit boards and key components. Standby consumption :approx.0.3W

Non-Use of Specific Chemical Substances. \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

DVD recorder with 500GB (DMR-XP200)/320GB (DMR-XE100) HDD. High quality Digital Audio & Video and UniPhier  $^{\text{TM}}$  Technology. Digital Tuner.

## **Panasonic Corporation, AVC Networks Company**

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URL http://panasonic.co.jp/ URL http://panasonic.net/csr/



Available in: Japan

DVD recorder DMR-XP200

## Home electric appliances/lighting

blu-ray disc players

## Portable Blu-ray Disc player DMP-BV100

#### Environmental performance

Achieved power consumption of approx.20W due to low power circuit technology. Standby consumption :approx.0.5W

Circuit is highly integrated to conserve energy.

Resources saving design

employed for circuit boards and key components.

Non-Use of Specific Chemical Substances.\*

(\*Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

Terrestrial digital Tuner. 8.9inch TFT wide display. DLNA.

YouTube.

High quality Digital Audio & Video and UniPhier<sup>™</sup> Technology.

## Panasonic Corporation, AVC Networks Company

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URL http://panasonic.co.jp/

URL http://panasonic.co.jp/





Portable Blu-ray Disc player DMP-BV100

Home electric appliances/lighting

Available in: Japan

EP-1-090

HDD recorders

## Hi-Vision Recorder equiped 1000GB HDD

#### Environmental performance

- Mitigation of climate change: Low power consumption (3.0W) in standby mode for quick start-up.
- Efficient use of resources: 35% reduction in weight and 42% reduction in volume with a slim design for resource saving (comparison with model of 2001). Enhanced recycleability because materials of plastic parts weighting 25g or more are marked.

#### Product performance

- USB External HDD for adding even if main HDD become full.
- OMAKASE Auto Recording for drama serial or your favorit programs
- MPEG4 AVC for recording longer time with High Definition resolution.

# Global Resource Energy saving Material Design Production Transport Use/repair

## **TOSHIBA CORPORATION Digital Media Network Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



RD-S1004K

Hi-Vision Recorder < VARDIA > RD-S1004K

Eco-product // Home electric appliances/lighting

## Home electric appliances/lighting

digital cameras

#### **DIGITAL SLR CAMERA EOS 500D EUR**

#### Environmental performance

- (1) Compact body and weight of only 480g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

#### Product performance

- High image quality and high-speed image processing. Approximately 15.1 mega pixel CMOS (Complementary Metal Oxide Semiconductor) Sensor and new DIGIC 4 Image Processor.
- (2) Face detection technology in Live View and full HD movie shooting function
- (3) Digital single-lens reflex camera that has interchangeable lenses and high-speed continuous drive up to 3.4 frame/s.
- (4) High sensitivity: ISO 3200 (normal) up to 6400/12800.



30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/





Available in: Worldwide EOS 500D

#### EP-1-092

## Home electric appliances/lighting

digital cameras

## **Digital Camera PowerShot SX200 IS**

#### Environmental performance

- (1) Compact body and weight of only 220g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

#### Product performance

- (1) 12x optical zoom to make it easy to get up close to a distant object.
- (2) 28mm wide-angle lens to capture the subject dynamically from wide viewing angles.
- (3) Lens-shift type image stabilizer (IS) system works even when zoomed in with large magnification.
- (4) Safety zoom function for using digital zooms without the image deterioration.



#### Canon Inc.

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Available in: Worldwide

PowerShot SX200 IS

## Home electric appliances/lighting

digital cameras

#### **DIGITAL CAMERA DIGITAL IXUS 100 IS**

#### Environmental performance

- (1) Compact body and weight of only 115g contribute to resource savings.
- (2) Compliance with the RoHS Directive.
- (3) Lead-free glass is utilized as the environmentally sound lenses.

#### Product performance

- (1) HD movie shooting capability plus HDMI mini output make it easy to enjoy digital video.
- (2) 2.5-inch clear live LCD II has a high visibility from wide viewing angles (even when viewed at an oblique angle or out of doors).
- (3) AF (Auto Focus) Servo to focus on a moving subject and select the proper settings for shooting.
- (4) Smart AUTO selects the proper settings from predefined 18 scene modes just by pressing the shutter button.





## Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/

Available in: Worldwide DIGITAL IXUS 100 IS

#### EP-1-094

#### Home electric appliances/lighting

Material

End-of-life

digital cameras

Production

Transport

High quality

LC

Stage

## Digital Interchangeable Lens Camera: LUMIX DMC-GF1

#### Environmental performance

Achieved Main Product weight (w/o battery) of approx.285g due to low resource use technology.

Power saving performance realizing about 380 continuous shots.

Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

## Product performance

Micro Four Thirds Camera System. 12.1-megapixel Live MOS sensor 3.0-inch LCD monitor. High Definition AVCHD Lite Movie Recording.

## Panasonic Corporation, AVC Networks Company

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URL http://panasonic.net/csr/



Available in: Japan, Asia, Europe, North America, Central America, U.S.A, Singapore, Thailand

Digital Interchangeable Lens Camera: LUMIX DMC-GF1

Eco-product // Home electric appliances/lighting

## Home electric appliances/lighting

digital cameras

## **Digital Camera: LUMIX DMC-FZ38/35**

#### Environmental performance

Achieved power consumption of approx.1.3W due to low power circuit technology.

Power saving performance realizing about 470 continuous shots.

Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

12.1 Megapixel Digital Camera.

High Definition AVCHD Lite Movie Recording.

Ultra High-Speed AF.

Wide-angle 27mm LEICA DC VARIO-ELMARIT lens and 18x optical zoom.

## Panasonic Corporation, AVC Networks Company

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URL http://panasonic.co.jp/

URL http://panasonic.net/csr/





Digital Camera: LUMIX DMC-FZ38

## Available in: Worldwide

## EP-1-096

## Home electric appliances/lighting

Material

End-of-life

digital cameras

Production

Transport

High quality

LC Stage

## **Digital Camera: LUMIX DMC-FP8**

#### Environmental performance

Achieved power consumption of approx.1.1W due to low power circuit technology. Power saving performance realizing about 380 continuous shots.

Circuits have been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

12.1 Megapixel Digital Camera.

Stylish Compact design.

With 28mm Wide-Angle LEICA DC VARIO ELMARIT Lens.

Power O.I.S.

(About twice as effective in compensating for blurring caused by low-frequency vibration)

Speed AF and quick startup

# Panasonic Corporation, AVC Networks Company

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Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/ URL http://panasonic.net/csr/



Available in: Worldwide

Digital Camera: LUMIX DMC-FP8

#### Environmental performance

(1) Hazardous substances-free product:

It does not use any materials prohibited by the Environment-related Substances Used in Product Control Rules. No polyvinyl chloride (PVC) is used in the electrical insulation of interconnection, and the lenses are made using eco-glass containing no lead, cadmium or arsenic.

(2) Resource saving:

It is reduced in size and weight by taking advantage of Micro Four Thirds standard feature, that also contributes less environmental burdens occurring during distribution.

#### Product performance

This product complies with Micro Four Thirds standard. It is achieved high-resolution and substantial reduction in size and weight that made a clear distinction from Compact Digital Camera.

It can be used with electric viewfinder for sell separately and new Art Filter function and so on are added.



## Olympus Imaging Corp.

Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo, 163-0914, Japan Tel +81-3-3340-2210 Fax +81-3-3340-8380

E-mail environ@ot.olympus.co.jp URL http://www.olympus.co.jp/en/

URL http://asia.olympus-imaging.com/products/dslr/ep2/

URL http://www.olympus-global.com/en/corc/csr/

Pen series Digital Camera EP-2



EP-1-098

## Home electric appliances/lighting

digital cameras

## OLYMPUS Compact Digital Camera $\mu$ -7020/Stylus-7020

#### Environmental performance

Available in: Worldwide

(1) Hazardous substances-free product:

It does not use any materials prohibited by the Environment-related Substances Used in Product Control Rules. No polyvinyl chloride (PVC) is used in the electrical insulation of interconnection, and the lenses are made using eco-glass containing no lead, cadmium or arsenic.

(2) Resource saving:

Compared with conventional products, it consumes about 8% less one's packed weight and 13% less one's packed volume, that also contribute less environmental burdens occurring during distribution.

#### Product performance

It has 7 times optical zoom, 3.0 type large liquid crystal monitor in a metal body and can be taken photographs clearly and safely by Advanced Face Detection, Intelligence Auto Mode and Digital Image Stabilization.

It is realized to save resources highly by reform of ones system and device.

## Olympus Imaging Corp.

Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo, 163-0914, Japan Tel +81-3-3340-2210 Fax +81-3-3340-8380

E-mail environ@ot.olympus.co.jp URL http://www.olympus.co.jp/en/

URL http://asia.olympus-imaging.com/products/compact/mju series/mju7020/

URL http://www.olympus-global.com/en/corc/csr/

Available in: Worldwide





Compact Digital Camera  $\,\mu$ -7020

3 4 5

Eco-product // Home electric appliances/lighting

6 7

## Home electric appliances/lighting

digital cameras

## Nikon Digital SLR camera D5000

#### **Environmental performance**

(1) Reduction of weight

· Reduces 23% of the parts compared to "D90"

 Reduces 10% of the weight, compared to "D90", while equipping a CMOS image sensor with the same number of pixels as "D90" and installing Vari-angle LCD monitor, so contributes to waste reduction and resource saving.

(2) Reduction of hazardous substances

- Meets the Nikon Green Procurement Standards and the criteria of EU RoHS directive
- · Lead-free solder; Used on all circuit boards
- · Eco-Glass (lead and arsenic-free optical glass) usage: 100%

#### Product performance

"D5000" installs a Vari-angle LCD monitor, which gives you abilities to shoot from nearly any angle and improves the conveniences of live-view and D-Movie shooting. "D5000" is a high cost-effective digital camera, inheriting the high quality and high performance of shooting functions of upper type "D90" and condensing easy uses, such as enhanced scene mode.

#### NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://nikon.com/

URL http://imaging.nikon.com/products/imaging/lineup/digitalcamera/slr/d5000/index.htm

URL http://nikon.com/about/csr/report/index.htm

Available in: Worldwide





Nikon Digital SLR camera D5000

#### **EP-1-100**

#### Home electric appliances/lighting

digital cameras

## Nikon Digital Compact Camera COOLPIX S1000pj

#### Environmental performance

(1) Resource saving

- The suppression of photo print, by using a built-in projector, saves paper resource
  (2) Power consumption efficiency: 19% higher than the previous model "S50", even with
  the advanced performances, such as increased pixel number, high magnification
- zoom and high sensitivity
  (3) Reduction of hazardous substances
  - Meets the Nikon Green Procurement Standards and the criteria of EU RoHS directive.
  - · Lead-free solder; Used on all circuit boards
  - · Eco-Glass (lead and arsenic-free optical glass) usage: 100%

#### **Product performance**

"COOLPIX S1000pj" is the first compact digital camera with a built-in projector in the world. You can start up the projector only by a touch of a button and enjoy projecting pictures on the spot they taken. "COOLPIX S1000pj" is a highly cost-effective camera with advanced functions, such as Optical 5x zoom from wide angle 28mm, VR image stabilization and Scene Auto Selector etc.

#### NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://nikon.com/

URL http://imaging.nikon.com/products/imaging/lineup/digitalcamera/coolpix/ s1000pj/index.htm

URL http://nikon.com/about/csr/report/index.htm

Available in: Worldwide





Nikon Digital Compact Camera COOLPIX S1000pj

## Home electric appliances/lighting

digital cameras

## Casio Digital Camera: EXILIM EX-H10

#### Environmental performance

- \* Reduced energy consumption / Highly-efficient circuitry / Energy consumption is reduced by 40% thanks to a new algorithm (\*Based on the amount of energy consumption per shot under CIPA standards.
- Compared with Casio's conventional model, the EX-Z200)
- Enables users to take up to 1,000 shots with a single battery charge
- Contains no particular chemicals (lead, mercury, cadmium, chromium hexavalent, flame retardant polybrominated biphenyls directed by EU RoHS/No PBDE)

#### Product performance

- \* 12.10 million-pixel image sensor
- \* 10 x optical zoom lens
- \* Ultra-wide angle 24 mm lens

#### CASIO COMPUTER CO. LTD

1-6-2 Honmachi Sibuya Tokyo, Japan URL http://world.casio.com/ URL http://world.casio.com/env/





#### EP-1-102

## Home electric appliances/lighting

video cameras

Production

High quality

## **Digital High Definition Video Camera HDC-TM30**

#### Environmental performance

Achieved power consumption of approx.3.5W due to low power circuit

Achieved Main Product weight (w/o Battery) of approx.227g.

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

Full-HD & compact body. Built-In 32GB Memory & SD Card Twin Memory. 16x Optical Zoom. Intelligent Auto Focus & Touch Screen.

## Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/ URL http://panasonic.net/csr/





Available in: Japan

Digital High Difinition Video Camera HDC-TM30

## Home electric appliances/lighting

sperker

## High-Fidelity and eco-friendly loudspeaker with cabinets made from used whiskey barrels

#### **Environmental performance**

The cabinets of the "Pure Malt Speaker" series are made from used whiskey barrels (virgin white oak) that produce rich sounds. Pioneer promotes the 3Rs (Reduce, Reuse, Recycle) aggressively, by not using new wood, preventing forest destruction, and preserving bio-diversity.

Oak trees grow for 100 years before serving as whiskey casks for another 50 to 70 years. After that, the wood is recycled into speaker cabinets that produce warm, rich sounds for many more years. The Pure Malt Speakers were commercialized in 1998, where Pioneer also uses retired casks for making audio racks and other products, expanding the Pure Malt series lineup, and promoting the recycling of natural materials.

In addition, energy is saved during production by using the heat of natural spas, Pioneer's original efforts to reduce harmful chemical substances, which are stricter than those of the RoHS Directive, and the low VOC (Volatile Organic Compounds), are also realized.

A portion of the revenues from product sales is donated to the Green Fund of the National Land Afforestation Promotion Organization as a contribution to government-led promotion of afforestation.

#### PIONEER CORPORATION

1-1 Shin-ogura, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0031, Japan Tel +81-44-580-3211

URL http://pioneer.jp/

URL http://pioneer.jp/components/puremalt/index.html?cl=200903\_main\_nuremalt

URL http://pioneer.jp/corp/csr/index.html

Available in: Worldwide





PURE MALT SPEAKER S-A4SPT-PM

#### EP-1-104

#### Home electric appliances/lighting

compact stereo systems

## **Home Theater System SC-BTX70**

#### Environmental performance

Achieved stand-by power consumption of approx. 0.2W.

Achieved power consumption of approx. 85W due to low power circuit technology. Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

2.1ch Blu-ray Disk Home Theater System.Slim and Stylish design.7.1ch Virtual Surround Speaker system.YouTube compatible, VIERA CAST.Digital power Amplifier 375W.



## **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/ URL http://panasonic.net/csr/



Available in: North America

Home Theater System SC-BTX70

## Home electric appliances/lighting

compact stereo systems

## DVD Stereo System SC-VK880/VK680/VK480

#### Environmental performance

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved. Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

5-DVD Changer

5.1ch (VK880)/2.1cH (VK680)/2cH (VK480) High Power and Large Speaker System

USB Recording from CD (MP3disk)

Digital power Amplifier

1000W (VK880)/500W (VK680)/250W (VK480)



## Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/

URL http://panasonic.net/csr/



Available in: Central America, South America

DVD Stereo System SC-VK880

#### **EP-1-106**

## Home electric appliances/lighting

compact stereo systems

## **CD Stereo System SC-AK580**

#### Environmental performance

Circuit has been integrated to promote energy saving, and compactness and light weight of circuit boards and fundamental parts have been improved.

Non-Use of Specific Chemical Substances \*

(\*: Lead, mercury, cadmium, hexavalent chromium, two specific brominated flame retardants, designated by the EU RoHS Directive.)

#### Product performance

5-CD Changer High Power and Large Speaker System 500W Digital power Amplifier USB Recording from CD (MP3disk)



## **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/ URL http://panasonic.net/csr/



Available in: Central America, South America

CD Stereo System SC-AK580

4 5

Eco-product // Home electric appliances/lighting

7

#### Home electric appliances/lighting

IC recorder

## OLYMPUS IC Recorder Voice-Trek DM-420/520, DM-450/550

#### **Environmental performance**

(1) Hazardous substances-free product:

It does not use any materials prohibited by the Environment-related Substances Used in Product Control Rules. No polyvinyl chloride (PVC) is used in the electrical insulation of interconnection.

(2) Energy Efficiency

Compared with conventional products, recording time of this product with stereo XQ mode is extended to 30 hours from 14 hours; increases by 114%.

(3) Resource saving:

Compared with conventional products, it consumes about 7% less one's packed weight and 40% less one's packed volume, that also contribute less environmental burdens occurring during distribution.

#### Product performance

It has High Quality Stereo Microphone and Linear PCM Recording capability, so that can record nonconventional high quality sound. Also supported functions to make it easy-to-use are rich, such as Recording Scene Selection, Voice Guidance and so on.

## Olympus Imaging Corp.

Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo, 163-0914, Japan Tel +81-3-3340-2210 Fax +81-3-3340-8380

E-mail environ@ot.olympus.co.jp

URL http://www.olympus.co.jp/en/

URL http://asia.olympus-imaging.com/products/voice recorders/digital rec/dm550/

URL http://www.olympus-global.com/en/corc/csr/

Available in: Worldwide



Voice-Trek DM-420/520, DM-450/550

LC

Stage

#### **EP-1-108**

#### Home electric appliances/lighting

End-of-life

electronic dictionary

Production

Transport

. Use/repair

## Casio Electronic Dictionary: EX-word XD-A Series

#### Environmental performance

- $^{\star}$  Load efficiency is improved by 36% by downsizing the individual package, reducing  $\rm CO_2$  emissions during transportation (compared with Casio's conventional model, the XD-SP6600).
- \* Battery life of approximately 150 hours for two AA alkaline batteries when the color display is continuously on while using the English-Japanese dictionary (With a brightness level of 3 and when the display is set to go dark after 30 seconds of non use)

#### Product performance

- \* Blanview liquid crystal is used to enhance viewability and give a longer battery life.
- \* The Twin Touch Panel, which consists of a main panel and a panel for handwriting, allows users to operate the device instinctively.
- \* The durable design, TAFCOT, is adopted to diminish shocks caused by falling, pressurization and vibration.
- \* The "Contents Plus" system enables users to add separately-sold contents, sound and text data.
- \* Excellent native pronunciation.

#### CASIO COMPUTER CO. LTD

1-6-2 Honmachi Sibuya Tokyo, Japan URL http://world.casio.com/ URL http://world.casio.com/env/



Available in: Japan, Worldwide

## Home electric appliances/lighting

watch

## Casio Wristwatch: Radio Wave Solar Watch G-SHOCK

#### Environmental performance

\* Uses a solar-power battery as the power source.

#### Product performance

- \* Shock resistant structure
- \* An originally-designed solar system is utilized to transform even low amounts of light into power
- \* The latest auto radio-wave receiving function, Multi-Band 6, receives time calibration radio signals up to six times per day (Japan[2], US, UK, Germany and China).





## **CASIO COMPUTER CO. LTD**

1-6-2 Honmachi Sibuya Tokyo, Japan

URL http://world.casio.com/

URL http://www.casio.com/products/Timepiece/G-Shock/

URL http://world.casio.com/env/

Available in: Japan, Worldwide

Eco-product // Home electric appliances/lighting

## New eco-friendly Prius with hybrid power

#### Environmental performance

The new Prius model is equipped with THS, a new-generation Toyota Hybrid System known as Hybrid Synergy Drive, which refers to the simultaneous evolution of ecology and power. It has achieved world-beating fuel economy of 35.5 km/L\* and low exhaust emissions. The drive has been dramatically improved by the development of hybrid power. 10-15 mode drive. \*Ministry of Land, Infrastructure, and Transport figure.



## **Toyota Motor Corporation**

1. Tovota-cho. Tovota-shi. Aichi. 471-8571. Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi aida@mail.toyota.co.jp URL http://www.toyota.co.jp



Prius

#### EP-2-002

#### Carriers/automobiles

#### automobiles

#### TOYOTA FCHV-adv

#### Environmental performance

The Toyota FCHV-adv achieved 25% better fuel economy and 60% higher pumpto-wheel efficiency in the Japanese 10-15 test cycle (Toyota test data) due to improvements made to the Toyota FC Stack and a redesigned fuel cell control system.

#### Product performance

From the start of the fuel cell vehicle effort in 1992, Toyota has pursued the development of its own fuel cell stack, the core component of any fuel cell vehicle. This high-performance fuel cell-the Toyota FC Stack-is a performance leader among vehicular fuel cells worldwide. In addition to the fuel cell, the FCHV has a secondary battery which stores energy regenerated during braking. When combined with the hybrid system which was first put to large-scale application in the Prius, the FCHV achieves highly efficient operation through sophisticated energy management. (Fuel type) Hydrogen, (Max cruising range) 330 km, (Max speed) 155 km/h, (Weight) 1880 kg, (Seating capacity) 5 people.



## **Toyota Motor Corporation**

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TOYOTA FCHV-adv

#### EP-2-003

#### Carriers/automobiles

automobiles

## **Eco-friendly vehicle "TOYOTA CROWN HYBRID"**

#### **Environmental performance**

Automobile hybrid systems combine two motive power sources, namely an internal combustion engine and an electric motor, to take advantage of the benefits provided by both these power sources while compensating for each other's shortcomings, resulting in highly efficient driving performance. Although hybrid systems use an electric motor, they do not require external charging as do all-electric vehicles.

#### Product performance

Toyota Crown Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure and Transport.

- 1) Specific fuel consumption (10-15 Japanese test cycle): 15.8 km/liter
- 2) Technology to reduce fuel consumption
- Variable valve timing
- Electric power steering system
- Direct injection 4 stroke gasoline engine
- Idling stop system

## **Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi\_aida@mail.toyota.co.jp URL http://www.toyota.co.jp





TOYOTA CROWN HYBRID

#### EP-2-004

#### Carriers/automobiles

automobiles

## **Eco-friendly Hybrid vehicle "TOYOTA ALPHARD HYBRID"**

#### Environmental performance

Toyota Alphard Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure, and Transport.

- (1) Specific fuel consumption (10-15 Japanese test cycle): 17.2 km/liter
- (2) Technology to reduce fuel consumption: Hybrid system Continuously variable transmission, Variable valve timing



# **Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi\_aida@mail.toyota.co.jp URL http://www.toyota.co.jp



Eco-friendly Hybrid vehicle "TOYOTA ALPHARD HYBRID"

## **Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"**

#### Environmental performance

Toyota Harrier Hybrid has cleared the 2010 Fuel Efficiency Standards, and has also achieved an exhaust emission level that is 75% lower than the 2005 Exhaust Emission Standards of the Ministry of Land, Infrastructure, and Transport. (1) Specific fuel consumption (10-15 Japanese test cycle): 17.8 km/liter (2) Technology to reduce fuel consumption: Hybrid system --Continuously variable transmission, Variable valve timing, Electric power steering system



## **Toyota Motor Corporation**

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Eco-friendly Hybrid vehicle "TOYOTA HARRIER HYBRID"

#### EP-2-006

#### Carriers/automobiles

#### automobiles

## **Eco-friendly Lexus LS600h with hybrid power**

#### Environmental performance

The Lexus 600h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 12.2 km/L and low exhaust emissions.

# Production LC Stage Transport Use/repair



Lexus LS600h with hybrid power

# **Toyota Motor Corporation**

1. Tovota-cho. Tovota-shi. Aichi. 471-8571. Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi\_aida@mail.toyota.co.jp URL http://www.toyota.co.jp

## **Eco-friendly Lexus GS450h with hybrid power**

#### Environmental performance

The Lexus 450h is equipped with the Toyota Hybrid System. It has achieved fuel economy of 14.2 km/L and low exhaust emissions.



## **Toyota Motor Corporation**

1, Toyota-cho, Toyota-shi, Aichi, 471-8571, Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi\_aida@mail.toyota.co.jp URL http://www.toyota.co.jp



Lexus GS450h with hybrid power

#### **EP-2-008**

#### Carriers/automobiles

#### automobiles

## Honda FCX Clarity hydrogen fuel cell electric vehicle

#### Environmental performance

The FCX Clarity was designed from scratch as a dedicated hydrogen fuel cell electric vehicle. It is powered by the highly compact, efficient and powerful Honda V Flow fuel cell stack. Boasting a low-slung, dynamic and sophisticated appearance made possible by the innovative layout of the fuel cell power plant, the FCX Clarity offers superior design and driving performance as well as environmental responsibility.

#### Product performance

Fuel/cruising range: 620km in 10-15 mode (Honda calculations)

# Global warming Air/Water/Soil Energy High quality Saving Design Production Resource Stage End-of-life Use/repair

# Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/

URL http://world.honda.com/FCXClarity/

URL http://world.honda.com/CSR/



Available in: Japan, U.S.A

Honda FCX Clarity

## **Honda Insight**

#### Environmental performance

Designed to set the standard for compact cars for a new era, the Insight combines outstanding environmental performance with fun, responsive driving and efficient, versatile packaging. The all-new Honda Insight was developed with the goal to provide these attributes in a car that is affordable to more customers.

Offering customers exceptional fuel economy, the Insight features a newly developed hybrid system including a 1.3-liter i-VTEC engine and Honda's proprietary Integrated Motor Assist (IMA). To further support fuel-efficient driving, the Insight features the Ecological Drive Assist System (Eco Assist) as standard equipment on all models.

## Global warming Material Production LC Stage Transport End-of-life , Use/repair

#### Product performance

fuel economy: 30 km/L in 10-15 mode (G-type and L-type)

## Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/

URL http://world.honda.com/INSIGHT/

URL http://world.honda.com/CSR/



Available in: Japan, Europe, North America

Honda Insight

#### EP-2-010

#### Carriers/automobiles

#### automobiles

## **Honda Civic Hybrid**

#### Environmental performance

The Civic Hybrid is equipped with the new 3-Stage i-VTEC + IMA Honda Hybrid System that delivers both spirited performance and an ultra-high fuel economy of 31 km/L\*.

\* Civic Hybrid MXB-type in 10-15 mode



## Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/

URL http://world.honda.com/CIVICHYBRID/

URL http://world.honda.com/CSR/



Available in: Japan, Asia, North America, South America

Honda Civic Hybrid

#### Clean Diesel Car "EXTRAIL 20GT"

#### Environmental performance

Newly launched Nissan Clean Diesel EXTRAIL 20GT meets most stringent emissions regulation introduced last year and also achieves excellent fuel economy such as 15.2km/l in 10/15 mode by featuring advanced technologies for emission reduction.

- Common rail fuel injection system
- Re-circulated exhaust gas cooler
- Diesel particulate filter
- Lean NOx trap catalyst
- Double swirl port

Nissan Clean Diesel EXTRAIL 20GT highly reduced typical diesel noise and vibrations and also provides superior quietness in the cabin.

## Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan Tel +81-45-523-5523

URL http://www.nissan.co.jp/





## EP-2-012 Carriers/automobiles

automobiles

#### **EV "LEAF"**

#### Environmental performance

Nissan LEAF is a zero-emission car with 5 seating capacity that doesn't emit  $\mathrm{CO}_2$  and exhaust gas while the vehicle is moving, and being designed for exclusive use as mass production type electric vehicle (EV). It enables to deliver a driving range of more than 160km(100miles) on one full charge\* (\*US LA4 mode). Nissan LEAF is powered by laminated compact lithium-ion batteries that generate power output of over 90kW, electric motor that delivers 80kW/280Nm, and regenerative braking system that generates electricity by using energy from break.

Charging at home through a 200V outlet is estimated to take approximately eight hours to full charge, and 10 minutes charging by a quick charger that is located outside makes about 50km driving range possible.

Slated for launch in late 2010 in Japan, the United States, and Europe.

\* Thermal power generation causes CO<sub>2</sub> emissions, but nuclear power, hydroelectric power, wind power and photovoltaic generation don't. In Japan, CO<sub>2</sub> emissions from electric vehicles (EV), even when taking into account emissions from the related electric power generation, are less than half of those from gasoline-powered vehicles over an equivalent distance.

# Nissan Motor Co., Ltd.

1-1-1 Takashima, Nishi-ku, Yokohama-shi, Kanagawa, 220-8686, Japan Tel +81-45-523-5523





Resource/Materials/Production/ Transfer/**Use**/End-of-Life



Available in: Japan, Europe, North America



#### The New Generation Electric Vehicle i MiEV

#### Environmental performance

The i-MiEV new-generation electric vehicle is powered by a large capacity lithium-ion battery system and a new high-efficiency high-output permanent magnet synchronous electric motor. The i-MiEV may be described as the ultimate eco-car as it drives on all-electric power and produces zero drivetime CO2 emissions\*.

\*: Excluding CO<sub>2</sub> emitted during the generation-to-charging process.

Mitsubishi Motors became the first manufacturer to bring a truly practical new-generation electric vehicle to market when it started delivering the i-MiEV principally to Japanese corporate, government agency and local authority customers in July 2009. The company plans to begin full-scale sales to individual customers in Japan, and to start production and sales of a left-hand drive version for the overseas market in 2010.



## MITSUBISHI MOTORS CORPORATION

33-8. Shiba 5-chome, Minato-ku, Tokyo, 108-8410, Japan

Tel +81-3-6852-4276

E-mail hidenori.uki@mitsubishi-motors.com

URL www.mitsubishi-motors.com

URL http://www.mitsubishi-motors.com/special/ev/index.html

URL http://www.mitsubishi-motors.com/corporate/environment/report/e/index.html



i MiEV: Mitsubishi innovative Electric Vehicle

#### EP-2-014

#### Carriers/automobiles

automobiles

#### **Paiero Diesel** (Japan spec)

#### Environmental performance

Since October 2008, Mitsubishi Motors has released a Pajero SUV equipped with a new "New Long-term Regulation"-compliant diesel engine. The new 3.2-liter engine features common-rail fuel injection, a NOx trap catalyst, and a Diesel Particulate Filter (DPF), which bring emissions in line with Japan's tough standards while providing a much quieter drive experience. In addition, fuel economy is improved 15% over the gasoline variant.

All versions of the new Pajero Diesel achieve the 2005 standard for fuelefficiency.

Same versions achieve the 2005 standard for fuel-efficiency plus 5%.



#### MITSUBISHI MOTORS CORPORATION

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E-mail hidenori.uki@mitsubishi-motors.com

URL www.mitsubishi-motors.com

URL http://www.mitsubishi-motors.co.jp/pajero/index.html

URL http://www.mitsubishimotors.corporate/environment/report/e/index.html



PAJERO (Diesel)



#### **Natural Gas Vehicle**

#### **Environmental performance**

Because of its environmentally-friendly features, NGV plays an important role in reducing the world's dependency on oil. In cooperation with the manufacturers, Osaka Gas promotes the broader use of NGVs in its service area by means of developing bi-fuel vehicles which are utilized in areas where there is no natural gas filling station.

The natural gas vehicle (NGV) is environmentally friendly as it emits no PM / black exhaust and less  $NO_x$  /  $CO_2$  than gasoline or diesel vehicles.

#### Product performance

 Mileage per filling Compressed natural gas: 160 km Gasoline: 665 km Total: 825 km

- (2) Displacement: 2,000 cc
- (3) Trunk size: 3,000/1,545/1,335 mm
- (4) Maximum load: 1,250 kg

## Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL http://www.osakagas.co.jp/indexe.html

URL http://www.osakagas.co.jp/csr\_e/index.html





Available in: Japan Bi-fuel vehicle

EP-2-016 Carriers/automobiles

buses

## The new-generation hybrid bus "Aero Star Eco Hybrid"

#### Environmental performance

Aero Star Eco Hybrid has the heavy vehicle mode fuel efficiency of 5.0 km/L largely surpassing the 2015 heavy vehicle fuel efficiency standard using a small-size and light-weight diesel engine for power generation as well as a regenerative braking system by which braking energy generated during deceleration is converted through an electronically controlled brake and stored in a battery.



# Mitsubishi Fuso Truck and Bus Corporation

890-12, Kashimada, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0058, Japan Tel +81-44-330-7700

URL http://www.mitsubishi-fuso.com/en/index.html



Available in: Japan

Aero Star Eco Hybrid

#### ISUZU ERGA/ERGA-mio

#### Environmental performance

ERGA/ERGA-mio: The CNG-MPI engine mounted on ERGA/ERGA-mio CNG complies with the strict New CNG Vehicle Exhaust Gas Emission Technology Guideline (the New Long-term Emissions Regulations). With this engine, NOx emissions are reduced 85% from the requirements of the New Long-term Emissions Regulations, and as a modified vehicle it has been certified by the Ministry of Land, Infrastructure, Transport and Tourism as a low-emission heavy-duty vehicle.

In addition, this vehicle reaches the 2009 accreditation criterion of the Eight Cities and Prefectures Low-Emission Car Designation System for Less Polluting Cars defined by the eight metropolitan cities and prefectures.

An idling stop-and-start system is equipped as standard specifications to reduce CO<sub>2</sub> emissions and improve fuel economy.



#### ISUZU MOTORS LIMITED

6-26-1.Minami-oi.Shinagawa-ku.Tokyo. 140-8722. Japan

URL http://www.isuzu.co.jp/world/index.html

URL http://www.isuzu.co.jp/world/product/index.html

URL http://www.isuzu.co.jp/world/corporate/about/environmental.html



Available in: Japan

#### EP-2-018

#### Carriers/automobiles

trucks

## Clean Diesel Truck "TOYOTA DYNA & TOYOACE Hybrid"

#### Environmental performance

This truck equipped with a hybrid system is the first of its kind in the world and was jointly developed with Hino Motors, Ltd. This truck has achieved a PM & NO<sub>x</sub> emission level that is 10% lower than the standard levels for 2005, qualifying it as a low emission diesel vehicle. The truck's fuel efficiency has also been improved by 30%. Max payload: 2-3 tons; Fuel type: low-sulfur diesel at 50 ppm max



# **Toyota Motor Corporation**

1. Tovota-cho. Tovota-shi. Aichi. 471-8571. Japan Tel +81-565-23-1341 Fax +81-565-23-5754 E-mail satoshi\_aida@mail.toyota.co.jp URL http://www.toyota.co.jp



Clean diesel truck "TOYOTA DYNA Hybrid"

## **Light Duty Truck "Canter Eco Hybrid"**

#### Environmental performance

The Canter Eco Hybrid light-duty truck, featuring a parallel hybrid system, significantly reduces fuel consumption and emissions.

It will begin regular sales of hybrid trucks in targeted export markets in 2010



# Mitsubishi Fuso Truck and Bus Corporation

890-12, Kashimada, Saiwai-ku, Kawasaki-shi, Kanagawa, 212-0058, Japan Tel +81-44-330-7700

URL http://www.mitsubishi-fuso.com/en/index.html



Canter Eco Hybrid

Available in: Japan, Oceania, Europe

## Carriers/automobiles

trucks

# ISUZU ELF Hybrid

EP-2-020

#### Environmental performance

ELF Diesel Hybrid, featuring the optimal hybrid system for light-duty trucks, is an advanced hybrid vehicle, offering ideal trade-off where both needs for a powerful commercial vehicle and for fuel efficiency and low emissions are met. The latest hybrid system is mounted on Isuzu's next-generation diesel D-CORE engine. Since no special infrastructure is required, the low emission vehicle is ideal for all regions.

Thanks to Isuzu's advanced technology, the basic performance, expected of all commercial vehicles - economy, durability, reliability, and safety - is enhanced to the utmost level in ELF Diesel Hybrid. The ELF Diesel Hybrid meets the 2015 fuel efficiency standards, the new long-term emissions regulations, and is certified by the Ministry of Land, Infrastructure, Transport and Tourism as a low-emission heavy-duty vehicle (with 10% less NOx and PM emissions than required by the New Long-term Regulations).



## ISUZU MOTORS LIMITED

6-26-1, Minami-oi, Shinagawa-ku, Tokyo, 140-8722, Japan

URL http://www.isuzu.co.jp/world/index.html

URL http://www.isuzu.co.jp/world/product/index.html

URL http://www.isuzu.co.jp/world/corporate/about/environmental.html



Available in: Japan

#### ISUZU ELF CNG

#### Environmental performance

ELF CNG is an environmentally-friendly (both in cities and rural areas) next-generation CNG vehicle offering outstanding emission performance that meets the "Post New Long-term Emission Regulations" and is the only alternative-energy-ready vehicle with an established infrastructure.

It boasts the best emission performance among all the low-emission vehicles available for practical use. It is not only the most cutting-edge LEV, but is also practical as commercial vehicles.

- \* Its fuel injection uses a Multi-point Injection (MPI) system and corresponds to the "Post New Long-term" emission regulations.
- \* Natural gas is superior in CO<sub>2</sub> emission properties. To further decrease CO<sub>2</sub> emissions, however, ELF CNG uses an idling stop-and-start system.



#### ISUZU MOTORS LIMITED

6-26-1.Minami-oi.Shinagawa-ku.Tokyo. 140-8722. Japan

URL http://www.isuzu.co.jp/world/index.html

URL http://www.isuzu.co.jp/world/product/index.html

URL http://www.isuzu.co.jp/world/corporate/about/environmental.html



Available in: Japan

## EP-2-022

#### Carriers/automobiles

trucks

#### ISUZU FORWARD CNG

#### Environmental performance

FORWARD CNG-MPI boasts outstanding environmental performance among the low-emission vehicles. The newly-developed CNG-MPI engine realizes significant improvement in emissions performance. NOx (nitrogen oxide) and NMHC (nonmethane hydrocarbon) emissions are reduced 85% and 75%, respectively compared to the 2005 Regulation on Exhaust Gas and Noise Emission (New Long-term Emissions Regulations), the world's strictest environmental standards.

All the vehicles in this series meet the New CNG Vehicle Exhaust Gas Emission Technology Guideline (the New Long-term Emissions Regulations). It is certified as low emission heavy-duty vehicle. With the improved engine performance, Forward CNG-MPI offers ideal trade-off where both needs for sophisticated environmental performance and strong power are met.



#### ISUZU MOTORS LIMITED

6-26-1.Minami-oi.Shinagawa-ku.Tokyo, 140-8722, Japan

URL http://www.isuzu.co.jp/world/index.html

URL http://www.isuzu.co.jp/world/product/index.html

URL http://www.isuzu.co.jp/world/corporate/about/environmental.html



Available in: Japan, Thailand

## **Economy & Ecology Crane U-can ECO**

U-can ECO received the 2007 Energy Conservation Grand Prize for excellent energy conservation equipment (Chairman Prize of ECCJ) for the first time in the industry. (\*1)

The electronic-controlled double pump mechanism, "Eco Pump System," cuts the number of revs by

half for cranes. (\*2) As a result, fuel efficiency has been improved by approximately 40 % and CO<sub>2</sub> emissions have been reduced, realizing a high economic effect and a reduction of the environmental burden (CO<sub>2</sub> emissions). In addition, the noise has also been decreased.

- (1) Approximately 160,000 yen (\*3) of fuel expenses is saved thanks to the improvement of fuel
- efficiency by roughly 40% (\*2). Approximately 4,000 kg (\*4) of  $CO_2$  emissions can be cut a year thanks to the reduction of gas
- discharge by roughly 40% (\*2).
  (3) Noise is reduced (\*5) by approximately △4 dB.

- A crane to build on large- and medium-sized trucks
- \*2 Compared with the company's product U-can (for middle-sized trucks)
  \*3 Light oil price: 106 yen/L, In case of being operated three hours per day, 250 days a year
  \*4 CO<sub>2</sub> emission coefficient: 2.62 kg-CO<sub>2</sub>/L
- \*5 Comparing the maximum when a crane is operated. Average within 7 m on each side of the crane

#### **FURUKAWA UNIC CORPORATION**

3-14. Nihonbashi Muromachi 2-chome Chuo-ku Tokyo. Japan





Available in: Japan

#### EP-2-024 Carriers/automobiles

motorcycles

## **Honda Super Cub 50**

The Super Cub 50's 50-cc air-cooled 4-stroke single-cylinder engine is equipped with Programmed Fuel Injection (PGM-FI\*), which brings an ideal balance between energy and environmental design and smooth and powerful output characteristics. This system enables appropriate, computer-controlled fuel supply according to various driving conditions, and gasoline mileage, especially on roads in urban areas where frequent acceleration is required, is greatly improved. In addition, thanks to the catalyzer equipped inside the exhaust pipe along with PGM-FI, the vehicle complies with national exhaust emissions regulations for two-wheel vehicles.

\* PGM-FI (Programmed Fuel Injection) is a registered trademark of Honda.

#### Product performance

The Cub series is currently produced in 15 countries and has been sold in a total of over 160 nations, reaching a total production of 64 million (as of the end of March 2009)

- 4-stroke engine that offers excellent fuel efficiency, silence, reliance and endurance
- \* Low-floor backbone frame to allow users to get on and off easily.
- \* Auto centrifugal clutch dispensing clutch operation

## Honda Motor Co., Ltd.

2-1-1, Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/ URL http://world.honda.com/CSR/





Available in: Japan

Honda Super Cub50

#### **Environmental performance**

#### 1) Loop-charge technology

Comfortable running with automatic control program & long running distance. Includes a smart automatic control system that changes the motor output on uphill slopes depending on gradient and automatically switches the motor to a generator on downhill slopes. (Mileage can be extended by about 70 % compared with Standard Mode without regeneration charging.)

2) Power up mode

Powerful assistance of 1:2 compared with assistance is achieved. Front model (CY-SPA26D) is 1:1 compared with assistance.

3) Abolition of polystyrene foam for packaging.

#### Product performance

Battery light with reflector and three high-intensity white LED lights for the headlamp of the bike's light system. The taillight uses a brake lamp whose blink rate changes when the brake is applied in association with the operation of the rear brake lever. Simple design with a new S-shaped frame featuring built-in cords and wiring.

## SANYO Electric Co.,Ltd.

5-5, Keihan-hondori2-chome, Moriguchi City, Osaka, Japan





Available in: Japan, North America

Electric Hybrid Bicycle CY-SPA600NA

EP-2-026

#### Carriers/automobiles

forklifts

#### Internal combustion lift truck "GENEO (8FG/D)

#### Environmental performance

The newest model internal combustion lift truck "GENEO (8FG/D)" now comes equipped as standard with an electronically controlled fuel injection system and a three-way catalytic muffler. Compared to our previous model lift truck, CO emissions have been cut by nearly 57%, and NOx and HC emissions have been reduced nearly 99%. Thanks to these improvements the exhaust gasses are cleaner and they already meet the new exhaust gas emissions standards for gasoline powered vehicles.

Also, operating noise has been reduced through the adoption of sound insulation and absorption measures, as well as a mechanism to prevent fork operating noise. Improvements to the paints used and the use of leadfree solder have lead to huge reductions in lead and hexavalent chromium.



# **Toyota Industries Corporation**

2-1, Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan Tel +81-566-22-2511 Fax +81-566-27-5650

URL http://www.toyota-industries.com/

URL http://www.toyota-industries.com/product/indv/lf/sangyo01. html#sangyo01a

URL http://www.toyota-industries.com/csr/library/



Internal combustion lift truck "GENEO (8FG/D) "

## Hitachi Monorail System friendly to the city environment

#### Environmental performance

Slim and light track beam guideway employed by Hitachi Monorail can contribute:

- Aluminum car body is easy-recyclable, and its light weight can reduce the electricity necessary to propel the Monorail.
- (2) Less air pollution by transferring exhaust gas from the car running under the guideway through an open track beam.
- (3) Shortening of construction period and reducing traffic congestion by manufacturing track beam outside the construction site and installing during night time.

#### Product performance

Rubber tires mounted on Hitachi Monorail is capable of negotiating smaller curve radius and steeper gradient, and it can provide "Line Alignment Design Flexibility" when it is planned for congested areas in a big city.

#### Hitachi, Ltd.

Akihabara Daibiru Building, 18-13, Soto-Kanda 1-chome, Chiyoda-ku, Tokyo, 101-8608, Japan

Tel +81-3-4564-4105 Fax +81-3-4564-6252





## EP-2-028 Carriers/automobiles

energy storage systems for rolling stock

## An Accumulating System for Railroad Carriages which Recycles Discharged Thermal Energy

#### Environmental performance

 Mitigation of climate change: 8% of inverter regenerated energy (energy generated during braking) is absorbed and recycled, amounting to 2% of the rolling stock acceleration energy.

#### Product performance

- Improvement in brake energy consumption: 50% of the energy previously consumed by the mechanical brakes of a motor-powered train is recycled.
- Increased brake life: Reduced brake abrasion lengthens the life of parts.



## TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4556 Fax +81-3-5444-9276

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Energy storage system (EDLC): COB015-A0, DC/DC converter system: COV068-A0

#### Environmental performance

(1) Power saving design: this product has preheat mode and power shutoff mode, and moreover, can switch to power shut-off mode upon pressing Power Saving key anytime.

(2) Non-halogen resin is used for the exterior and interior parts (except for some internal parts).

#### Product performance

The three functions of coping, printing and scaning are integrated into one main unit to help improve operational efficiency in the office.

# Resource Chemical substances Saving Material Chemical substances Saving Design Production Transport Use/repair



Digital Multifunctional System MX-M200D/M160D (inc. options)

## **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/

#### EP-3-002

## OA/IT equipment

multifunctional copy machines/printers

## **Digital Full Color Multifunctional System MX-2301N**

#### Environmental performance

- (1) Power saving design: this product has preheat mode and power shut-off mode, and moreover, can switch to power shut-off mode upon pressing Power Saving key anytime.
- (2) The product meets the requirements of the EU RoHS directive, and non-halogen resin is used for the exterior and interior parts (except for some internal parts).

#### Product performance

Mycros Toner HG offers higher image quality with less graininess and excellent resolution. Specifically, this product has high-level reproduction of neutral color images, fine lines and small letters with little deformation of images.

# Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



Digital Full Color Multifunctional System MX-2301N (inc. options)

Long-life

# Environmental performance

- (1) Power saving design: this product has preheat mode and power shutoff mode, and moreover, can switch to power shut-off mode upon pressing Power Saving key anytime.
- (2) The product meets the requirements of the EU RoHS directive, and non-halogen resin is used for the exterior and interior parts (except for some internal parts).

# Product performance

The two functions of coping and printing are integrated into one main unit to help improve operational efficiency in the office.

# Material Production LC Stage Transport End-of-life I . Use/repair



Digital Multifunctional System MX-M310/M310N/M260/M260N (inc. options)

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/

# EP-3-004

# OA/IT equipment

multifunctional copy machines/printers

# Digital Multifunctional System MX-M503N/M453N/M363N

### Environmental performance

- (1) An improved fixing roller increases heat efficiency during toner fixing. A white LED is employed as the light source for scanning documents. They decrease power consumption by up to 36% compared with the conventional machines.
- (2) It takes only 20 seconds to warm up when the power is turned on by optimizing electric control over various components. Thus, even in automatic power shut-off mode, standby mode can be resumed in short time.

# Product performance

This product offers enhanced basic performance such as color scanning capability and 1,200 dpi high resolution prints.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





Digital Multifunctional System MX-M503N/M453N/M363N (inc. options)

# EP-3-005 OA/IT equipment

multifunctional copy machines/printers

# Kyocera Mita Re-Condition MFP "KM-5035RC/4035RC/3035RC"

# Environmental performance

In order to realize a sustainable recycling-oriented society, it is necessary to promote the recycling of used products.

So we produce RC (reconditioning) models by using used parts taken from disassembled products, after cleaning and inspection.

Our rigorous selection and inspection processes guarantee high-quality and highly reliable RC machines.

# Product performance

Print speed (A4) KM-5035RC: 50ppm (B/W) KM-4035RC: 40ppm (B/W) KM-3035RC: 31ppm (B/W)

# **KYOCERAMITA**

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan Tel +81-6-6764-3555

URL http://www.kyoceramita.com/



# EP-3-006 OA/IT equipment

multifunctional copy machines/printers

# PIXUS MP640/PIXMA MP648, A4 Inkjet All-In-One Printer

### Environmental performance

- (1) Energy saving: Power savings of 43% have been achieved compared to the conventional printer MP610 through energy saving technology for the poweroff, standby, and operating modes.
- (2) Resource Saving: Package volume have been reduced with compact design and strengthening of the printer. 11% reduction by printer volume and 29% reduction by package volume have been achieved in comparison with those of the MP610.
- (3) Eco-mark label is approved.

### Product performance

- (1) The high-definition photo-printing with exceptional resolution up to 9600 dpi and ink droplets of 1 pl (pico-liter), with 43 sec. of high-speed A4 photo printing, and the 4800dpi high-resolution scanning.
- (2) Quick Start and Easy-Scroll Wheel for user convenience.
- (3) Wireless printing and scanning are available with wireless LAN.

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225

URL http://www.canon.com/environment/





Available in: Worldwide

PIXUS MP640/PIXMA MP648

Production

Transport

. Use/repair

Global

Material

End-of-life [

# Environmental performance

(1) Energy saving with Canon's original On-demand fixing technology and less than 1.5W power consumption in sleep mode. (2) CO<sub>2</sub> emissions in product life cycle (the stages of producing, use and transportations) are reduced, using original new design system. (3) Biomass plastic with highest levels of flame retardance is used in exterior plastic parts. Biomass plastic is also used in a touch pen and operation buttons. (4) Compliance with the RoHS Directive which restricts and prohibits the use of the 6 chemical substances, and the use of lead-free mechanical parts which goes beyond legal requirements.

# Product performance

- (1) A large screen with user-friendly icons making operation ever so easy and customizable menu to improve operation efficiency
- (2) Security options to ensure that your documents stay safe and confidential
- (3) Space-saving design

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/



LC

Stage

imageRUNNER ADVANCE C5035 with options including Inner Finisher

Available in: Worldwide

EP-3-008

OA/IT equipment

multifunctional copy machines/printers

# Black and White Multifunctional Printer iR 3245/3245N

### Environmental performance

- (1) Energy Saving. 1.5W sleep mode and 10 sec or less from sleep mode by use of Canon's original On-demand fixing technology
- (2) Compliance with the RoHS Directive of restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)
- (3) Standard automatic duplexing

### Product performance

- (1) Copy/Print speed 45 ppm (A4 size)
- (2) Compact body of 565 mm (same as with optional Finisher-S1)
- (3) Providing with color scanning. With the optional Color Universal Send Technology, users can distribute scanned documents to multiple network destinations such as e-mail addresses and network folders.
- (4) Control panel designed with a new TFT touch-screen, providing a wider viewing angle and greater contrast to facilitate easier operation.

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/

Available in: Worldwide



Eco-product // OA/IT equipment

### Environmental performance

The used machines collected from the customers are disassembled and remanufactured. Only the parts complying with the remanufacturing quality standards are selected and cleaned. Canon's original recycling technology is applied to clean the exterior parts. The high rate of reused parts reduces environmental burden (converted to CO<sub>2</sub> emissions) up to the manufacturing stage.

### Product performance

Copy/Print speed (B&W/Full color): 32/32 ppm (A4 size)

# Recycled Material Production LC Stage Transport End-of-life . Use/repair



iR C3200N-R

LC

Stage

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/

Available in: Japan, Republic of Korea

# EP-3-010

# OA/IT equipment

Purification

Production

Transport

multifunctional copy machines/printers

Material

End-of-life

# Compact Color Multifunctional Printer, MF8350Cdn/MF8330Cdn

### Environmental performance

- (1) Energy saving with Canon's original On-Demand fixing technology. The power consumption is about 3W in sleep mode.
- (2) Compliance with the RoHS Directive which restricts and prohibits the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)
- (3) Duplex printing function provided

# Product performance

- (1) 20 ppm/cpm in color and mono (A4 size)
- (2) A user-friendly wide LCD display is used. Animated troubleshooting makes operation effortless.
- (3) Space-saving design of 430mm wide

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/



MF8350Cdn

Available in: Worldwide

198



# **iR 6570N**

### Environmental performance

(1) The used machines collected from the customers are disassembled and remanufactured. Only the parts complying with the remanufacturing quality standards are selected and cleaned. An average 91% of parts are reused by weight with Canon's original recycling technology for cleaning the exterior parts. The high rate of reused parts reduces environmental burden (converted to CO<sub>2</sub> emissions) up to the manufacturing stage.

(2) Canon's original IH fixing technology is equipped, which achieves great reduction of energy consumption.

# Product performance

- (1) 65ppm
- (2) Standard LIPS LX is incorporated which shortens data processing time and improves printing performance

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/





iR 6570N-R for Japan (same as iR 6570N for Korea) with optional finisher

Available in: Japan, Republic of Korea

### EP-3-012 OA/IT equipment

multifunctional copy machines/printers

# Full-color Digital Multifunction Device, DocuCentre-IV C2260

[Major Energy and Environmental Design]

- Industry leading (\*1) energy-saving performance (TEC value: 1.69 kWh/(DC-IV C 2260 CP)
- Achieving 3 W or below power usage when in sleep mode Silent design using fewer cooling fans.
- Lower emissions of harmful substances due to less use of lead and halogen.
- Use of biomass plastic containing corn as raw material.

- Recyclable external covers without sacrificing quality.

  EA-Eco toner that can be fixed on paper at roughly 20 degrees Celsius lower than conventional

# Product performance

This full-color digital multifunction copy device, DocuCentre-IV C2260, has been newly developed for small to medium-size business. The size of the body is the most compact in the industry (\*2). The machine is excellent in its basic function while pursuing user-friendliness. Superior costeffectiveness is realized by loading various functions on the machine to save costs.

- \*1. As of November 2009, TEC value (Typical Electricity Consumption value) of 20 monochrome prints per minute with the A3 color multifunction copy device
  \*2. As of November 2009, with the body of the A3 color multifunction copy device (W x D)

# Fuji Xerox

Tokyo Minato Ward Akasaka 9-7-3, Japan Tel +81-3-6271-5111 URL http://www.fujixerox.co.jp/





Eco-product // OA/IT equipment

# EP-3-013 OA/IT equipment

multifunctional copy machines/printers

# Full-color Digital Multifunction Device, ApeosPort-IV Series

### **Environmental performance**

[Major Energy and Environmental Design]

- Achieving lower electricity consumption by 75 percent(\*1) compared to a previous model.
- The newly developed fusing device, which incorporates an IH belt, boasts the world's fastest startup time of 3 seconds (\*2). With this, the fusing device does not have to be preheated, achieving zero power consumption when not printing.
- Light emitting diodes (LEDs) are used as the light sources for image scanning as well as for the exposure unit of the print engine.
- The energy-efficient EA-Eco Toner has been adopted for the first time for officeuse products. Its fusing temperature is lower by approximately 20 degrees Celsius compared with a conventional EA toner, cutting power use in fusing by around 15 %.
- \*1 Comparing ApeosPort-IV C4470 CPS (TEC value: 2.70 kWh) and ApeosPort-III C4400 CPS (TEC value: 10.23 kWh) by TEC value (Typical Electricity Consumption a week)
- \*2 In case of ApeosPort-IV C3370/ C2270. Time required for the device to start up from sleep mode

# Fuji Xerox

Tokyo Minato Ward Akasaka 9-7-3, Japan Tel +81-3-6271-5111 URL http://www.fujixerox.co.jp/





# EP-3-014

# OA/IT equipment

multifunctional copy machines/printers

# ApeosPort IV - C5570/C4470/C3370/C2270

### Environmental performance

By connecting several business critical applications, you can increase staff productivity, as well as improve business and environmental efficiencies Got a recyclability and paper conservation basis Green Label (Singapore)





# Fuji Xerox Singapore Pte Ltd

80 Anson Road #01-01 Fuji Xerox Towers, 079907, Singapore Tel +65-6766-8888

E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore

# **OA/IT** equipment

# multifunctional copy machines/printers

# DocuCentre III C4100/C3100

### Environmental performance

The DocuCentre-III C3100/4100 multifunction devices offer high productivity and high quality with the convenience of colour for all of your printing, copying, Scanning and faxing needs. You're In control of the colour and save time, money, and effort while Increasing the impact and effectiveness of your documents and presentations.

Got a recyclability and paper conservation basis Green Label (Singapore)



# Fuji Xerox Singapore Pte Ltd

80 Anson Road #01-01 Fuji Xerox Towers, 079907, Singapore

Tel +65-6766-8888

E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore



# EP-3-016 OA/IT equipment

# multifunctional copy machines/printers

# DocuCentre III 3007/2007

### Environmental performance

Our equipment features environmentally responsible design and energy efficient enhancements. Our document software and digital technologies help reduce paper wastage and our services enable clients to improve the efficiency of document intensive business processes and optimise their equipment infrastructure to save costs and cut carbon emissions.

Got a recyclability and paper conservation basis Green Label (Singapore)

# Product performance

The DocuCentre-III 3007/2007 multifunction devices are available as a copier-only device all the way up to a full fledged multifunction that can print, copy, scan and fax. A host of timesaving feature boost your team's efficiency, and advanced workflow solution streamline the tasks you perform every day.

# Fuji Xerox Singapore Pte Ltd

80 Anson Road #01-01 Fuji Xerox Towers, 079907, Singapore Tel +65-6766-8888

E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore





Eco-product // 0A/IT equipment

multifunctional copy machines/printers

**OA/IT** equipment

# FX4127PS/FX4112PS/FX4127CP/FX4112CP

# Environmental performance

Ideal for all of your high-volume printing, they deliver maximum speed and versatility in minimal space. And they come equipped with the capabilities you need to thrive in diverse environments.

Got a recyclability and paper conservation basis Green Label (Singapore)



# Fuji Xerox Singapore Pte Ltd

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E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore



# EP-3-018 OA/IT equipment

multifunctional copy machines/printers

# DocuCentre/ApeosPort III C4400

# Environmental performance

If you're used to black and white only, consider the benefits of adding a splash of colour to your office documents and marketing materials. Colour captures attention, enhances productivity, improves communication and could help boost sales. With many businesses competing for a share of the market, companies can greatly enhance their business image by using colour in business documents.

Got a recyclability and paper conservation basis Green Label (Singapore)



# Fuji Xerox Singapore Pte Ltd

80 Anson Road #01-01 Fuji Xerox Towers, 079907, Singapore Tel +65-6766-8888

E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore



# OA/IT equipment

# multifunctional copy machines/printers

# DocuCentre/ApeosPort III C2201/C2200/C3300

# Environmental performance

The range of DocuCentre-III C3300/C2200/C2201 multifunction devices are equipped with many advanced features to power your business with a focus on environmental performance. They are the first digital colour multifunction devices in the industry to receive the prestigious Minister of Economy, Trade and Industry prize in the Eco-Products Category at the 4th Eco-Products Awards in Japan for use of industry-first environmental technologies: new LED print head technology; lead-free shafts; and biomass plastic.

Got a recyclability and paper conservation basis Green Label (Singapore)



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E-mail pauline.wong@sgp.fujixerox.com

URL www.fujixerox.com.sg

URL http://www.fujixerox.com.sg/products/index.jsp URL http://www.fujixerox.com/eng/company/sr/2009/

Available in: Singapore



### EP-3-020 **OA/IT** equipment

### multifunctional copy machines/printers

# **Digital Color Printer HL-3040CN**

### Environmental performance

- (1) Using digital LED print technology, the print engine is substantially smaller and lighter than Brother's conventional color printers.
- (2) Meets the International Energy Star Program requirements and is Eco Mark certified (3Rs and Energy Saving Design).
- (3) Meets the RoHS Directive

# Product performance

- \* Speed: 16 pages per minute (Color/Monochrome)
- Paper Capacity: 250 sheets
- Resolution: 2400 dpi quality
- \* PC Interface: Hi-Speed USB 2.0, Ethernet
- \* Memory: Standard 32 MB Option: Maximum up to 544 MB

# **BROTHER INDUSTRIES, LTD.**

15-1, Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan URL http://www.brother.co.jp





Available in: Worldwide

# multifunctional copy machines/printers

# **Digital Color All-in-one Printer MFC-9120CN**

# Environmental performance

- (1) Using digital LED print technology, the print engine is substantially smaller and lighter than Brother's conventional color all-in-one printers.
- (2) Meets the International Energy Star Program requirements and is Eco Mark certified (3Rs and Energy Saving Design).
- (3) Meets the RoHS Directive

# Product performance

- \* Speed: 16 pages per minute (Color/Monochrome)
- \* Paper Capacity: 250 sheets
- \* ADF: 35 sheets
- \* Print Resolution: 2400 dpi quality
- \* Super G3: Max. 33.6 kbps
- \* PC Interface: Hi-Speed USB 2.0, Ethernet
- \* Memory: 64 MB

# **BROTHER INDUSTRIES, LTD.**

15-1, Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan URL http://www.brother.co.jp



**OA/IT** equipment



Available in: Worldwide

# EP-3-022

# **OA/IT** equipment

multifunctional copy machines/printers

# Compact Color Inkjet All-in-one Printer MFC-935CDWN

### Environmental performance

- Compact all-in-one printer with versatile features such as Printer, Copy, Scan, FAX and Telephone.
- (2) Meets the International Energy Star Program requirements and is Eco Mark certified (3Rs and Energy Saving Design).
- (3) Meets the RoHS Directive

### Product performance

- \* Speed: Max. 28 pages per minute (Color), Max. 35 pages per minute (Monochrome)
- \* Print Resolution: Max. 6000 dpi
- \* Super G3: Max. 33.6 kbps
- \* PC Interface: Hi-Speed USB 2.0, Ethernet and Wireless (802.11b/g) Ethernet.
- \* Memory: 48 MB

# **BROTHER INDUSTRIES, LTD.**

15-1, Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan URL http://www.brother.co.jp





Available in: Japan

# Copy machine Aficio MP 2550

### Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

### Product performance

- High productivity 25 ppm.
- Outstanding usability.
- Variety of customisation possibilities.
- Advanced document management.
- standard couour scanning

# RICOH (THAILAND) LIMITED

341 Onnui Road, Prawet, Prawet, Bangkok, 10250, Thailand

Tel +66-2-762-1141 Fax +66-2-762-1170 E-mail siriprom.san@ricoh.co.th

URL www.ricoh.com

Available in: Thailand

URL www.ricoh.co.th. www.ricoh.com URL www.ricoh.co.th, www.ricoh.com



### **OA/IT** equipment EP-3-024

### multifunctional copy machines/printers

# Copy machine Aficio MP 3350

### Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

# Product performance

- Exceptional speed 33 ppm.
- Versatile document handling.
- complete range of tailor-made options.
- Handy printing tools.
- standard colour scanning.

# RICOH (THAILAND) LIMITED

341 Onnui Road, Prawet, Prawet, Bangkok, 10250, Thailand Tel +66-2-762-1141 Fax +66-2-762-1170

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URL www.ricoh.com

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Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

- Impeccable colour quality.
- Security conscious.
- Continuous operation.
- Expert finishing.
- Wide media versatility.
- Outstanding ease of use.
- Intelligen business fax.
- True communication hubs
- With the environment at heart.

# RICOH (THAILAND) LIMITED

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Available in: Thailand



# EP-3-026

# **OA/IT** equipment

### multifunctional copy machines/printers

# Copy machine Aficio MP C7500

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

### Product performance

- Impeccable colour quality.
- Security conscious.
- Continuous operation.
- Expert finishing.
- Wide media versatility.
- Outstanding ease of use.
- Intelligen business fax.
- True communication hubs - With the environment at heart.

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URL www.ricoh.co.th, www.ricoh.com

URL www.ricoh.co.th, www.ricoh.com



# Copy machine Aficio MP C2000

### **Environmental performance**

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled merials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

### Product performance

- Intelligent Faxing.
- Impress in Colour.
- Continuous Operation.
- Finishing Experts.
- Optimal Document Management.
- Make your Complex Tasks Easy.
- Efficient Distribution.
- Advanced Printing.
- Safeguard Access & Information.

# RICOH (THAILAND) LIMITED

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Available in: Thailand



# EP-3-028 OA/IT equipment

# multifunctional copy machines/printers

# Copy machine Aficio MP 6000

### Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled metrials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

# Product performance

- Ample Productivity for Daily jobs and Peak Loads.
- The Best Possible Print Quality.
- Maximum Security Built-in.
- Intelligently Store Jobs for On-demand Printing.
- Out of the Ordinary Output: Z-folding & Streampunching.
- Efficient Business Faxing.
- Run your Customer Specific Applications.
- A Streamlined Production Workflow.
- An Uninterrupted Workflow for Any Job.
- Extensive Online Finishing.

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# multifunctional copy machines/printers

**OA/IT** equipment

# Copy machine Aficio MP 7000

### **Environmental performance**

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

### Product performance

EP-3-029

- Ample Productivity for Daily jobs and Peak Loads.
- The Best Possible Print Quality.
- Maximum Security Built-in.
- Intelligently Store Jobs for On-demand Printing.
- Out of the Ordinary Output: Z-folding & Streampunching.
- Efficient Business Faxing.
- Run your Customer Specific Applications.
- A Streamlined Production Workflow.
- An Uninterrupted Workflow for Any Job.
- Extensive Online Finishing.

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Available in: Thailand



### **OA/IT** equipment EP-3-030

### multifunctional copy machines/printers

# Copy machine Aficio MP 4000

# Environmental performance

Energy Star compliance, complied with EU RoHS directive, complied with Ricoh original standards for environmentally sensitive substance, complied with chemical emissions and sound level requirements of GL, reduce paper consumption, non use of CFCs, HCFCs, 1.1.1 trichloro-ethane, carbon-tetrachloride, use recycled mterials, non use PBB, PBDE and chloroparafins, take toner cartridges and drum back form customer.

### Product performance

- Exceptional productivity.
- Unique colour scanning & distribution.
- Multifunctional wizards.
- Professional faxing.
- Essential security. - Expert finishing.
- Easy operation.
- Wide media versatility. - At the forefront of eco care.

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### Product performance

- Exceptional productivity.
- Unique colour scanning & distribution.
- Multifunctional wizards.
- Professional faxing.
- Essential security.
- Expert finishing.
- Easy operation.
- Wide media versatility.
- At the forefront of eco care.

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Available in: Thailand



# EP-3-032 OA/IT equipment

multifunctional copy machines/printers

# A3 Color LED Multifunction Printer, MC860dn

### Environmental performance

- (1) An energy-saving LED is used at the printhead, which allows light to fall on the photographic film.
- (2) Features multi-tasking standards to reduce the amount of required paper, enabling duplex (2-sided) printing and the sending and receiving of faxes by data.
- (3) Five-year limited warranty, allowing users to use the printer for its entire life span (five years or 600,000 pages)
- (4) An Eco-Mark-certified and Energy-Star-qualified product

# Product performance

- (1) Digital LED printhead realizes brilliant output.
- (2) Low color printing costs: roughly 11.7 yen per sheet of A4 paper
- (3) Simplified internal structure allows users to fix paper jams and to maintain the device easily.

# Oki Data Corporation

4-11-22, Shibaura, Minato-ku, Tokyo, 108-8551, Japan





Eco-product // OA/IT equipment

### **OA/IT** equipment EP-3-033

multifunctional copy machines/printers

# Powerful performance and lightning speed color MFP for office environment

### Environmental performance

- Mitigation of climate change: Reduces CO2 emissins of mainly in usage stage by adopting high-efficient fusing engine and low-temperature fusing toner technologies (reduce amount of CO<sub>2</sub> emissins of all stages: 461.6kg
- Efficient use of resources: Uses recycled plastics for cases etc.
- Management of chemicals: Reduces harmful substances by halogen-free and chromium-free materials

### Product performance

- Touch panel: Large color LCD with touch panel enables easy operation
- High speed: High-speed printing to match business needs
- Fast scanning: High speed document scanner enables fast scanning for high volume documents

# **TOSHIBA TEC CORPORATION**

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan

Tel +81-3-6422-7164 Fax +81-3-6422-7121 URL http://www.toshibatec.co.jp/index.html.html

URL http://www.toshibatec.co.jp/csr/report/index.html

Chemical substances Recycled materials Material Production LC Stage Transport End-of-life



Multifunctional Digital Color Systems e-STUDIO6530C

Available in: Japan

# EP-3-034

# OA/IT equipment

multifunctional copy machines/printers

# Inkjet printer Multi Photo Colorio EP-802A (Epson Stylus Photo PX710W/TX710W/ Artisan 710)

Resource saving>
The EP-802A is 50% smaller and 10% lighter than the PM-A870 from 2004.

<Products that are focused on the effective use of resources>

Unpainted housing: Reduces the impact of painting and improves plastic recyclability

Use of recycled materials: Uses recycled plastic for internal printer parts Effective use of paper: Optional auto-duplex printing feature (Excluding same sales areas.)

<Elimination of hazardous substances>

The EP-802A conforms to the EU RoHS directive.

This product is an all-in-one inkjet printer having the functions of copier, scanner, and printer built-in Wi-Fi, plus wired LAN and wireless LAN, and versatile paper handling.

This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation

The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation

For more information, see http://www.epson.jp/

# Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan Tel +81-266-52-3131

URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

URL http://www.epson.co.jp/e/community/





Available in: Japan, Oceania, Europe, North America

EP-802A (Epson Stylus Photo PX710W / TX710W, Artisan 710)

- 1. This digital full color MFP is compliant with the RoHS directive which restricts the use of hazardous substances.
- 2. Conforms to the international ENERGY STAR program.

### Product performance

Increased office productivity is your top priority. The Kyocera TASKalfa 500ci Series of color multifunctional systems transforms your office, your workflow, and your documents. Powerful, intuitive, and incredibly efficient, it makes a bold, impression both inside and out.

Print speed (A4)

TASKalfa 500ci: 40ppm (Color)/50ppm (B/W) TASKalfa 400ci: 40ppm (Color)/40ppm (B/W) TASKalfa 300ci: 30ppm (Color)/30ppm (B/W) TASKalfa 250ci: 25ppm (Color)/25ppm (B/W)

# **KYOCERAMITA**

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan Tel +81-6-6764-3555

URL http://www.kyoceramita.com/



EP-3-036 OA/IT equipment

printers

# Kyocera Mita Color Laser Printer "ECOSYS FS-C5400DN"

### Environmental performance

This Color Laser Printer is Kyocera's leading product in environmental design. It incorporates Kyocera's proprietary long life technology to minimize the replacement of consumable parts. The "ECOSYS" concept makes it environmentally conscious and cost efficient because toner is the only consumable for this printer.

This product is compliant with the RoHS Directive that was initiated in Europe in 2006 to eliminate substances that are harmful to the environment and also with the standards of the International Energy Star Program.

### Product performance

Print speed (A4)

ECOSYS FS-C5300DN:35ppm (Color,B/W)

# **KYOCERAMITA**

2-28, 1 Chome, Tamatsukuri, Chuo-ku Osaka, 540-8585, Japan Tel +81-6-6764-3555

URL http://www.kyoceramita.com/



Eco-product // OA/IT equipment

# Large Format Inkjet Printer " imagePROGRAF iPF650/iPF655/iPF750/iPF755"

### Environmental performance

- iPF755 realizes about 19.5kg (about 80%) CO<sub>2</sub> discharge reduction in one year in comparison with W7200 (released in 2002).
- 2. These models have compact body size with having high class function and equipments for the higher class machines. iPF755/750 realizes about 28% machine weight reduction and about 16% packing volume reduction in comparison with W7200. Canon promotes CO<sub>2</sub> discharge reduction in production, shipment, sales and other all business process by reducing machine weight and package size simultaneously.
- These models meet Eu RoHS directive, which limits use of lead, mercury, cadmium, hexavalent chromium and PBB/PBDE.
- 4. The product series have Ecomark certification. (No.08122039)

### Product performance

- 1. Printing speed: about 28 second per A1 size (portrait).
- 2. Space-saving large format printing is available with fully front operation.
- 3. Usability and comfortable operability won "Good Design Prize".

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/





imagePROGRAF iPF650

Material

End-of-life

Available in: Japan, Asia, Oceania, Europe, North America

EP-3-038

# OA/IT equipment

Energy saving

LC Stage Production

Transport

. Use/repair

printers

# Environmentally-friendly double-sided label printer Scantronics (R) GN412T

# Environmental performance

Bar-code printer that simultaneously prints on both sides of the label. Non-Sepa Combination Labels can be used as two separate labels by peeling the bonded sticky side. Since there is no liner waste, paper is saved and  ${\rm CO_2}$  emissions are reduced.

# Product performance

The automatic document feeder requires no label indicators to show the position when setting the labels for printing, and labels can be printed clearly from the beginning, so no labels are wasted. The ability to print all labels clearly eliminates waste.

Sato's Ecomatch promotes the 3Rs (Reduce, Reuse, Recycle) to support the environmental conservation activities of customers.

For any query, send inquiry to the contact mentioned below.

# SATO CORPORATION

9-10,Ebisu 4-chome,shibuya-ku,Tokyo, 150-0013, Japan E-mail sales@satogbs.com URL www.satoworldwide.com



Available in: Japan

**OA/IT** equipment

# Casio Page Printer: SPEEDIA N3600

### Environmental performance

- \* Uses a toner cartridge, the price of which is inclusive of a carbon offsetting fee (Can offset CO<sub>2</sub> emissions whose volume is as the same as the energy consumed during printing)
- \* Includes the useless-printing prevention function "Easy Eco Printing Navi."
- \* Meets the RoHS Directive

### Product performance

Downsized space-saving design to allow users to put the device anywhere

- \* Quick printing: 24 ppm for color and 30 ppm for monochrome \* The Recognition Printing Function is used to allow printing with IC cards and input through numerical keypads.
- Trusty Print, a function that protects against illegal copying, is equipped as standard.



1-6-2 Honmachi Sibuya Tokyo, Japan





EP-3-040 OA/IT equipment

printers

### **Business Inkjet Printer, PX-B510** (B-510DN/B-518DN)

# Environmental performance

<Global warming impact>

The PX-B510 saves energy in the office, generating 76% fewer  ${\rm CO_2}$  emissions than a laser printer LP-V500\* from 2005.

-Energy saving> The PX-B510 uses approximately 92% less energy than the LP-V500\*.(Based on Japanese specifications.)

<Products that are focused on the effective use of resources>

Effective use of paper: Auto-duplex printing feature

<Elimination of hazardous substances>

The PX-B510 conforms to the EU RoHS directive

\*Comparison with similar performance laser printer. (Calculated under Epson's test conditions.)

# Product performance

This product is a business-ready inkjet printer pursue high productivity and low running cost, mass color printing demand.

This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan

The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see http://www.epson.jp/

# Seiko Epson Corporation

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URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

URL http://www.epson.co.jp/e/community/

Material Production LC Stage Transport End-of-life エコ商品 ねっと掲載 103kg-CO<sub>2</sub> Resource/Materials/Production/ Transfer/Use/End-of-Life not Inspection



Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China)

PX-B510 (B-510DN/B-518DN)

<Global warming impact>
Biomass plastic is used in the cover of the photoconductor unit. From material extraction to disposal, biomass plastics generate approximately 20% fewer carbon emissions than petroleumbased

values of plastics. Schedules should get the state of the specifications.)
<Resource saving>

Epson has proposed a new "Return cartridge program" in addition to conventional toner cartridges. Customers only pay for the toner, while Epson takes care of collecting and recycling used

<Elimination of hazardous substances>

The LP-S9000 conforms to the EU RoHS directive.

This product is a high-performance laser printer will be possible to get 1.5 million total prints or a service life of 5 years and high-quality 1200dpi output, 35 sheets per minute high-speed printing.

This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan Corporation. The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see http://www.epson.jp/





# **Seiko Epson Corporation**

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URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

URL http://www.epson.co.jp/e/community/

Available in: Japan

LP-S9000

OA/IT equipment

# printers Inkjet printer Colorio EP-302 (Epson Stylus Photo T50/T59/T60/P50/Artisan 50)

EP-3-042

<Energy saving>
The EP-302 uses 50% less power than PM-G730 from 2005. (Based on Japanese specifications.)
Epson has continued to engineer effective ways of reducing power consumption, including limiting the number of points in the printer to which power is supplied in sleep mode, and shifting the printer. into sleep mode faster. Total power consumption is further reduced with a low-power ASIC chip and a high-efficiency power supply.

<Products that are focused on the effective use of resources>
Unpainted housing\*: Reduces the impact of painting and improves plastic recyclability
Except for operation panel markings and design detail

<Flimination of hazardous substances:</p>

The EP-302A conforms to the EU RoHS directive.

This product is a single function inkjet printer offers ultra high definition printing, six economical individual ink cartridges, CD/CVD printing, and print speeds of up to 38ppm

This product is manufactured by Seiko Epson Corporation and is sold by Epson Sales Japan

The party to the Eco Mark utilization contract for this product is Epson Sales Japan Corporation. For more information, see http://www.epson.jp/

# Seiko Epson Corporation

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URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

URL http://www.epson.co.jp/e/community/





Inkjet printer Colorio EP-302 (Epson Stylus Photo T50/T59/T60/P50/Artisan 50)

Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China)

High quality

Production

Transport

LC

Stage

エコ商品

End-of-life

# Environmental performance

<Energy saving>

The Colorio Me E-600 has a built-in feature for scheduling power-on and power-off times. It automatically shuts down when the set time is reached, so no power is wasted while you sleep.

\* The main power supply is not switched off.

<Elimination of hazardous substances>

Mercury-free LEDs used for 7-inch color LCD monitor backlight.

The E-600 conforms to the EU RoHS directive.

# Product performance

This product is a 2-in-1 digital frame & compact photo printer built-in the 12 slideshows including clock and calendar options.

# Seiko Epson Corporation

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan Tel +81-266-52-3131

URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

EP-3-044

URL http://www.epson.co.jp/e/community/

Available in: Japan, Oceania, North America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China), China

**OA/IT** equipment

E-600 (PictureMate PM300/PM310)

electronic cash registers

# Compact Register with Large Color LCD Display and Scalability

### Environmental performance

- Mitigation of climate change: 15% reduction in standby power consumption thanks to the LCD backlight off function, etc.
- Efficient use of resources: 22% reduction in the packaging size thanks to the adoption of a foldable LCD structure.
- Management of chemicals: Adoption of halogen-free material for printed circuit board.

### Product performance

- Visibility: Enhanced visibility and operability thanks to the 8.5-inch color LCD display.
- Usability: Easy-to-use color-coded universal design keyboard.
- Scalability: Connectivity with LAN, automatic change calculator, checkout scanner, etc.

# **TOSHIBA TEC CORPORATION**

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan

Tel +81-3-6422-7164 Fax +81-3-6422-7121

URL http://www.toshibatec.co.jp/index.html.html

URL http://www.toshibatec.co.jp/csr/report/index.html

Available in: Japan





Scanning POS Register MA-2055

Eco-product // OA/IT equipment

# SDHC memory card

### Environmental performance

This card uses reduced structural materials compared with other recording media at recording capacity.

This card also reduced packing materials and was designed a concern for the environment.

\* 65% of the amount of package plastic use is reduced in comparison with our 2008 model.

### Product performance

This card is used for a recording media of high definition movie. It is linked with BD recorder and SD card movie.

This card has a high speed class 4 adaptation.

This card can be used to record to events for fast playback.

# Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/avc/

URL http://panasonic.net/csr/

High quality Material Production LC Stage Transport End-of-life . Use/repair



SDHC memory card: RP-SDW04GE1K

Available in: Japan, Worldwide

# EP-3-046

memory cards

**OA/IT** equipment

# microSDHC card

### Environmental performance

This card uses reduced structural materials compared with other recording media at recording capacity.

This card also reduced packing materials and was designed a concern for

\* 65% of the amount of package plastic use is reduced in comparison with our 2008 model.

# Product performance

This card corresponds to the equipment equipped with the streaming and One Seg as an external recording medium of the cellular phone.

This card has a high speed class 4 adaptation.

# Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.co.jp/avc/ URL http://panasonic.net/csr/

Available in: Japan, Worldwide





microSDHC card: RP-SM04GCE1K

216

- Mitigation of climate change: At our advanced semiconductor plant, energy consumption has been greatly reduced by a novel air conditioning system and the use of waste heat.
- Efficient use of resources: Use of materials per bit is cut by advanced processing technology and multi-level cell technology.

### Product performance

 Large capacity: 2,000 times greater capacity than a memory of the same size introduced in 2000

# Global Resource High quality Material Design Production Resource Stage Transport Use/repair



\* The exterior design of this SD Memory Card might be modified when it will be released.

# **TOSHIBA CORPORATION Semiconductor Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-3375 Fax +81-3-5444-9342

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

# EP-3-048

OA/IT equipment

projectors

# **POWER PROJECTOR SX80 MarkII**

### Environmental performance

- (1) Compact body and weight of only 5.2 kg contribute to resource savings.
- (2) A variety of interfaces for direct connection to digital camera, USB thumb drive, or HD digital video camera, without using PC, reduce power consumption when used.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

# Product performance

- Various interfaces can be directly connected to the state-of-the-art digital devices.
- (2) SXGA + (1,400 x 1,050)/for high-definition offers realistic projection of high-resolution images.
- (3) Reflective LCD Panel, LCOS (Liquid Crystal On Silicon) achieves latticefree, seamless images

# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225

URL http://www.canon.com/environment/





Available in: Worldwide

SX80 MarkII

Eco-product // OA/IT equipment

# **POWER PROJECTOR WUX10 Mark II**

### **Environmental performance**

- (1) This model features 0.71-inch Reflective LCD Panel, LCOS and Canon's proprietary AISYS (Aspectual Illumination System) optical system, and its newly developed lamp contributes to resource savings by improving light-use efficiency and lamp efficacy.
- (2) Compact body and weight of only 5.0kg contribute to resource savings.
- (3) Compliance with the RoHS Directive.
- (4) Lead-free glass is utilized as the environmentally sound lenses.

### Product performance

- (1) WUXGA wide screen eclipses conventional full HD screens.
- (2) World's smallest 0.71-inch high-resolution LCOS panel developed by Canon.
- (3) High brightness 3,200lm, High contrast 1000:1.
- (4) Newly designed projection lens with high-performance contributes to less distortion and high resolution.



# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/



Available in: Worldwide

WUX10 MarkII

# EP-3-050

# **OA/IT** equipment

projectors

# Ultra-short throw projector

### Environmental performance

- · Compliance with the RoHS Directive : restriction and prohibition of the use of lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE)
- Energy saving: reduce by the use of materials, CO2 emission during distribution, annual power consumption.
- Reduction of waste:saving of resources by using recycled materials for packing, by nonuse of styrene foam for packing, by saving time for uninstallation by compact body structure.

### Product performance

- High performance lens with free-shaped surface
- Ultra short throw projection with 80"at 63cm
- Adopting optical mechanism that correct the distortion of screen image by free shaped mirror
- · Mirror is on the top of the projector and able to open/close

# Hitachi Consumer Electronics Co., Ltd.

292 Yoshida-cho, Totsuka-ku, Yokohama, Kanagawa, 244-0817, Japan





CP-A100

Long-life

LC

Stage

Production

Transport

, Use/repair

# The PT-DZ6700 one-chip DLP<sup>™</sup> projector

### Environmental performance

- 1) Achievement of both high brightness and energy saving. Improvement of power consumption by 0.142 W per lumen
- 2) Use of a lead-free lens and non-halogen resin
- 3) Improved compactness and reduced weight due to the adoption of a liquid cooling method
- 4) Power saving mode enabled by lamp switching

# Product performance

- 1) High brightness (6,000 lm)
- 2) High resolution (WUXGA: 1,920 x 1,200)
- 3) Geometric correction
- 4) Multi-screen support system
- 5) Detail clarity processor

# Panasonic Corporation, AVC Networks Company

2-15 Matsuba-cho, Kadoma City, Osaka, 571-8503, Japan Tel +81-6-6905-4363 Fax +81-6-6905-4376

URL http://panasonic.biz/projector

URL http://panasonic.net/csr/



Global

Material

End-of-life

1Chip DLP<sup>™</sup> Projector: PT-DZ6700

### Available in: Worldwide

EP-3-052

# The PT-DW6300 one-chip DLP™ projector

# Environmental performance

- 1) Achievement of both high brightness and energy saving. Improvement of power consumption by 0.133 W per lumen
- 2) Use of a lead-free lens and non-halogen resin
- 3) Improved compactness and reduced weight due to the adoption of a liquid cooling method
- 4) Power saving mode enabled by lamp switching

# Product performance

- 1) High brightness (6,000 lm)
- 2) High resolution (WXGA: 1,280 x 800)
- 3) Geometric correction
- 4) Multi-screen support system
- 5) Detail clarity processor

# Panasonic Corporation, AVC Networks Company

2-15 Matsuba-cho, Kadoma City, Osaka, 571-8503, Japan

Tel +81-6-6905-4363 Fax +81-6-6905-4376 URL http://panasonic.biz/projector URL http://panasonic.net/csr/

Available in: Worldwide













# **OS Screen SafeE series Motorized screen EA**

### Environmental performance

The screen fabric is made of 51% chemical recycled fibers. The backside of the fabric is used for the black border, to avoid the VOC compound due to the printing ink. All mechanical parts are in compliance with RoHS Directives, eliminating lead, mercury cadmium, hexavalent chromium, PBB or PBDE. Furthermore VOC measures are applied to the double-faced tape, the adhesive, painting, and solvents. The product is being manufactured with MSDS (Material Safty Data Sheet) in the produciton process, and the durability is also proved with the 2,000 up and down tests for the long use.

### Product performance

The electric screen. The aspect: NTSC. The bracket is available both for wall and ceiling mountings. DC24V specified with tally signal, suitable for system installations. Wall switch is also available, together with remote control operation. 3 sizes: 80" (W1626xH1219),100" (W2032xH1524) and 120" (W2438xH1829).

# OS CO.,LTD

OS Osaka Bldg., 6-5-53 Minamitumori, Nishinari-Ku, Osaka, 557-0063, Japan Tel +81-3-3629-5211 Fax +81-3-3629-5214

E-mail info@os-worldwide.com

URL http://www.os-worldwide.com/index\_jp.html

URL http://jp.os-worldwide.com/products/osscreen/front/eco/safe e.html

URL http://jp.os-worldwide.com/company/safety.html

Available in: Japan, Asia





OS Screen SafeE EA-80VF\_Eseco

# EP-3-054

**OA/IT** equipment

screen

# OS screen SafeE series Motorizedscreen ET

### Environmental performance

The screen fabric is made of 51% chemical recycled fibers. The backside of the fabric is used for the black border, to avoid the VOC compound due to the printing ink. All mechanical parts are in compliance with RoHS Directives, eliminating lead, mercury cadmium, hexavalent chromium, PBB or PBDE. Furthermore VOC measures are applied to the double-faced tape, the adhesive, painting, and solvents. The product is being manufactured with MSDS (Material Safty Data Sheet) in the produciton process, and the durability is also proved with the 2,000 up and down tests for the long use.

### Product performance

The electric screen. The aspect: NTSC & 1:1. The screen without the case, suitable for installation in the ceiling box. DC24V specified with tally signal, suitable for system installations. Wall switch is also available, together with remote control operation. 3 sizes: 80",100",120" and 1:1 sizes.

# OS CO.,LTD

OS Osaka Bldg., 6-5-53 Minamitumori, Nishinari-Ku, Osaka, 557-0063, Japan Tel +81-3-3629-5211 Fax +81-3-3629-5214

E-mail info@os-worldwide.com

URL http://www.os-worldwide.com/index\_jp.html

URL http://jp.os-worldwide.com/products/osscreen/front/eco/safe e.html

URL http://jp.os-worldwide.com/company/safety.html

Available in: Japan, Asia





OS Screen SafeE ET-100VF\_Eseco

**OA/IT** equipment

# OS screen SafeE series Manual type screen AM

### Environmental performance

The screen fabric is made of 51% chemical recycled fibers. The backside of the fabric is used for the black border, to avoid the VOC compound due to the printing ink. All mechanical parts are in compliance with RoHS Directives, eliminating lead, mercury cadmium, hexavalent chromium, PBB or PBDE. Furthermore VOC measures are applied to the double-faced tape, the adhesive, painting, and solvents. The product is being manufactured with MSDS (Material Safty Data Sheet) in the produciton process, and the durability is also proved with the 2,000 up and down tests for the long use.

### Product performance

The manual screen. The aspect: 1:1. The screen with the small round case. With the ball-stop mechanism, the screen can be locked at any desired positions. The soft-wind mechanism can make the smooth rewind of the screen. The aluminum hook bar for pulling down the screen is equipped. 3 sizes: W1500,W 1800,W2000.

# OS CO.,LTD

OS Osaka Bldg., 6-5-53 Minamitumori, Nishinari-Ku, Osaka, 557-0063, Japan Tel +81-3-3629-5211 Fax +81-3-3629-5214

E-mail info@os-worldwide.com

URL http://www.os-worldwide.com/index\_jp.html

URL http://jp.os-worldwide.com/products/osscreen/front/eco/safe e.html

URL http://jp.os-worldwide.com/company/safety.html

Available in: Japan, Asia





OS Screen SafeE AM-1818\_Eseco

### OA/IT equipment EP-3-056

screen

# OS screen SafeE series Manual type screen LT

### Environmental performance

The screen fabric is made of 51% chemical recycled fibers. The backside of the fabric is used for the black border, to avoid the VOC compound due to the printing ink. All mechanical parts are in compliance with RoHS Directives, eliminating lead, mercury cadmium, hexavalent chromium, PBB or PBDE. Furthermore VOC measures are applied to the double-faced tape, the adhesive, painting, and solvents. The product is being manufactured with MSDS (Material Safty Data Sheet) in the produciton process, and the durability is also proved with the 2,000 up and down tests for the long use.

# Product performance

The manual screen. The aspect: NTSC. The screen without the case, suitable for installation in the ceiling box. With the ball-stop mechanism, the screen can be locked at any desired position. The soft-wind mechanism makes the smooth rewind of the screen. The aluminum hook bar is equipped. 120"

# OS CO..LTD

OS Osaka Bldg., 6-5-53 Minamitumori, Nishinari-Ku, Osaka, 557-0063, Japan Tel +81-3-3629-5211 Fax +81-3-3629-5214

E-mail info@os-worldwide.com

URL http://www.os-worldwide.com/index\_jp.html

URL http://jp.os-worldwide.com/products/osscreen/front/eco/safe e.html

URL http://jp.os-worldwide.com/company/safety.html

Available in: Japan, Asia





OS Screen SafeE LT-120VF Eseco

Sharp's new mobile phone sports a built-in solar cell module, making it possible to charge the phone outdoors when the remaining battery level is low. Charging the phone via the solar cell module for about 10 minutes gives one minute of talk time or about two hours in standby mode\*.

\* This indication time is measured under the following conditions with artificial lighting: Energy save mode is ON, clear and sunny at high noon, the solar panel is positioned facing an angle of 90 degrees in relation to the sun, strong incoming signal, start charging right after the battery has run out of power.

### Product performance

- (1) Waterproof performance equivalent to IPX5 and IPX7 ratings.
- (2) Features to support daily sport activities.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan

Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





**SOLAR PHONE SH002** 

# EP-3-058

OA/IT equipment

mobile phone

# Solar-powered mobile phone, "docomo STYLE series SH-08A"

### Environmental performance

Sharp's new mobile phone sports a built-in solar cell module, making it possible to charge the phone outdoors when the remaining battery level is low. Charging the phone via the solar cell module for about 10 minutes gives one minute of talk time or about two hours in standby mode\*<sup>1</sup>.

\*1 This time is measured in Japan when the solar panel is positioned facing an angle of 90 degrees in relation to the sun right after the battery has run out of power. Under the condition of 25 °C, clear and sunny at high noon, without shielding materials on the phone.

### Product performance

- (1) Waterproof performance equivalent to IPX5 and IPX7 ratings.\*2
- (2) 8 mega pixels CCD camera with "ProPix" image processor.
- (3) Decoration mail features and GPS feature that apply global use.
- \*2 Be sure that the back cover and cap (external connection terminal cover) are securely closed during use. To maintain waterproof performance, replace parts once every two years regardless of whether or not there are any abnormalities (charges apply).

# Sharp Corporation

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp

URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/





docomo STYLE series SH-08A

Production

Transport

. Use/repair

# Solar-powered mobile phone, "SOLAR HYBRID Softbank 936SH"

### Environmental performance

Sharp's new mobile phone sports a built-in solar cell module, making it possible to charge the phone outdoors when the remaining battery level is low. Charging the phone via the solar cell module for about 10 minutes gives one minute of talk time or about two hours in standby mode\*.

\* This time is measured in Japan when the solar panel is positioned facing an angle of 90 degrees in relation to the sun right after the battery has run out of power. Under the condition of 25 °C, clear and sunny at high noon, without shielding materials on the phone.

# Product performance

- (1) Waterproof performance equivalent to IPX5 and IPX7 ratings.
- (2) 8 mega pixels CCD camera with "ProPix" image processor.
- (3) Video features with Blu-ray disc coalition.

# **Sharp Corporation**

22-22 Nagaike-cho, Abeno-ku, Osaka, 545-8522, Japan Tel +81-6-6625-0438 Fax +81-6-6625-0153

E-mail eco-info@sharp.co.jp URL http://sharp-world.com/

URL http://sharp-world.com/corporate/eco/



Global

Energy saving

> LC Stage

Material

End-of-life [

SOLAR HYBRID Softbank 936SH

# EP-3-060 OA/IT equipment

mobile phone

# World's slimmest waterproof phone (\*1)

# Environmental performance

- Efficient use of resources: Efficient resource utilization through the miniaturization of parts, reduction of the number of parts, and high-density packaging.
- Management of chemicals: Elimination of the use of 15 specified substances. Reduced use and substitution of polyvinyl chloride (PVC) and brominated flame retardant (BFR) in principal parts.

# Product performance

- With an ultra-slim body that measures an approx. 11mm thick, the T003 is waterproof to IPX5/7 standards. Not only does it fit easily into your pocket, but it also enhances your lifestyle in any setting-even in the outdoors, and the kitchen.
   New Premium Coating (\*2) uses four coats of paint on the stainless steel body, making
- New Premium Coating (\*2) uses four coats of paint on the stainless steel body, making it feel gentle in the hand. The contoured 3D Keys are designed to make typing easy.
- (\*1) As a waterproof folding clamshell-style phone, with a thickness of 11.6mm (14.9mm in thickest portion). As of September 2009 (Toshiba's research)
- (\*2) Only for Citrus Green and Luminous Red models.

# **TOSHIBA CORPORATION Mobile Communications Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





T003

Eco-product // 0A/IT equipment

- Efficient use of resources: Efficient resource utilization through the miniaturization of parts, reduction of the number of parts, and high-density packaging.
- Management of chemicals: Elimination of the use of 15 specified substances.
   Reduced use and substitution of polyvinyl chloride (PVC) and brominated flame retardant (BFR) in principal parts.

### Product performance

- The T-01A is an approx. 9.9 mm thick, an approx 129g in weight, and equipped with an approx. 4.1inch wide-VGA screen, full touch panel LCD.
- You can even customize the easy-to-view Stripe Menu to your own specifications.
- With the phone's 1 GHz CPU, web browsing and other functions zip right along stress-free.(\*1)
- (\*1) Running multiple applications at the same time may deteriorate performance.

# **TOSHIBA CORPORATION Mobile Communications Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm







T-01A

# EP-3-062

# OA/IT equipment

network camera

# **Network Camera VB-C500VD**

### Environmental performance

- (1) Compliance with the RoHS Directive.
- (2) Lead-free glass is utilized as the environmentally sound lenses.

# Product performance

- (1) An image compression and transmission engine, DIGIC NET, achieves high image quality.
- (2) Smart Shade Control to make easier to see the subject even if the background of the subject is too bright.
- (3) Shutter Priority AE to achieve blur-free images of fast-moving subjects.
- (4) Simultaneously distribution of JPEG and MPEG-4.





# Canon Inc.

30-2, Shimomaruko 3-chome, Ohta-ku, Tokyo, 146-8501, Japan Tel +81-3-3758-2111 Fax +81-3-3758-8225 URL http://www.canon.com/environment/



Available in: Worldwide

VB-C500VD

**OA/IT** equipment

# Full HD CMOS-based Remote Head Color Camera System

### Environmental performance

- Mitigation of climate change: 9.6% reduction in carbon dioxide emissions by 36% reduction in the number of electronic parts thanks to the adoption of a CMOS sensor and highly integrated circuits.
- Efficient use of resources: Adoption of recycle plastic to C mount lens cap.
- Management of chemicals: Halogen-free printed circuit board

### Product performance

FULL HD (1920x1080) output. Smallest and lightest CMOS remote head color camera in this field.

- 1/3 type 2.2 million pixel (effective pixel) progressive scanning CMOS is adopted.
- To obtain the best image quality, various function such as photometry area setting, 6 color matrix setting etc. are abundantly installed.
- DVI-I output enables us to connect with a commercial FULL HD monitor by 60 frames per second.
   (as of August 2009)

# **TOSHIBA CORPORATION Digital Media Network Company**

- 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
- URL http://www.toshiba.co.jp/index.htm
- URL http://www.toshiba.com/taisisd/indmed/products/prod\_detail\_ikhr1h.jsp
- URL http://www.toshiba.co.jp/env/en/report/index.htm





Available in: Japan, North America

Industorial Full HD Camera IK-HR1H/IK-HR1CD

# EP-3-064 OA/IT equipment

servers

# Blade Servers "BladeSymphony 2000/320"

# Environmental performance

The BladeSymphony product family has two powerful, flexible and reliable models available.

"BladeSymphony2000" is the high-end model focused on core computing system and "BladeSymphony320" is small-space and highly-integrated model. "BladeSymphony320" is 24% power-saving, 40% space-saving, and 50% lightweight compared with the rack mount server. (comparison with Hitachi PC server, at the time of November, 2009)

Moreover, BladeSymphony, possesses Hitachi virtualization feature "Virtage" and long

Moreover, BladeSymphony possesses Hitachi virtualization feature "Virtage" and long life-support service (maximum seven years) is provided. BladeSymphony comply with EU RoHS Directive.

### Product performance

"BladeSymphony2000"

8 blades/10 U (the number of units according to EIA standards), a power supply module: The 80PLUS GOLD® certified

"BladeSymphony320"

10 blades/6 U (the number of units according to EIA standards), a power supply module: The 80PLUS SILVER  $^{\!\!\!\!\!\!\!\!^{\otimes}}$  certified

# Hitachi, Ltd.

1, Horiyamashita, Hadano-shi, Kanagawa, 259-1392, Japan

URL http://www.hitachi.com/

URL http://www.hitachi.co.jp/products/bladesymphony\_global/index.html

URL http://www.hitachi.com/csr/





BladeSymphony 2000

Available in: Japan, Europe, North America, U.S.A, Republic of Korea, South Africa

225

# Ultimate entry server, SPARC Enterprise M3000

### **Environmental performance**

SPARC Enterprise M3000 is the latest ecology server developed with high-density implementation and cooling technologies. Uses energy saving components such as SPARC64-VII and high-efficiency power. Silent and efficient cooling with optimized temperature dependent fan rotation control and air duct which intensively cools heated

- 54% reduction in max. operating power consumption (1090W to 505W) from previous model(\*)
- 60% reduction of volume and weight per efficiency unit from previous model
- 65% reduction of CO<sub>2</sub> annual emission from previous model
- Biobased plastic used for battery-holder (approx. 5g)
- \* PRIMEPOWER 450 (4U, AC 200 V)

### Product performance

- Equipped with functions for business in only 2U space, has highest class performance for entry model and can be used in various business fields.
- Uses international standard UNIX OS Solaris

# **Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

Tel +81-03-5568-1170

URL http://www.fujitsu.com/global/

URL http://www.fujitsu.com/global/services/computing/server/sparcenterprise/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide





SPARC Enterprise M3000

### **OA/IT** equipment EP-3-066

servers

# Blade server PRIMERGY BX900

- (1) Energy saving: Power consumption/CO $_2$  emission reduced 40% (\*)
- 90%+ conversion efficiency reduces loss in power devices.

  The properture-based control of fan rotation reduces fan drive power consumption. Air flow design for cooling efficiency limits rotation and total flow.
- Day/time dependent energy saving mode schedule switching.
- (2) Resource saving
   Fewer cables. (100 to 10)
  - Shipping assembled system reduces packaging.
- Review Board Special Award, Savings in IT-Related Energy Consumption, Green IT Award 2009
   2009 Minister of Environment Award for Prevention of Global Warming
- \* Compared with 2006 rack server (RX200 S3)

- (1) Highest density in industry
- 10U-chassis and 18 blades
- Next generation oriented large capacity chassis
   Transmission path throughput: 6.4Tbps
   Hardware spec enables collection of multiple virtual servers
  - Latest CPU and high-speed large-capacity memory

# **Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123,

Tel +81-03-5568-1170

URL http://www.fujitsu.com/global/

URL http://www.fujitsu.com/global/services/computing/server/ia/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Japan, Asia, Oceania, Europe, North America





PRIMERGY BX900 S1 (General chassis and system name) / BX920 S1 (Server blade)

Compared to the convetional products;

Electric power: 55% less Space: 50% less

Weight: 58% less

### Product performance

2 meters tall and 540 kg with a 128-processor & 512-core capabilities



# **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan

URL http://www.nec.com/

URL http://www.nec.com/global/prod/express/product/ecocenter/

URL http://www.nec.co.jp/csr/en/



**EP-3-068 OA/IT** equipment

servers

# IA Server with a Built-in Intelligent Battery

# Environmental performance

- Efficient use of resources: 40% reduction in footprint compared with the use of an external UPS thanks to the built-in battery. The battery life is 5 years whereas an external UPS must be replaced every 2 years.
- Management of chemicals: Use of a nickel-metal-hydride battery instead of a battery containing lead.

# Product performance

- Countermeasures for power outage and instantaneous power failure: Power supply with a built-in battery for data protection during power outage and instantaneous power failure.
- Scheduled operation: Intelligent battery for automatic start-up and shutdown

# **TOSHIBA CORPORATION Personal Computer & Network Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





### **OA/IT** equipment EP-3-069

personal computers

Long-life

# Endeavor NP11-V ---. A nettop PC which saving power and silent by no fan.

1) Energy saving

Is compliant with International ENERGY STAR program, and achieves power consumption as low as 14W in idle state.

Resource saving

It has effected saving resource that the compact body of 20mm in width, 154mm in depth, and 173mm in height, the lightweight 790g only included in its stand.

Unpainted housing

The outer housing is unpainted, which achieves both paint process reduction and plastic recyclability

1) User friendly PC

Loaded with Intel Atom processor and 1000Base-T-compliant network adapter, user can enjoy Internet and e-mail comfortably.

Could be set up into a small space with its stand or can be rear mounted on a display monitor with an optional kit as an all in one PC. Layout can be arranged freely.

A heat exhaust system well-designed without any cooling fan, which decreases the operation noise to be only 17dB.

# Material Production LC Stage Transport End-of-life Use/repair 63.3kg-CO<sub>2</sub> Resource/Materials/Production Transfer/Use/End-of-Life Inspection

Global

warmina

# **EPSON DIRECT CORPORATION**

1059 Muraimachi Yoshikawa Matsumoto-shi, Nagano-ken, 399-8703, Japan Tel +81-50-2000-3700 Fax +81-263-85-6100

URL http://shop.epson.jp

URL http://shop.epson.jp/np11-v



Nettop computer "Endeavor NP11-V"

# Available in: Japan

# EP-3-070

# **OA/IT** equipment

personal computers

# Endeavor Na02mini-V ---. A netbook PC fits your mobile life.

1) Compact and lightweight body

Compact body in a size of 265mm in width, 180mm in depth, and 25mm in height has a high resource saving efficiency. Weighing only 1kg makes it easily to carry around.

2) Energy saving Compliant with International ENERGY STAR program, has a 3 hour battery life with the standard battery and runs 6 hours with the high capacity battery.

3) Mercury- free display
The display adopts LED backlight that does not use mercury. 10.1-inch wide glare type LCD vividly display movies and photographs, etc.

1) Comfortable mobile life

Loaded with Intel Atom processor and wireless LAN, can enjoy Internet and e-mail comfortably.

2) Smart design

The top panel is designed with In Mold Film which is scratch resistant and beautifully shines in pearl black.

Useful keyboard

Has a comfortable key-touch operation with the keyboard sizing in pitch of 17mm and stroke of

# **EPSON DIRECT CORPORATION**

1059 Muraimachi Yoshikawa Matsumoto-shi, Nagano-ken, 399-8703, Japan Tel +81-50-2000-3700 Fax +81-263-85-6100

URL http://shop.epson.jp

URL http://shop.epson.jp/na02mini-v





Available in: Japan

Netbook computer "Endeavor Na02mini-V"

1) Energy saving
Compliant with International ENERGY STAR Program, it achieves power consumption as low as 22.1W in idle state using MoDT (Mobile on Desk-Top) technology devices.

2) Space saving

Compact body of 75mm in width, 185mm in depth, and 195mm in height have high resource saving efficiency. It also makes it possible to be placed anywhere either vertically or horizontally.

# Product performance

1) High performance

Mobile Intel GM45 chipset is adopted, where Intel Celeron processor or Intel Core2 Duo processor can be installed. Endeavor ST125E achieves both high performance and lower cost operation.

2) Small Sound

System achieves less than 22dB idle state noise using an efficient cooling design. Small sound, same as a notebook PC, provides comfortable working environment.

Multi monitor

This system is equipped with an HDMI and VGA port, supports multi monitor function to extend working area on your display.

# **EPSON DIRECT CORPORATION**

1059 Muraimachi Yoshikawa Matsumoto-shi, Nagano-ken, 399-8703, Japan Tel +81-50-2000-3700 Fax +81-263-85-6100

URL http://shop.epson.jp

URL http://shop.epson.jp/st125e

Global Long-life Material Production LC Stage Transport End-of-life Use/repair 116.4kg-CO<sub>։</sub> Resource/Materials/Production Transfer/Use/End-of-Life Inspection

Desktop computer "Endeavor ST125E"

Energy saving

End-of-life

LC Stage

Available in: Japan

### **OA/IT** equipment EP-3-072

personal computers

Production

# Desktop-replacement notebook PC with Large wide screen: CF-F8 series

### Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards adopting long-life backlight to achieve low power consumption
- "Effective use of resources" : Lightweight machine equipped with unique

and thin-wall molding with Magnesium Alloy case

### Product performance

- Easily portable, lightweight design: 1630g weight including a battery pack
- Designed to withstand rugged mobile : Free fall test at 76 cm height at
- 14.1 inches Large wide screen for efficient operations : WXGA/1280X800 pixels

# Panasonic Corporation, AVC Networks Company

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/avc/toughbook/

URL http://panasonic.net/csr/



Available in: Japan, Asia, Asia and Oceania, Europe, North America, Middle and Near East, Mexico

Notebook PC with Large wide screen: CF-F8 series

Eco-product // 0A/IT equipment

# EP-3-073 OA/IT equipment

personal computers

# 14.1" Large screen notebook PC with spill resistant keyboard : CF-Y8 series

# Environmental performance

- "Prevention of Global Warming" : Compliant with International Energy Star Program standards

adopting long-life backlight to achieve low power consumption

- "Effective use of resources" : Lightweight machine equipped with unique shell drive

and thin-wall molding with Magnesium Alloy case

# Product performance

- Easily portable, lightweight design: 1510g weight including a battery pack
- Designed to withstand rugged mobile: Free fall test at 76 cm height at development stage
- 14.1 inches Large screen for efficient operations (\*) CF-Y8GWQAAS

# **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cho, Kadoma City, Osaka, 571-8504, Japan

Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.net/

URL http://panasonic.net/avc/toughbook/

URL http://panasonic.net/csr/

Available in: Japan, Asia, Asia and Oceania, Europe, North America, Middle and Near East, Mexico













14.1" Large screen notebook PC: CF-Y8 series

# EP-3-074

# **OA/IT** equipment

### personal computers

# A4 wide display PC (15.6 inch) FMV-A8290

# Environmental performance

- LCD with LED backlight (mercury-free design) that considers energy saving and environmental conservation.
- (2) Conforms to the ENERGY STAR Program\*
- (3) Achieved AAA in Energy Consumption Efficiency Category I in the 2007 standards of the Japan Law Concerning the Rational Use of Energy.
- (4) Approx. 20% reduction in packaging volume from previous model.
- \* Except for Intel® Celeron® Processor T3100 model

### Product performance

Achieves a high-efficiency, optimum PC environment for business

- (1) CPU offers dual core high-speed processing
- (2) Includes Support button. Pressing this button activates FMV support navigation.
- (3) Various security functions
- Fingerprint sensor, security chip, and smart card can be installed.
- Portshutter, software to limit the use of USB and other ports, is installed as standard.

# Fujitsu Limited

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Japan

Tel +81-03-5568-1170

URL http://www.fujitsu.com/global/

URL http://www.fmworld.net/biz/fmv/lifebook/0910/a8290/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Japan

FMV-A8290





- Conforms to the ENERGY STAR Program.
- A low noise level of around 20 dB (Å) \*1 was achieved by reducing the fan speed through the use of a notebook CPU (which emits less heat than those for desktop PCs).
- This product has a CPU with outstanding power saving functions. Compared with a
  previous model \*², it provides outstanding energy saving performance, with a 41%
  reduction in power consumption (41W to 24 W). Use of this product lowers running
  costs.
- \* 1 Value measured in-house for standard configuration
- \* 2 Compared with FMV-D5290 Intel® Celeron® 430 (1.80 GHz)

#### Product performance

Multiple Monitor Function
 Two-port display interface as standard (Mini D-SUB15-pin (analog) x 1, DVI-D 24-pin (digital) x 1). Enables simple set-up of a multiple monitor environment.

## **Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123, Janan

Tel +81-03-5568-1170

URL http://www.fujitsu.com/global/

URL http://www.fmworld.net/biz/fmv/esprimo/0904/d5180/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Japan





FMV-D5180 \*Displays are sold separately

## EP-3-076

## OA/IT equipment

#### personal computers

## **Business-oriented Desktop PC/Mate Type MG**

#### Environmental performance

The products install the functions of "ECO MODE Setting" and of "Brightness Control Knob", both of which can stimulate the users' awareness toward energy saving operation.

Compared to conventional products;

CO<sub>2</sub> reduction: 59% less

= ca 70kg/year

\* This product is manufactured by NEC Personal Products, Ltd. and is sold by NEC Corporation.

The party to the Eco Mark utilization contract for this product is NEC Personal Products, Ltd.

# **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan URL http://www.nec.com/

URL http://www.nec.co.jp/csr/en/





## EP-3-077 OA/IT equipment

personal computers

## Business-oriented Desktop PC/Mate Type ME (PC-MY28F/E-6)

## Environmental performance

The products install the ECO MODE Setting Function which users can easily switch to the energy saving mode.

Compared to the conventional products;

CO<sub>2</sub> reduction: 52% less

= ca 40kg/year

\* This product is manufactured by NEC Personal Products, Ltd. and is sold by NEC Corporation.

The party to the Eco Mark utilization contract for this product is NEC Personal Products, Ltd.











## **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan

URL http://www.nec.com/

URL http://www.nec.co.jp/csr/en/



Available in: Japan

#### EP-3-078

## OA/IT equipment

personal computers

## **Business-oriented Desktop PC/Mate Type MF**

#### Environmental performance

The products install the ECO MODE Setting Function which users can easily switch to the energy saving mode.

Compared to the conventional products;

CO<sub>2</sub> reduction: 53% less

= ca 60kg/year

\* This product is manufactured by NEC Personal Products, Ltd. and is sold by NEC Corporation.

The party to the Eco Mark utilization contract for this product is NEC Personal Products, Ltd.



# **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan

URL http://www.nec.com/

URL http://www.nec.co.jp/csr/en/



- Mitigation of climate change: Low power consumption thanks to the lowvoltage unit and system power management.
- Efficient use of resources: Resource saving by the miniaturization of substrates, thin LCD/DVD, and thin casing.
- Management of chemicals: Adoption of mercury-free LED backlight LCD and halogen and antimony compound-free substrate.

#### Product performance

- Enhanced performance: Large-capacity flash memory drive for high-speed data storage. Long-lasting battery operation. Easy-to-view screen even in bright lighting conditions.
- High reliability: Principal components protected from external shock and structural design offering protection against liquid infiltration. Fingerprint sensor and TPM security prevent unauthorized access to HDD.

## **TOSHIBA CORPORATION Personal Computer & Network Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





dynabook SS RX2

EP-3-080 OA/IT equipment

hard disks

## High capacity and high performance hard disk drive for Eterprise.

· Ultrastar C15K147

By downsizing, saves annual power consumption by approx.60% compared to 3.5inch HDD with same performance for enterprise servers. (Parallel between Ultrastar 15K147 (YR2005) and Ultrastar C15K147.

· Ultrastar 15K600

Advanced power management features achieved annual power saving approx.9% (Parallel between Ultrastar 15K147 (YR2005) and Ultrastar 15K600.

· Provides five power-saving mode options in order to optimize power usage.

· Ultrastar C15K147

15,000 RPM performance, 6Gb/sec SAS moves more data quickly and reliably, 64MB cache buffer, Large 147GB capacity

Ultrastar 15K600

600GB capacity will store most everything, Spinning at 15,000 RPM for mission critical performance, FCAL & SAS interfaces for reliable data throughput, 64MB cache buffer

## Hitachi Global Storage Technologies

1 Kirihara-cho, Fujisawa-shi, kanagawa, 252-8588, Japan

URL http://www.hitachigst.com/

URL http://www.hitachigst.com/portal/site/jp/products/ultrastar/





Ultrastar C15K147 (Left) / Ultrastar 15K600 (Right)

Eco-product // OA/IT equipment

- Mitigation of climate change: Improvement of the energy consumption efficiency to 1/40 compared with the benchmark model.
- Efficient use of resources: Weight is less than 1/5 that of a 3.5-inch HDD with the same capacity.
- Management of chemicals: Bromine-, chlorine- and antimony-free HDD.
- \*Benchmark model: MK2016GAP

#### Product performance

- Large capacity: Storage capacity of 640 GB thanks to improvement of the magnetic head and disk. Plenty of capacity for the storage of video and photos on a notebook PC, TV and game machine.
- Low noise: Reduction of acoustic noise during data seek by 2dB compared with the previous model (MK3252GSX).



## **TOSHIBA CORPORATION Digital Media Network Company**

- 1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan
- URL http://www.toshiba.co.jp/index.htm
- URL http://www3.toshiba.co.jp/storage/index.htm
- URL http://www.toshiba.co.jp/env/en/report/index.htm



Available in: Worldwide

2.5-inch Hard Disk Drive MK6465GSX

# Next-generation Grid Storage/iStorage HS8-20

#### Environmental performance

Compared to the convetional products;

CO2 reduction: 63% less

= ca 27ton/year,

EP-3-082

= JPY 1,700/year

Space-saving: 75% less

# OA/IT equipment

storage









## **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan

Available in: Worldwide

Compared to the conventional products; CO<sub>2</sub> reduction: 61% less

= ca 75kg/year

#### Product performance

iStorage D8 series bring an innovative architecture to the mid-range that provides tremendous flexibility, resiliency, and scalability, along with Thin Provisioning for high capacity efficiency.



## **NEC Corporation**

7-1, Shiba 5 Cho-me, Minato-ku, Tokyo, Japan

URL http://www.nec.com/

URL http://www.nec.com/global/prod/storage/

URL http://www.nec.co.jp/csr/en/



Available in: North America

EP-3-084 OA/IT equipment

disk arrays

Disk Storage System Operating with Power Saving by "Storage Virtualization Technologies"

#### Environmental performance

- Mitigation of climate change: Energy consumption efficiency 0.11W/GB (Standard energy consumption efficiency is 0.63W/GB).
- Efficient use of resources: Reduction of number of parts.

#### Product performance

- Fast Speed Transactions: Improvement of throughput.
- Storage Virtualization Technologies: Easy planning of volume capacity by "Storage Virtualization Technology".

# Global warming substances saving Material Design Resource LC Stage Transport End-of-life Use/repair



ArrayFort AF7500 MKC0264A

## **Toshiba Solutions Corporation**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan

Tel +81-3-3457-3260 Fax +81-3-5444-9429

E-mail eco-info@toshiba-sol.co.jp URL http://www.toshiba-sol.co.jp/

URL http://www.toshiba.co.jp/index.htm

Available in: Japan

Eco-product // 0A/IT equipment

UJ232 has been developed as a 9.5mm height Blu-ray Disc drive; slimmer than the current 12.7 mm height Blu-ray Disc drive.

UJ232 has achieved high-performance strongly required from the current PC market for mobile computers. In addition, it significantly contributes to designing slimmer, lighter and more resource-saving mobile computers.

#### Product performance

- 1. The thinnest 9.5 mm Blu-ray Disc drive (\*) in capable of reading and writing Blu-ray media in the market
- Weight reduction down to 140 g.
   Supporting seven types of CD and DVD recordable media (DVD-/+R DVD-/+RW DVD-RAM CD-R/RW). Also supporting Blu-ray recordable media (BD-R,BD-RE) with 2X writing speed.
- 4. PVC-free

(\*) In the category of Blu-ray Disc drive used in mobile computers in the market. Based on a 12/2009 market research conducted by us.

## Panasonic System Networks Co.,Ltd.

1080 Takano Nagomi-Machi Tamana-Gun, Kumamoto, 865-0193, Japan Tel +81-968-86-4855 Fax +81-968-86-4859 URL http://panasonic.net/csr/





9.5mm Height Blu-ray Disc Drive: UJ232

Available in: Worldwide

EP-3-086

## OA/IT equipment

mobile information terminals

## FLEPia the world's first portable information terminal featuring color electronic paper

#### Environmental performance

FLEPia is the world's first portable information terminal employing color e-paper, boasting slim lightweight design and low power consumption. The use of e-paper for display means that no power is used in maintaining static images and only a tiny amount of power is used for page rewriting. This allows a longer battery life than for notebook PCs and PDAs. The A5 version (8 inches) weighs 360 g. Thickness is 12.5 mm thick, and up to 40 hours of continuous operation is possible on a single charge \*. Users can carry a variety of content, thus contributing to a paperless society.

\* 2,400 pages of images of 64 colors, rewritten at a 1 min. content display interval.

#### Product performance

- Content download using high-speed wireless LAN supplied as standard.
- Color display is as easy on the eye as paper. 260,000 colors with XGA 768 x 1,024 resolution
- Touch panel and buttons enable quick operation.

## **Fujitsu Frontech Limited**

1776 Yanokuchi, Inagi-shi, Tokyo, 206-8555, Japan Tel +81-42-377-0445 Fax +81-42-379-6500

URL http://www.frontech.fujitsu.com/en/

URL http://www.frontech.fujitsu.com/en/release/20070420.html

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Japan





**FLEPia** 

- Mitigation of climate change: 8% reduction in standby power consumption thanks to a lower voltage circuit element.
- Efficient use of resources: Use of recycled plastic for the duster tray.
- Management of chemicals: Adoption of halogen-free material for printed circuit board.

#### Product performance

- Easy operation: The industry's first voice guidance function for easy operation.
- Usability: Adjustable scanner angle for improved reading performance.
- Convenience: Enhanced ease of storing with storable cable and duster

#### **TOSHIBA TEC CORPORATION**

Oval Court Ohsaki Mark East 2-17-2, Higashi Gotanda, Shinagawa-ku, Tokyo, 141-8664, Japan

Tel +81-3-6422-7164 Fax +81-3-6422-7121 URL http://www.toshibatec.co.jp/index.html.html URL http://www.toshibatec.co.jp/csr/report/index.html

Available in: Japan





Smart Line Scanner LS-790T

**EP-3-088 OA/IT** equipment

displays

## ECO Plus Model - a display that enhances both energy saving and security

#### Environmental performance

A 17-inch display that enables power saving through a user presence/absence detection function

- An infrared sensor detects user presence or absence. If the user is absent, the sensor automatically turns off the display after a minimum of 4 sec.
- The display is automatically turned on again when the user returns to the area in front of the display. Reduces power consumption by 80% compared to our previous models.
- Conforms to the ENERGY STAR Program

#### Product performance

Peep prevention - security enhancement using a password lock.

- Password screen lock can be set up for protection when display is turned off. Prevents snooping or unauthorized input by others in the user's absence.
- By linkage to the FMV-ESPRIMO main unit, fingerprint or ID card can be used instead of password input (optional extra).
- Requires no driver installation.

## **Fujitsu Limited**

Shiodome City Center, 1-5-2 Higashi-Shimbashi, Minato-ku, Tokyo, 105-7123,

Tel +81-03-5568-1170

URL http://www.fujitsu.com/global/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Japan





VL-177SRL

The products install the ECO MODE and Carbon Meter, which can stimulate the users' awareness toward energy saving operation.

Compared to conventional products during the Eco mode;

CO2 reduction: 66% less

- = ca 30kg/year,
- = JPY 1,700/year











## **NEC Display Solutions, Ltd.**

4-13-23, Shibaura, Minato-ku, Tokyo, Japan URL http://www.nec-display.com/global/index.html



Available in: Worldwide

## EP-3-090 OA/IT equipment

displays

## LCD MultiSync Series/LCD-EA222WMe

#### Environmental performance

In addition to the ECO MODE and the Carbon Meter, this product installs the "Auto Brightness Function" which automatically adjust the brightness of the monitor when sensing the ambient brightness, and also "Off Mode Function" which automatically moves to the power saving mode when the users do not use the products for a certain time.

Compared to conventional products during the Eco mode;  $CO_2$  reduction: 43% less = ca 58kg/year,



# **NEC Display Solutions, Ltd.**

4-13-23, Shibaura, Minato-ku, Tokyo, Japan URL http://www.nec-display.com/global/index.html



Available in: North America

High quality

LC

Stage

Production

Transport

. Use/repair

## Compact design Document scanner "imageFORMULA P-150"

- High energy-efficient and compact design with CMOS CIS sensor and light source of LED
   No wait-time to start scanning after pressing Power-Switch ON
   Automatic Power ON/OFF depending on the feeder tray
   Conforms to ENERGY STAR standards

- Sleep mode: 1W Standby mode: 0.1W (Official data of application for ECCJ) Scanning: With 1 USB 2.5W or less With 2 USB 5.0W or less
- Compliant with European RoHS Directive

The most compact and light weighted document scanner\*1

- l-pass duplex scanning
- B&W/Color: 15/10ppm (A4/LTR portrait/200dpi/2USB or AC adapter) 12/10ppm (A4/LTR portrait/200dpi/1USB) Plug & Scan function
- Can scan without installing Scanning Software onto PC
- BUS Power Drive
- Advanced image processing functions
- Auto size detection, Deskew, Skip blank page, Text Orientation Recognition, Auto color detection, etc.
- \* Domestic A4 ADF Document Scanner (Based on research by CEI as of September 1, 2009)



Global

warming

Material

End-of-life

#### CANON ELECTRONICS INC.

3-5-10, Shibakoenn, Minato-ku, Tokyo, 105-0011, Japan Tel +81-3-6910-4119 Fax +81-3-5472-7671

E-mail kankyo@canon-elec.co.jp

URL http://www.canon-elec.co.jp/english/aboutus/index.html

URL http://www.canon-elec.co.jp/english/products/ims/en-p150/index.html

Available in: Worldwide Document Scanner P-150

**OA/IT** equipment EP-3-092

scanners

## Hi-performance A4-size color Document scanner "imageFORMULA DR-3010C"

- High energy-efficient and compact design with CMOS CIS sensor and light source of LED
- No wait-time to start scanning after pressing Power-Switch ON Automatic Power ON/OFF depending on the status of the connected PC
- Conforms to ENERGY STAR standards
  - Sleep mode: 3.7W Standby mode: 0.5W or less (Official data of application for ECCJ) Scanning: 16.5W or less
- Compliant with European RoHS Directive

#### Product performance

High performance scanner featuring easy operation and robust body

- B&W/Color: 30ppm (A4/LTR portrait/200dpi)
- Reliable feeding of a wide range of documents including embossed plastic cards Convenient "One-touch" job buttons for advanced registration of popular scan-jobs
- Ultrasonic Double Feed Detection
- Folio function to scan larger-size documents up to A3
- Advanced image processing functions
  - Auto-paper size detection, Deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.

## CANON ELECTRONICS INC.

3-5-10, Shibakoenn, Minato-ku, Tokyo, 105-0011, Japan Tel +81-3-6910-4119 Fax +81-3-5472-7671

E-mail kankyo@canon-elec.co.jp

URL http://www.canon-elec.co.jp/english/aboutus/index.html

URL http://www.canon-elec.co.jp/english/products/ims/dr3010c/index.html

Available in: Worldwide

Document Scanner DR-3010C





#### EP-3-093 **OA/IT** equipment

## Robust and high-speed A3 Document scanner "imageFORMULA DR-6050C/7550C/9050C"

#### Environmental performance

- High energy-efficient and compact design with CMOS 3-line CIS sensors and light source of LED

No wait-time to start scanning after pressing Power-Switch ON Conform to ENERGY STAR standards

DR-6050C/7550C/9050C Sleep mode:3.1W/3.2W/2.9W Standby mode:0.5W/0.5W/0.5W (Official data of application for ECCJ) Scanning:82W/82W/83W

Compliant with European RoHS Directive

- High speed A3 document scanner featuring reliable feeding B&W/Color:60ppm (DR-6050C) 75ppm (DR-7550C) 90ppm (DR-9050C) (A4/LTR portrait, 200dpi)
- Enhanced color accuracy with advanced 3-line CMOS sensor and 3D Color Correction On board image processing chip for faster image processing
- Staple detection feature
- Front operation with U-Turn Path feeding Ultrasonic Double Feed Detection
- Advanced image processing functions

Auto-paper size detection, Deskew, Skip blank page, Text Orientation Recognition, Auto Color Detection, etc.

#### CANON ELECTRONICS INC.

3-5-10, Shibakoenn, Minato-ku, Tokyo, 105-0011, Japan

Tel +81-3-6910-4119 Fax +81-3-5472-7671

E-mail kankyo@canon-elec.co.jp

URL http://www.canon-elec.co.jp/english/aboutus/index.html

URL http://www.canon-elec.co.jp/english/products/ims/en-dr9050-7550-6050/ index html

Available in: Worldwide





Document Scanner DR-6050C/7550C/9050C

#### **OA/IT** equipment EP-3-094

scanners

## fi-5900C - A3, high-speed, energy-saving, duplex image scanner

#### Environmental performance

- Energy saving: The fi-5900C is an international ENERGY STAR program standards meeting high output production scanner that consumes very little energy, especially when in sleep mode.
- Eco-friendly materials: Bio-based plastics were incorporated into the fi-5900C's document ejection unit.
- The addition of document placement and removal time reduction technology enhances overall performance and reduces the fi-5900C's carbon footprint by 55%, compared to the previous model (fi-4990C).
- EU RoHS compliant.

#### Product performance

- The fi-5900C is a high speed color duplex ADF scanner that is capable of scanning up to 125ppm/250ipm, A4 landscape size color scanning (200/300dpi).
- Utilization of pre- and post-scanning processing technology into the fi-5900C minimizes user intervention and improves overall digitizing efficiency.

## **PFU LIMITED**

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan Tel +81-44-540-4668 Fax +81-44-540-4639

E-mail scanners@pfu.fujitsu.com

URL http://www.fujitsu.com/global/about/environment/

URL http://www.fujitsu.com/global/services/computing/peripheral/scanners/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide





fi-5900C

- Resource saving: fi-6800 is smallest in its class (See Note) (Takes up 53% less space and is 72% lighter than its previous model (fi-4860C2))
- Energy saving: Short recovery time (within 6 seconds). Low power consumption when in sleep mode (less than 4W without CGA board interface)
- Eco-efficiency factor: Enhanced performance improves scanning efficiency and reduces the size of body. The fi-6800 has an Eco-efficiency factor of 2.15.
- EU RoHS compliant.

#### Product performance

- The fi-6800 offers fast, 130ppm/260ipm, A4 landscape size color scanning (200/300dpi) with smallest body in the class.
- The fi-6800 supports new automatic functions that make scanner operating tasks even easier, faster and more energy efficient.

Note: Applies to business scanners priced between ¥1,170,000 and ¥4,400,000.

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URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide fi-6800

OA/IT equipment

scanners

## fi-6240 - The smallest A4 ADF/ flatbed duplex color scanner in its class

#### Environmental performance

- Resource saving: The smallest and least resource demanding A4 scanner in its class (30ppm or faster, see note).
- Eco-efficiency factor: Multi-feed and document jam detection enhanced performance improves scanning efficiency. The lengthening of the fi-6240's product life enables users to operate it for longer, thus reducing their burden on the environment. The fi-6140 has an Eco-efficiency factor of 2.13.
- EU RoHS compliant.

EP-3-096

#### Product performance

- The compact A4 ADF&flatbed color duplex high-speed fi-6240, which is capable of scanning an impressive 80ppm in color (120ppm in monochrome) (A4, portrait, 200dpi) is ideal for decentralized scanning.

Note: Applies to A4 ADF&flatbed scanners that are capable of 40ppm/80ipm speeds (A4, monochrome, 200dpi) that sell for a retail price of 300,000 yen or less.

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URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide











## EP-3-097 OA/IT equipment

scanners

## fi-6140 - The smallest A4 ADF duplex color scanner in its class

#### Environmental performance

- Resource saving: The smallest and least resource demanding A4 scanner in its class (30ppm or faster, see note).
- Eco-efficiency factor: Multi-feed and document jam detection enhanced performance improves scanning efficiency. The lengthening of the fi-6140's product life enables users to operate it for longer, thus reducing their burden on the environment. The fi-6140 has an Eco-efficiency factor of 2.09.
- EU RoHS compliant.

#### Product performance

 The compact A4 ADF color duplex high-speed fi-6140, which is capable of scanning an impressive 80ppm in color (120ppm in monochrome) (A4, portrait, 200dpi) is ideal for decentralized scanning.

Note: Applies to A4 ADF scanners that are capable of 40ppm/80ipm speeds (A4, monochrome, 200dpi) that sell for a retail price of 300,000 yen or less.

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URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide





fi-6140

LC

Stage

エコ商品

End-of-life

## EP-3-098 OA/IT equipment

scanners

High quality

Production

Transport

## fi-60F - Resource and energy saving A6 flatbed scanner

#### Environmental performance

- Resource saving: The smallest and fastest scanner in its class.
- Incorporated environmentally friendly material: The fi-60F has been painted with easy to recycle paint and makes use of a mercury-free light source.
- Energy saving: The fi-60F is one of the top performing international ENERGY STAR standards meeting scanners. (The fi-60F requires a mere 2W or less when in sleep mode.)
- Quiet performance: Operates at 42dB or lower.
- EU RoHS compliant.

#### Product performance

 The fi-60F A6 flatbed color scanner offers first-rate speedy one-second scanning (200dpi, monochrome).

## **PFU LIMITED**

Solid Square East Tower, 580 Horikawa-Cho, Saiwai-ku, Kawasaki-Shi, Kanagawa, 212-8563, Japan Tel +81-44-540-4668 Fax +81-44-540-4639

E-mail scanners@pfu.fujitsu.com

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URL http://www.fujitsu.com/global/services/computing/peripheral/scanners/

URL http://www.fujitsu.com/global/about/environment/communication/report/

Available in: Worldwide



fi-60F

Production

Transport

. Use/repair

**OA/IT** equipment

Long-life

LC

Stage

## Desktop type OCR scanner S1500 for high-speed data entry from paper documents

#### Environmental performance

- Mitigation of climate change: Features an Energy Star compliant "low power consumption" mode.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Management of chemicals: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

#### Product performance

- High-speed scanning: High-speed scanning for OCR of 50 sheets per minute for A4-sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble-free operation, even with mixed sheet thickness.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.

## **Toshiba Solutions Corporation**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan Tel +81-3-3457-3260 Fax +81-3-5444-9429

E-mail eco-info@toshiba-sol.co.jp URL http://www.toshiba-sol.co.jp/ URL http://www.toshiba.co.jp/index.htm

Global

End-of-life

Desktop type OCR scanner S1500

Available in: Japan

EP-3-100 OA/IT equipment

scanners

## Desktop type OCR scanner S2500 for high-speed data entry from paper documents

#### Environmental performance

- Mitigation of climate change: Features an Energy Star compliant "low power consumption" mode.
- Efficient use of resources: About 40% reduction in total weight; using fewer, thinner components, made of lightweight materials.
- Elimination of harmful chemical substances: Uses a mercury-free, long-life light source; made of LED (Light-emitting Diodes) instead of fluorescent lamp.

#### Product performance

- High-speed scanning: High-speed scanning for OCR of 120 sheets per minute for A4sized documents.
- Prevention of multi-feeding: Highly accurate double-feeding detection mechanism for trouble free operation, even with mixed sheet thickness.
- Duplex imprinting mechanism: OCR software for document format identification decides suitable imprinting side even for batch scanning with stacks of inter-mixed forms.
- Maintenance saving: Maintenance frequency is reduced by increasing the durability of rollers.

## **Toshiba Solutions Corporation**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-6691, Japan

Tel +81-3-3457-3260 Fax +81-3-5444-9429 E-mail eco-info@toshiba-sol.co.jp

URL http://www.toshiba-sol.co.jp/ URL http://www.toshiba.co.jp/index.htm

Available in: Japan





Desktop type OCR scanner S2500

The GT-X820 scans at twice the speed of the comparative 2007 model (GT-X770) and uses 48% less power during scanning, 27% less power in standby mode, and 60% less in sleep mode. (Based on Japanese specifications.)

Elimination of hazardous substances>

The GT-X820 conforms to the EU RoHS directive.

LEDs are non-mercury light sources.

#### Product performance

This product is a High-quality 6400 dpi film and photo scanner with new technology for no warmup time, faster scans and lower power consumption.

# Global warming Substances Energy High quality saving Design Production Stage End-of-life Use/repair

## **Seiko Epson Corporation**

3-3-5 Owa, Suwa-shi, Nagano-ken, 392-8502, Japan Tel +81-266-52-3131

URL http://www.epson.co.jp/e/community/environment/

URL http://www.epson.com/

URL http://www.epson.co.jp/e/community/



Available in: Japan, Oceania, Europe, North America, Central America, South America, Southeast Asia, Republic of Korea, Taiwan (Rep. of China), China

GT-X820 (Epson Perfection V600 Photo)

## Office supplies/furniture

stamps

## Akita Cedar Seal Sugimaru-kun

#### Environmental performance

Amid the accelerating deforestation and destruction of the environment in recent years, the development of substitute materials is being encouraged in the seal industry, which mainly consumes imported natural woods. Akita is a producing district of Japanese cedar. The products of the company are made using waste pieces of Akita cedar.

#### Product performance

A special press process enables seals to maintain their compressed forms without using chemicals. The quality of seals is almost the same. The refined seals feature the grains of wood on them.

## Production LC Stage Transport End-of-life Use/repair



#### **TSURUTAC**

10-4 Kiyokawa-cho, Yokote, Akita, 013-0032, Japan Tel +81-182-32-0220 Fax +81-182-32-0224

E-mail tsuruya@po.tsuruta.co.jp URL http://www.tsuruta.co.jp

Available in: Japan

#### EP-4-002

## Office supplies/furniture

desks

## CX office desk made in the pursuit of simplified design

#### Environmental performance

CX desk has the following eco-friendly features.

Simplified design: The desk's weight was reduced by approximately 13% compared with our company's conventional products through simplified design to eliminate duplicated desk legs and modestly panels and downsized basic parts (in case of an island-type, face-to-face layout for 8 people).

Improved recyclability: Metals (steel, aluminum) are used for 96% of the total weight of the product (in case of non-pedestal desk).

Use of an eco-melamine desktop: The surface material of the desktop is made of originally developed eco-melamine using 52% waste paper.

Use of recycled materials: Recycled materials are used for 43% of the resin parts (in case of pedestal desk).

#### Product performance

CX desk is a neo-standard desk that meets a variety of office needs through the pursuit of simplified design for improved functionality and simplified structure.

#### **ITOKI CORPORATION**

4-12, Imafukuhigashi, 1-chome, Joto-ku, Osaka, 536-0002, Japan Tel +81-6-6935-2200 Fax +81-6-6935-2268

URL http://www.itoki.jp/

URL http://www.itoki.jp/products/desk/cx/

URL http://www.itoki.jp/udeco/communication/erreports.html

Available in: Japan





CX DESK

## FURSYS multifunctional desk "USD desk series"

#### Environmental performance

"USD desk" is made of wood, steel and plastic. 1) Less than 1.5PPM of formaldehyde and lower level of heavy-metal than environmental standard are used for this desk. 2) The coating materials and processes of "USD desk" are eco-friendly. These coating materials are also authorized by KOREA Eco-labeling Program. 3) The product life is long. The safety and durability of this desk was verified through experiments.

#### Product performance

The USD desk series is designed for students to give them the utmost comfort and efficiency to study. It has adjustabilities of height and tilt and antiskid function. It also has had a patent registration in Korea.

## FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea Tel +82-2-443-2818 Fax +82-2-443-3814 URL http://www.fursys.com





#### **EP-4-004**

## Office supplies/furniture

chairs & desks

## "SCHOLAR light" classroom desk & chair

#### Environmental performance

"SCHOLAR light" is a new super light-weight desk and chair for classrooms in educational facilities. The environmental features of this product are as follows.

\* Saving Resources - 23% less weight

The structure was reviewed for less use of resource which led "SCHOLAR light" to be 23% less weight comparing to conventional products (Gross weight of desk and chair). This also makes the product easier for students to lift up and move.

#### Product performance

\* Movable Design

There is a handgrip on both sides of the desk so that the product can be lifted up and moved safely. The chair also has a handle for easy moving.

\* Consideration of weight balance when lifting up

The weight balance of the desk is well-considered to prevent students losing their balance when lifting up the product. The L-shaped trapezoidal leg provides stability as well as easiness when sitting down or standing up.

## **Okamura Corporation**

Tenri Bldg., Kitasaiwai, Nishiku, Yokohama, 220-0004, Japan Tel +81-45-319-3480 Fax +81-45-319-3482 URL http://www.okamura.jp/





SCHOLAR light



Contessa is a revolutionary office seating created by collaboration with the leading Italian industrial design firm Giugiaro Design. The environmental features are as follows

Saving Resource

Simulation technology such as resin flow analysis technology is used in pursuit of necessary strength and design with the aim of optimizing the use of resources. Minimizing Environmental Load

To ensure safe product end of life, Okamura is working on minimization of the use of substances with environmental load. As a result of this effort, Contessa clears standard values based on the RoHS directive although furniture is not currently included among the targets of this regime.

Reducing VOCs

Reducing VOCs). Which can result in sick building syndrome and allergic dermatitis. Contessa has certified GREENGUARD certification, the USA's world-class indoor air quality standard flow analysis technology is used in pursuit of necessary strength and design with the aim of optimizing the use of resources.

As well as the comfortable seating and a synchro-reclining mechanism, "Smart Operation" enables the user to adjust the chair in a natural posture. In particular, levers at the tips of the armrests adjust the seat's height and angle of recline, achieving an unprecedented level of usability.an unprecedented level of usability.

## **Okamura Corporation**

Tenri Bldg., Kitasaiwai, Nishiku, Yokohama, 220-0004, Japan

Tel +81-45-319-3480 Fax +81-45-319-3482

URL http://www.okamura.jp/

URL http://www.okamura.co.jp/english/product/

URL http://www.okamura.co.jp/company/csr/report.html

Available in: Japan, Asia, Oceania, Europe





Contessa

#### EP-4-006

## Office supplies/furniture

chairs

## A folding chair made from only recyclable materials

#### Environmental performance

The same material polypropylene is used for the covers of seat and its back.life cycle using parts that can be easily disassembled for separation and recycling. With its readily removable seat pad, the chair can be used for a long time as its upholstery can be easily replaced when stained or simply to change its look. The small stacking pitch allows many units to be stored together, offering excellent functionality in addition to environmental friendliness

#### Product performance

W=440mm,D=438mm,H=735mm,SH=430mm

## SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan

E-mail innfo@isu-sankei.co.jp URL http://www.isu-sankei.co.jp URL http://www.isu-sankei.co.jp

Available in: Japan



13.4kg-CO<sub>2</sub>



Resource/Materials/Production/

Eco-product // Office supplies/furni

The same material polypropylene is used for the covers of seat and its back. life cycle using parts that can be easily disassembled for separation and recycling. With its readily removable seat pad, the chair can be used for a long time as its upholstery can be easily replaced when stained or simply to change its look. The small stacking pitch allows many units to be stored together, offering excellent functionality in addition to environmental friendliness

#### Product performance

W440 mm; D438 mm; H735 mm; SH: 430 mm; stacking pitch: 26 mm; product weight: 2.9 kg (MS), 3.2 kg (MX, MY)

## Material Production Stage Transport End-of-life Use/repair エコ商品 ねっと掲載 9.05kg-CO<sub>2</sub> Resource/Materials/Production/ Transfer/Use/End-of-Life not Inspection

## SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE. 510-0017, Japan

E-mail innfo@isu-sankei.co.jp URL http://www.isu-sankei.co.jp URL http://www.isu-sankei.co.jp

Available in: Japan



EP-4-008

## Office supplies/furniture

chairs

## A stacking chair made from only recyclable materials

#### Environmental performance

The same material polypropylene resin is used for the covers of the seat and its back as well as for the cushions, upholstery and leg caps, allowing it to be easily broken down for replacement or disposal using household tools. Its steel and polypropylene resin parts can also be separated easily. The use of identical material wherever possible makes recycling easy, and the powdercoated frame does not require drainage water or organic solvents. Its dedicated carriage offers excellent stackability of up to 40 units at a time.

#### Product performance

W: 516 mm D: 535 mm H: 770 mm; SH: 430 mm; product weight: 3.4 kg

## Material Production LC Stage Transport End-of-life . Use/repair

#### 8.92kg-CO<sub>2</sub> Resource/Materials/Production/ Transfer/Use/End-of-Life not Inspection

工口商品

ねっと掲載

## SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan

Available in: Japan



Eco-product // Office supplies/furniture

## A highly variable conference chair

#### Environmental performance

This chair is highly adaptable, offering great color variation for the seat, seat back and seat pad in addition to usage with or without armrests and a writing board, and is suitable for use in all types of meeting rooms. The armrests and writing board can be attached and removed easily using only the screws in the back of the seat. These four-leg chairs can be stacked, and feature excellent storage performance. Large plastic forms are attached to the leg ends to ensure stability, and the polypropylene resin used for the seat, seat back and seat pad is recyclable.

#### Product performance

W: 580 mm D: 665 mm H: 762 mm; SH: 455 mm; product weight: 7.6 kg (CM710-MYMC); great variation with four-leg chair, four-leg chair with armrests, four-leg chair with writing board, chair on casters, chair with armrests on casters, chair with writing board on casters, with or without seat pad

#### SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan



Available in: Japan

EP-4-010

Office supplies/furniture

Recycled materials

LC

Stage

Global

エコ商品 ねっと掲載 6.5kg-CO<sub>2</sub>

Material

End-of-life

not Inspection

chairs

Production

Transport

. Use/repair

Resource/Materials/Production/

Transfer/Use/End-of-Life

## HECMEC (Heartful Ecology, Message and Education for the Children of the future) HM01

#### Environmental performance

Adorable rounded design without any sharps corners.Our chairs are designed considering all possible hazards so that children can use them safely and comfortably. We have no doubt that children will take good care of these chairs with affection.If children enjoy painting the chair with the color they like, their affection for the chair will deepen.We hope that users understand by using our chairs that taking care of products and using them for a long time is closely linked to the "earth-friendly"theme. Ourchairs are fabricated with minimam environmental load throughout the manifacturing process, from procurement of raw materials to product disposal and recycling.CO<sub>2</sub> emission has been reduced by no less than 40% by changing the raw material for frames from the "steel"normally used to "paper tubes"

#### Product performance

Dimension w390 D380 H630 SH320 3.1kg Backrest and seat polypropylene Leg frame Paper tubes

## SANKEI KOGYO CO LTD

48 AZASUKEMACHI UENOCYO SUZUKA MIE, 510-0017, Japan E-mail innfo@isu-sankei.co.jp URL http://www.isu-sankei.co.jp

URL http://www.isu-sankei.ce URL http://www.hecmec.jp

Available in: Japan, Asia

Eco-product // Office supplies/furni

# Highly functional and eco-friendly office chair "Spina" Environmental performance

Use of recycled materials: Parts made from 100% recycled polypropylene out of recovered battery cases are used for the mechanism cover, levers, etc.

Reduction of material use: The inner shell with numerous slits in the seat pan provides a cushion effect, reducing the amount of urethane compared with conventional products.

Material labeling: The materials used in most plastic parts are labeled to facilitate separation and recycling at the time of disposal.

#### Product performance

With the passive slide seat (PSS) system that makes the seat sink and slide back when seated, and the active lumber support (ALS) system that makes the lumber part of the chair's backrest push forward, Spina chair supports the user's back properly even when sitting back and leaning or sitting forward. This humanfriendly Slina chair won the Gold Prize of the Good Design Award in 2007.

#### **ITOKI CORPORATION**

4-12, Imafukuhigashi 1-chome, Joto-ku, Osaka, 536-0002, Japan Tel +81-6-6935-2200 Fax +81-6-6935-2268

URL http://www.itoki.jp/

URL http://www.itoki.jp/spina/

URL http://www.itoki.jp/udeco/communication/erreports.html

Available in: Japan







Spina Chair

#### EP-4-012

## Office supplies/furniture

#### chairs

#### Chair

#### **Environmental performance**

We apply the following to the design principles of our office furniture:

- Preference for reusable materials
- Easy separation of valuable materials to allow the return of resources to the material
- Marking of plastic components by material type
- Easy removal of fixed parts (no excess use of nuts/bolts in the assembly of components)
- Avoiding composite materials that cannot be separated into their component materials
- High functionality which guarantees long-term adaptability

We take a systematic approach to achieving our objectives. Our Environment Management System is designed to apply to the business. Our products embody valuable resources. We therefore plan for the future of our products during development stage. Our fully recyclable designs combine exceptional functionality and durability with demand for maximum reuse of materials.

## MTM Solutions Pte Ltd

2 Gemmill Lane, 048462, Singapore Tel +65-6438-0692 Fax +65-6438-0693 E-mail info@mtmsolution.com URL www.mtmsolution.com URL www.koenig-neurath.de

Available in: Asia, Asia and Oceania





Okay Chair

250

## Office supplies/furniture

chairs

## **FURSYS multifunctional chair "REPLY"**

#### Environmental performance

REPLY is ergonomic and eco-friendly. 1) The plastic recycling rate is more than 63%. 2) It doesn't use PVC but contains regulated chemical elements which are much less than standard quantity. 3) It is used for a long period of time because the mesh parts of the back and the seat are replaceable when contaminated or worn.

#### Product performance

1) Fursys' unique "dynamically-fitting back system" allows the user to adjust the backrest curvature to fit the individual body type. This helps to prevent the musculoskeletal problems that can occur from prolonged sitting in awkward postures. 2) Its various control levers are all within easy reach from the standard seated work position.

## FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea Tel +82-2-443-2818 Fax +82-2-443-3814 URL http://www.fursys.com





## EP-4-014

## Office supplies/furniture

chairs

#### Christal teak root stool

#### Environmental performance

Turns old teak roots into luxury stool furniture.

#### Product performance

Luxury stool best for every room.

URL http://www.treecycled.com

## Material Production LC Stage Transport End-of-life . Use/repair

# PT. EPOS MODERN INDONESIA

Jl.Raya Ngabul KM.8 Tahunan, Jepara, Central Java, 59428, Indonesia Tel +62-291-596454 Fax +62-291-593014 E-mail eposjepara@yahoo.com



Christal Teak Stool

The spine panel of this product consists of steel, aluminum and plastic. It is an eco-product; it made by harmless and recycled materials. 1) Manufacturing process is eco-friendly; it keeps exactly environmental regulations of various fields. 2) It doesn't use PVC. 3) The plastic recycling rate is up to 87%.

#### Product performance

"Expace" series is an office furniture system that adopts new approach to cable management called "Spine". 1) This Spine houses numerous cables (140mm wide); the panels provide independent access to electrical power and computer networks. 2) It is also the spatial boundaries in the open-plan office; desks and other furniture can be laid out in various configurations within this framework; the workspace can be altered as needs arise.

## FURSYS,INC.

Fursys Bldg., 45-1, OGEum-Dong, Songpa-Gu, Seoul, 138-130, Korea Tel +82-2-443-2818 Fax +82-2-443-3814 URL http://www.fursys.com





#### EP-4-016

## Office supplies/furniture

calendar

## **Ecology Carbon Offset Calendar**

#### Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of  $\rm CO_2$ .

#### Product performance

The Ecology calendar is compact, and features a large space for making notes

Size: 119 x 150 mm, 1 cover + 12 main sheets, logo (VOC free, waterless printing)

## **Pripress Center Corporation**

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan URL http://www.pripress.co.jp/





Ecology Carbon Offset Calendar

## Office supplies/furniture

calendar

## Window Memo Carbon Offset Calendar

#### Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

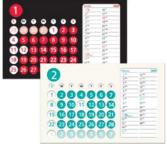
For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

#### Product performance

The Window Memo is a fun calendar with a colorful and stylish design. Size: 120 x 180 mm, 12 main sheets, logo (VOC free, waterless printing)

## **Pripress Center Corporation** 2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan URL http://www.pripress.co.jp/





Window Memo Carbon Offset Calendar

EP-4-018

Available in: Japan

## Office supplies/furniture

calendar

## **Index Carbon Offset Calendar**

#### Environmental performance

We develop environmentally friendly products. Since 2003, we have been selling recyclable desk calendars made solely of paper without paste or fittings. In 2008, we launched a business to offset carbon through afforestation and began selling Carbon Offset Calendars.

For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

#### Product performance

The Index Calendar has outstanding functionality and features easy-to-use tabs and a large space for making notes.

Size: 140 x 180 mm, 1 cover + 6 main sheets, logo (soy ink)

## Material Production LC Stage Transport End-of-life

## **Pripress Center Corporation**

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan URL http://www.pripress.co.jp/



Available in: Japan

Index Carbon Offset Calendar

An eco-friendly calendar that uses paper certified by the FSC and is made with waterless printing and soy ink. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

#### Product performance

The simple and stylish design allows users ample space for writing memos, making the calendar functionable. Each page features a silhouetted image of something in danger of extinction accompanied by an environmental message.

Size: 600 x 425 mm, The products are bound using the hot-melt binding method., Cover + 13-page main text (No VOC, waterless printing)



## **Pripress Center Corporation**

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan URL http://www.pripress.co.jp/



Available in: Japan

The Earth FSC

## EP-4-020

#### Office supplies/furniture

calendar

#### **Eco-Mark-certified Green Calendar**

#### Environmental performance

An Eco-Mark-labeled calendar. All the paper used in the product is 100% recycled. The packaging of the calendars is made from milk cartons. For every 100 copies of the calendar that are made, a larch is planted. Every larch absorbs 155 kg of CO<sub>2</sub>.

#### Product performance

Size: 119 x 150 mm, 12-page main text, Logotype (No VOC, waterless printing)



## **Pripress Center Corporation**

2-3, North2 West14, Chuoh-ku, Sapporo-shi, Hokkaido, 060-0002, Japan URL http://www.pripress.co.jp/



## Office supplies/furniture

trash bin

## R3plas Eco Trash bin Biomass coconut husk fiber

#### Environmental performance

Cocount Husk fiber is world most renewable and ideal for alternative wood design. It is natural and carbon natural and thereby helps mitigation of the global warming and contribute to reduce the comsumption of fossil resources. It help prevent deforestation.

#### Product performance

Better water resistant than wood termite and fungus proof weather proof recyclability sustainable manufacturing Easy coloring eco friendly cost effective Eco function

## WINRIGO (S) PTE LTD

No 21 Toh Guan Road East #04-09 Toh Guan Centre, 608609, Singapore Tel +65-63101396 Fax +65-65154557

E-mail salewin@singnet.com.sg URL www.winrigo.com.sg URL www.winrigo.com.sg URL www.winrigo.com.sg

Available in: Worldwide





R3plas Eco-Trashbin from Biomass Coconut husk fiber

#### EP-4-022

#### Office supplies/furniture

wiring floors

## 100% recycled PET panels for groove-wiring double floors

#### Environmental performance

This wiring floor is made of recycled PET bottle flakes to effectively use resources to preserve the global environment. CO<sub>2</sub> emissions can be reduced by 32kg by recycling PET bottles to make 1m<sup>2</sup> panels.

#### Product performance

- 1. The transparent cover allows wiring in grooves to be checked at a glance by just turning over the tile carpets.
- 2. The wire capacity of FPZ3000 is approx. three times that of our conventional wiring floorFP. Therefore, it can also accommodate wiring in offices with many PCs.
- 3. The finished floor panel thickness is only 50mm. The thin panels can also be used in offices with a low ceiling.
- 4. The panel joint rings securely fix the panel corners. They prevent panel displacement and provide high resistance to earthquakes.

## Panasonic Electric Works Co., Ltd.

1048. Kadoma, Osaka, 571-8686. Japan Tel +81-6-6909-0611 Fax +81-6-6908-2179 URL http://panasonic-electric-works.net/

URL http://panasonic-denko.co.jp/e/corp/csr/index.html





Available in: Japan, Worldwide, Asia

Wiring Floor FPR3000 NE11820 Wiring Floor FPZ3000 NE11840

## Chalk using recycled eggshells discarded by food processing companies

#### Environmental performance

Eggshells discarded by food processing companies were heated, sterilized, crushed and ground up, and chalk was manufactured by substituting 60% of the raw material in regular calcium carbonate chalk (i.e., calcium carbonate) with the ground eggshells. Discarded eggshells were recycled into chalk raw materials for use at schools, construction sites, etc. Sprinkling chalk powder generated from chalk use also leads to soil improvement.



## NIHONHAKUBOKU INDUSTRY CO.,LTD.

13 IZUMI MISATO-SHI SAITAMA-KEN, 341-0054, Japan

Tel +81-48-952-7171 Fax +81-48-952-7175

E-mail junji@tenjin-chalk.co.jp URL http://www.tenjin-chalk.co.jp/ URL http://www.tenjin-chalk.co.jp/



ECO Chalk 72

#### EP-4-024

#### Office supplies/furniture

stapler

#### Staple-less Stapler (Two-hole type)

#### **Environmental performance**

No staples are required to bind paper, leading to a reduction of resource consumption.

Sheets of Paper bound by this product can be recycled without removing

Recycled plastic is used for the major resin parts.

#### Product performance

Since the stapler makes two holes at once when binding paper, work efficiency is greatly improved.

Approximately 10 PPC sheets (\* In case of 64 g/m²) can be bound firmly. As the handle is shaped to fit into the hand, it is easy to push down the handle. A clear gauge is equipped to allow users to check the positions of closing

Since no staples are used, users can handle the products safely.

## **KOKUYO S&T Co..Ltd**

6-1-1 Oimazato-minami Higashinari-ku, Osaka, 537-8686, Japan



## Office supplies/furniture

mouse pad

## feudal warlord mouse pad

#### Environmental performance

It is a mouse pad made of the urethane which became unnecessary at the time of electronic parts production. It can be reduced the quantity of garbage going out of the factory. Combination rate of the garbage of the product is

#### Product performance

The mouse pad used repealed urethane edge materials for.

It take in the vibration from the top of the mat. Because the back side is processed, is hard to glide on a desk; a sense of stability of the relief.

Not to mention optical mouse, even a ball-type mouse does not slip too much, and but the comfortable operation that is not caught is possible.

### Recycled materials Material Production LC Stage Transport End-of-life . Use/repair

9.6kg-CO<sub>2</sub> not Inspection

Resource/Materials/Production/ Transfer/Use/End-of-Life

#### Wastebox co Itd

3F fujimoto building 4-77chikaramachi higashi-ku Nagoya, Aichi, 461-0018,

Tel +81-52-937-1950 Fax +81-52-937-1951

E-mail info@wastebox.net URL http://wastebox.net/

URL http://www.co2sakugen.net/shopdetail/019001000011/order/

Available in: Japan, Worldwide



feudal warlord's family emblem and line

## EP-4-026

## Office supplies/furniture

drawing boards

## **Crescent No. 16 Cold Press Illustration Board**

#### Environmental performance

Illustration board with a board interface (unbleached, 100% recycled waste paper)

#### Product performance

Featuring the purest shade of white among all cold press boards, this product is also known as the blue white board, and is used extensively by both students and professionals.



## **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/

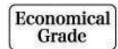




Illustration board with a board interface (unbleached, 100% recycled waste paper).

#### Product performance

A relatively low-priced hot press board with a strong elastic surface, this product is used extensively by both students and professionals.



## **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/ Economical Grade

ねっと掲載



Available in: Japan

#### **EP-4-028**

#### Office supplies/furniture

drawing boards

## **Crescent No. 99 Cold Press Illustration Board**

#### Environmental performance

Illustration board with a board interface (unbleached, 100% recycled waste paper).

#### Product performance

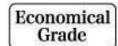
A low-priced option among cold press boards, this model is recommended for both students and professionals.



# **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/



ねっと掲載



## Office supplies/furniture

clipboards

## **CLIP BOARD**

#### Environmental performance

Our CLIP BOARD is made of recycled materials.

The ratio between raw materials and recycled ones is 60:40.





## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggido, Korea

E-mail kkkon@unitel.co.kr



## EP-4-030

## Office supplies/furniture

file folders

## File Folders with 20-pocket display book

#### Environmental performance

Our file folders are made of recyclied materials based on the recycling and reuse methods.

The ratio between raw materials and recycled ones is 60:40.

#### Product performance

Key Specifications/Special Features:

20 -pocket display book

A4 size

Various colors are available

# Material Production Resource Stage Transport End-of-life Use/repair



# Elite Information Industry

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-do. Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com

Eco-product // Office supplies/furniture

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.

#### Product performance

- 40 -pocket display book
- A4 size
- Various colors are available







## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggido, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com

## EP-4-032

## Office supplies/furniture

file folders

## File Folders with Lever Clip

#### Environmental performance

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.





# **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com



## Office supplies/furniture

file folders

## File Folders with Clip

#### Environmental performance

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.



## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggido, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com



## EP-4-034

## Office supplies/furniture

file folders

## File Folders with Lever Clip

#### Environmental performance

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.



## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com



# File Folders with 80-pocket display book

#### Environmental performance

Our file folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.

#### Product performance

- 80-pocket display book
- A4 size
- Various colors are available







## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggido, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com

## EP-4-036

## Office supplies/furniture

file folders

## File Folders with Ring Binder

#### Environmental performance

Our File Folders are made of recycled materials based on the recycled and reuse method. The ratio between raw materials and recycled ones is 60 : 40.

#### Product performance

SIZE: 255×310mm TRIGGER TYPE - 4-D RING

## Material Production LC Stage Transport End-of-life Use/repair





## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-

Tel +82-31-318-3157 Fax +82-31-318-3170

E-mail sy\_elite@hotmail.com

## Office supplies/furniture

file folders

## File Folders with Ring Binder (2 Ring)

#### Environmental performance

Our File Folders are made of recycled materials based on the recycling and reuse method.

The ratio between raw materials and recycled ones is 60:40.

#### Product performance

TRIGGER TYPE - 2-D RING



## **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggido, Korea

Tel +82-31-318-3157 Fax +82-31-318-3170 E-mail sy\_elite@hotmail.com



## EP-4-038

## Office supplies/furniture

file folders

#### File Folders with Ring Binder (3 Ring)

#### Environmental performance

Our File Folders are made of recycled materials based on the recycling and reuse method. The ratio between raw materials and recycled ones is 60:40.

#### Product performance

TRIGGER TYPE - 3-D RING



# **Elite Information Industry**

101, Seogwang Techno Town, 247-1, Eunhang-dong, Siheung-si, Gyeonggi-

Tel +82-31-318-3157 Fax +82-31-318-3170 E-mail sy\_elite@hotmail.com



# Recyclable Order Curtain Fabrics Collection, FELTA

Recycling of the FELTA curtains has begun at the recycling authorization facility, and the product is the first in the industry to be Eco Mark certified thanks to the first recuperative and recycling system in the curtain industry. The collection of used curtains is conducted according to a recycling service undertaken by certified wide-area waste disposal agents under the Waste Disposal and Public Cleansing Law. Agent status can be acquired by joint application with other manufacturers. The collected curtains are reproduced into chemical raw material, such as hydrocarbon oil, gas and carbon, with the chemical recycling method developed by Nippon Steel Corporation, which is certified as a recycling authorization. In addition, power consumption and CO<sub>2</sub> reduction effects from heat shielding and thermal insulation are disclosed in a book of case examples in an effort to conduct easy-to-understand environmental programs.

Furthermore, not only the curtains' excellent design, but also the economically-friendly activities are

highly esteemed, receiving the Good Design Sustainable Design Award (METI Minister's Prize)

- Power-consumption and CO<sub>2</sub>-emission reduction effects are described on each item: heat-shield
- and heat-retention rankings are newly established. Fulfillment of safety functions: 100% fireproof products; F☆☆☆☆ is given to the items
- (Authorized number: N09-2146), etc.
  The best anti-formaldehyde product (under the self-imposed standards in the industry) defined by the Interior-fabrics Performance Evaluation Conference

## Kawashima Selkon Textiles Co.,Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061, Japan

Tel +81-3-5144-3851 Fax +81-3-5144-3852

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/curtain/felta.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide





FELTA (FT1899)

## EP-5-002

apparel

Apparel/textiles

## Woman's clothing brand ECOMACO

#### Environmental performance

Our clothes are made from products such as corn starch, soybeans, bamboo, Japanese papers, and silk. This means it can be recycled into soil and does not need to be incinerated.

#### Product performance

- 1. Our products are made from secure natural plant fibers, rendering allergy issues with clothing a problem of the past.
- 2. The products have flexible stretch, so they can be used by all generations, infants to adults, and activities.
- 3. You can feel comfortable wearing these clothes in any situation, especially travel and casual wear because they are very light and compact.
- 4. You do not need to press the clothes because the design is meant to have a wrinkled look.
- 5. They can be washed at home, so are easy to maintain.

#### **ECOMACO**

96-5 Okadamachi Nagano-shi Nagano-ken, 380-0936, Japan E-mail silk@oka-masako.com URL http://www.ecomaco.com/english/index.php





We are an ISO 9001:2000 company exporting 100%-certified organic cotton apparel from India.

Cotton and its processing are certified under global organic textile standards.

Our dyeing, printing, and production are all certified under GOTS.

We practice fair trade for the production of finished products.

#### Product performance

We specialize in baby apparel, baby bath items, and baby bedding. We also offer fabrics, bags, and towels.

## Material Production Stage Transport End-of-life . Use/repair



ORGANIC COTTON KIMONO BABY BODY SUIT

## **NET PARADIGM INDIA PVT, LTD.**

A-38K SECTOR 64. NOIDA, 201301, India Tel +91-120-4211316 Fax +91-120-4211317 E-mail vickram@organicandmore.com URL www.organicandmore.com

## EP-5-004

Apparel/textiles

headwear

## Skull caps made from used t-shirts

#### Environmental performance

Used t-shirts reclaimed as highly unique skull caps.



# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news&user\_lang=en

Available in: Worldwide





265

This tracking cap is reclaimed from used t-shirts with part of a used t-shirt as a badge.



## Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

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URL http://www.triple-pim.com
URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news&user\_lang=en

Available in: Worldwide



Tracking Cap with Badge

## **EP-5-006**

#### Apparel/textiles

#### headwear

#### Chic hat

#### Environmental performance

This hat was remade from used checkered shirts and used corduroy pants.





4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

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URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Chic Hat

co-produce // Appaid

**4** 5

8

### Environmental performance

Unique checkered hat remade from used checkered shirts.



# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

Tel +66-81731-5869 Fax +66-2689-9044 E-mail info@triple-pim.com

URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Check Hat

**EP-5-008** Apparel/textiles

footwear

### **Areca Sheath Eco-Slippers** (Footwear)

### Environmental performance

· The leaf sheath of Area (Areca Catechu Linn) palm, extensively cultivated in South India as a cash crop, supplies a strong pliable material that is amenable to shaping. This product is obtained from the plant leaf part, which in the course of its biological life cycle, dries, falls and regenerates. This naturally shed leaf sheath is strong, semi-flexible yet not brittle, odorless, and water and heat resistant. This leaf sheath has its own natural grain and characteristic texture, very much similar to those seen in furniture-grade wood.



# The Little Export Company

B-46, Sector - 44, Noida, 201301, India Tel +91-9818113111 E-mail ankur.sales@gmail.com



### Funky wallet reclaimed from used overcoat leather

### Environmental performance

We remake used overcoat leather into funky wallets. We thus save power that is otherwise used for tanning leather and material resources. The important thing is that we save animals' lives!

### Product performance

To hold paper currency (4 slots), credit cards (9 slots), picture of family member or friend (1 slot).



# Material III

Funky Wallet

### Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com
URL http://www.triple-pim.com
URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide

### EP-5-010

### Apparel/textiles

### bags

# Shoulder leather bags (for laptops)

### Environmental performance

We remake used overcoat leather into shoulder bags. We thus save power that is otherwise used for tanning leather and material resources. The important thing is that we save animals' lives!

### Product performance

Two zippers for front and back, two pockets from original overcoat, one slot in side for paper documents and main soft case for laptop.



# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Shoulder laptop bag

# Shoulder bags (from recycled coat and shirt material)

### Environmental performance

We remake used overcoat leather along with used checkered shirts into shoulder bags. We could save power for tanning leather and resource. The important thing is we save the animal's lives!

### Product performance

One soft case for laptop, two slots for document papers, one pocket zipper, two pockets for wallet and IPod.



# Asterials ...

Shoulder laptop bag

### Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com
URL http://www.triple-pim.com
URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide

### EP-5-012

Apparel/textiles

bags

### Tote bag (from recycled corduroy pants and recycled leather)

### Environmental performance

We remake used corduroy pants along with used overcoat leather into tote bags. These pants come from secondhand stores. We could save power for tanning leather and resource. The important thing is we save the animal's lives!

### Product performance

One pocket zipper, two pockets for wallet and IPod.

# Material Design Resource Cartes Production Transport Use/repair

# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Tote Bag

### **Businessman's tote bags**

### Environmental performance

These tote bags are remade from used business suits. The body is from used pants, the pockets from used shirts, and the magnet lock covering from used neckties.



### Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Businessman Tote

### EP-5-014

### Apparel/textiles

### bags

### Tote bags with pocket from used shirts

### Environmental performance

These tote bags are remade from used shirts into attractive and cute bags. It is adjustable in the upper bag with a small pocket for coins.



# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Tote bag with Coins Pocket from used shirt

Apparel/textiles

# Backpacks made from used army shirts

### Environmental performance

These backpacks are remade from used army shirts acquired from secondhand stores.

### Product performance

We reclaim for multi-purpose and multi-carry methods to save natural resources.



### Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Backpack remade from used army shirt

### EP-5-016 Apparel/textiles

### bags

### Army multi-use bags from used army shirts

### Environmental performance

These multi-bags are remade from used army shirts acquired from secondhand stores.



# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com URL http://www.triple-pim.com URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Army Multi Bag from used army shirt

Eco-product // Apparel/textiles

### Environmental performance

Backpack remade from 10 used "aloha shirts," requiring cutting and then patching together to make a range of colorful designs.



### Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand

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URL http://www.triple-pim.com
URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news

Available in: Worldwide



Backpack made from various used "aloha shirts"

### EP-5-018

### Apparel/textiles

### bags

# Colorful tote bags made from used winter jackets

### Environmental performance

This colorful lovely tote bag is remade from five pieces cut from used winter jackets with denim.



Colorful Tote bag

# Triple Pim Co., Ltd.

4236/64 Trok Norkhet, Bangklo, Bangkorlaem, Bangkok, 10120, Thailand Tel +66-81731-5869 Fax +66-2689-9044

E-mail info@triple-pim.com
URL http://www.triple-pim.com

URL http://www.theremaker.com

URL http://www.theremaker.com/index.php?page=news&user\_lang=en

Available in: Worldwide

bags

# 100% GOTS-certified organic cotton shopping bags

### Environmental performance

The organic cotton bags are made from certified organic cotton that is audited at the farm level to the finished product level. They are definitely reusable reducing the need for harmful paper or plastic bags.

Dyes used are azo-free, heavy-metal free, low impact and reactive. Printing is water based.

### Product performance

Bags can be made to any style, size, and strength.

We use various canvas and calico fabrics to make our certified organic cotton bags.

### **NET PARADIGM INDIA PVT, LTD.**

A-38K SECTOR 64, NOIDA, 201301, India Tel +91-120-4211316 Fax +91-120-4211317 E-mail vickram@organicandmore.com URL www.organicandmore.com





ORGANIC COTTON SHOPPING BAGS

Use/repair

### **Environment-conscious Tile Carpet, COLOR BANK MULTI**

The backing of the COLOR BANK MULTI uses disposed tile-carpets as its raw materials. Under Kawashima Selkon Textilles' original recycle system, "e-RECYCLED," Polyvinyl Chloride backing from collected disposed tile-carpets is reused.

collected disposed life-carpets is reused. By producing tile-carpets using disposed ones, the ideal Circle recycling is realized. In addition, under the carbon offset policy, the cutback rate of  $CO_2$  is raised by 50%, contributing to global warming prevention.

(Compared with products not using recycled backing, CO<sub>2</sub> emissions are cut by half.)

Carbon dioxide emissions reductions by "e-RECYCLED": Approximately 18%

Offset of emissions rights: Approximately 32%

(Approximately 4.3 tons of CO<sub>2</sub> are cut by using 1,000m<sup>2</sup> of the product)

Yam/Fiber: Solution Dyed Nylon 100% Product Definition: Tufted Textured Loop (Random)

ntistatic property, flame proofness, antifouling property (Soil hide) F☆☆☆☆ Authorization Law on Promoting Green Purchasing conforming product

Carbon Offset target product

### Kawashima Selkon Textiles Co., Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061, Japan

Tel 03-5144-3853 Fax 03-5144-3854

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/tile/bank.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide









COLORBANK MULTI (KD520-05)

### EP-6-002

### Household goods and equipment

carpet tile

# Environment-conscious Tile Carpet, COLOR BANK STRIPE

The backing of the COLOR BANK STRIPE uses disposed tile-carpets as its raw materials.

Under Kawashima Selkon Textiles' original recycle system, "e-RECYCLED," vinyl chloride backing from

collected disposed tile-carpets is reused.

By producing tile-carpets using disposed ones, the ideal circle recycling is realized. In addition, under the carbon offset policy, the cutback rate of CO<sub>2</sub> is raised by 50%, contributing to global warming prevention.

(Compared with products not using recycled backing, CO<sub>2</sub> emissions are cut by half.) Carbon dioxide emissions reductions by "e-RECYCLED": Approximately 18%

Offset of emissions rights: Approximately 32%

(Approximately 4.3 tons of CO<sub>2</sub> are cut by using 1,000m<sup>2</sup> of the product)

Yam/Fiber: Solution Dyed Nylon 100% Product Definition: Tufted Textured Loop (High & Low)

Antistatic property, flame proofness, antifouling property (Soil hide) Frank Authorization
Law on Promoting Green Purchasing conforming product

Carbon Offset target product

# Kawashima Selkon Textiles Co.,Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061. Japan

Tel 03-5144-3853 Fax 03-5144-3854

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/tile/bank.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide









COLORBANK STRIPE (KD530-02,06)

274

equipment

### Household goods and equipment

carpet tile

### **Environment-conscious Tile Carpet, COLOR BANK SAXONY**

COLOR BANK SAXONY's recycling ratio reaches 45% (ratio by total weight).

COLOR BANK SAXONY uses disposed tile-carpets as its raw materials.

Under Kawashima Selkon Textiles' original recycle system, "e-RECYCLED," Polyvinyl Chloride backing from collected disposed tile-carpets is reused. The use of recycled backing Refine Back reduces CO<sub>2</sub> emissions by 14% (1.4kg/m') compared with non-recycled backing.

COLOR BANK SAXONY is the first such product to receive Eco Mark certification in the industry. In addition, under the carbon offset policy, the cutback rate of CO<sub>2</sub> is raised by 50%, contributing to global warming nervention.

in addition, index in the cation index points, the cations have prevention.

(Compared with products not using recycled backing, CO<sub>2</sub> emissions are cut by half.)

Carbon dioxide emissions reductions by e-RECYCLED: Approximately 14%

Offset of emissions rights: Approximately 36%

. 50% (Approximately 5.0tons of CO<sub>2</sub> are cut by using 1,000m<sup>2</sup> of this product.)

Yam/Fiber: Nylon (BCF) 100% Product Definition: Tufted Textured Cut

Antistatic property, flame proofness, antifouling property (SG Processing) F☆☆☆☆ Authorization

Law on Promoting Green Purchasing conforming product Carbon Offset target product

### Kawashima Selkon Textiles Co.,Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061, Japan

Tel 03-5144-3853 Fax 03-5144-3854

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/tile/saxony.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide



8.6kg-CO Resource/Materials/Production/ Transfer/Use/End-of-Life Inspection



COLOR BANK SAXONY (KD600-01,03,04,16)

### EP-6-004

### Household goods and equipment

carpet tile

# **Environment-conscious Tile Carpet, SOLID**

The SOLID's recycling ratio reaches more than 40% (ratio by total weight). SOLID's backing uses disposed tile-carpets as its raw materials. Under Kawashima Selkon Textiles' original recycle system, "e-RECYCLED," Polyvinyl Chloride backing from collected disposed tile-carpets is reused. By producing tile-carpets using disposed tile-carpets, the ideal cyclical recycling is realized. In addition, under the carbon offset policy, the cutback rate of CO<sub>2</sub> is raised by 50%, contributing to global warming nervention.

(Compared with products not using recycled backing, CO<sub>2</sub> emissions are cut by half) Carbon dioxide emissions reductions by e-RECYCLED: Approximately 8.7%

Offset of emissions rights: Approximately 41.3%

\$50% (Approximately 5.5 tons of CO<sub>2</sub> are cut by using 1,000m<sup>2</sup> of the product)

Yam/Fiber: Nylon (BCF) 100% Product Definition: Tufted Textured Loop (High & Low)

Antistatic property, flame proofness, antifouling property (SG Processing) Authorization Law on Promoting Green Purchasing conforming product Carbon Offset target product

### Kawashima Selkon Textiles Co.,Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061. Japan

Tel 03-5144-3853 Fax 03-5144-3854

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/tile/graphic01.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide





SOLID (KD3502,3503,3507,3508,3511,3512)

Eco-product // Household goods and

equipment

Material

End-of-life

Production

Transport

Use/repair

### **Eco-friendly Solid Bamboo Flooring**

### Environmental performance

Bamboo is one of the world's most renewable and strongest natural resources, and an ideal alternative to wood. Bamboo is ready for harvesting in 4 to 6 years, while trees take 20 to 80 years to mature. There is also no need to replant bamboo as it grows out from its own shoots, in direct contrast with forests which require expensive and time-consuming reforestation efforts. We only use mature bamboo harvested from government-certified forests, which ensures that the bamboo plants have enough time to re-grow.

### Product performance

Our eco-flooring is made of 100% solid bamboo using European technology and comes prefinished with a German scratch-resistant polyurethane coating. The products exceed the strict international E0 standard (<0.5mg/L) for formaldehyde emissions, ensuring a healthy environment for our customers.

### Star Bamboo (S) Pte Ltd

51 Bukit Batok Crescent #06-41 Unity Centre, 658077, Singapore

Tel +65-6565-9217 Fax +65-6565-0508

E-mail info@starbamboo.com URL http://www.starbamboo.com

URL http://www.starbamboo.com/bamboo-flooring

LC

Stage

Bamboo flooring in luxury apartment showroom

Available in: Worldwide

### **EP-6-006**

### Household goods and equipment

floor materials

# **Eco-friendly flooring Fores Hard**

### Environmental performance

By combining plyboards made using coniferous trees produced in Japan and special MDF plyboards made by utilizing mill ends, we have created E Hardbase, an environmentally-friendly base material.

As a base material used instead of south-sea wood boards, it greatly contributes to cutting CO<sub>2</sub> emissions and the protection of forests.

### Product performance

Resistant to dents and scratches.

Resistant to dents from falling tableware and scratches caused by dragging slippers and vacuum cleaners.

\* Easy maintenance and no wax required

### High quality Production LC Stage Transport End-of-life . Use/renair

### **DAIKEN CORPORATION**

Dojima Avanza 6-20, Dojima 1-chome, Kita-ku, Osaka, 530-8210, Japan



Available in: Japan

### Household goods and equipment

Material

End-of-life [

floor materials

Long-life

Production

Transport

. Use/repair

### (WPC) OA-Floor . Access Floor (WPC)

- Wood plastic composites
- Wood powder content at 85% (max.)
- Green technology
- Energy-efficient materials
- CO<sub>2</sub> decrease for global warming prevention Quality ISO 9001 and Environmental ISO 14001
- Recycing available resources
- Harmful substances
- 100% recycling is possible
- No chemical adhesive

### Product performance

USE: For an intelligent building, computer center, studio, operating room etc.— any place that uses many circuits.

- 1. EN-OF500 size: 500 x 500 x 30mm
- EN-AF600 size: 600 x 600 x 35mm
  2. Local compressibility resistance, perpendicularity, flame retardant, resistance, flatness, moistureproofing, color-fastness are all superior.
- 3. Formaldehyde super zero
- Product does not release toxic substances when incinerated

### ENWPC CORP.

5th floor, Yeoksun B/D, #779-2, Yeoksam-dong, Kangnam-gu, Seoul, 135-928,

Tel +82-2-555-2285 Fax +82-2-555-2103

URL http://www.enwpc.com

Available in: Republic of Korea

E-mail enwpc@paran.com

OA-Floor (WPC) , Access Floor (WPC)



LC

Stage

### **EP-6-008**

### Household goods and equipment

adsorption board

# **Well-cushioned Formaldehyde Adsorption Board**

Formaldehyde in the air and on the floor is absorbed not only during the construction, but also after the execution, contributing to the healthy lives of residents.

Mill ends produced during lumbering as well as wood waste from factories are utilized as recycled resources and are formed into sheets to commercialize them.

- Green Purchasing Law (Law Concerning the Promotion of Eco-friendly Goods and Services by the State and Others) special procurement products (building materials)
- \* Eco Mark-certified product (100% recycled and unused materials are used for wooden parts) No. 05111013
- \* Recycle Mark-certified product (Japan Fiberboard and Particleboard Manufacturers Association) JFP-M009

- The well-cushioned product protects floors from falling objects and shocks and is also effective at preventing sand inclusion and scratches
- Water repellent finish prevents water stains accumulating on floors in the case of water leaks and rain that blows in through the door.

### **DAIKEN CORPORATION**

Dojima Avanza 6-20, Dojima 1-chome, Kita-ku, Osaka, 530-8210, Japan





Available in: Japan

### Household goods and equipment

wooden desks, tables and chairs

### Solid Surface (Solid & Granite)

### Environmental performance

Product certification program for low emitting interior building materials, furnishings

### Product performance

Low chemical emissions performance



### LG Hausys, Ltd.

20 Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-721, Republic of Korea Tel +82-2-3773-3478 Fax +82-2-785-3996

E-mail hanbc@lghausys.com URL www.lghausys.com URL www.lghi-macs.com

Available in: Asia, U.S.A, Republic of Korea

MMA Acrylic Solid Surface (Solid & Granite)

### EP-6-010

### Household goods and equipment

mattresses

### Frei Green Environmental Natural Latex Mattress

### Environmental performance

100% pure natural latex provides extra elasticity, and Tencel® mattress cover provides additional comfort. The product's volatile formaldehyde concentration is only 0.01mg/m<sup>3</sup> with TVoC 0.005mg/m<sup>3</sup>.

### Product performance

Unlike any other latex mattress on the market, our natural latex mattress is the only mattress that has earned the national toxic-free certification. We are using 100% pure natural latex with highest standards of excellence are held for Function. Quality, and Safety. After an exhausting day of working. lying on Frei Green Environmental Latex Mattress relaxes your entire body through the unique design of breathable bubble-structure supporting your waist. Coupled with the soft, luxurious, and biodegradable Tencel® mattress cover. The delicate texture and the non-toxic properties make the ultimate transparency, comfort, and softness.



# **Acircle Corporation**

1F, No.104 Anping Rd., Jhonghe City, Taipei, 23576, Republic of China Tel +886-2-8941-2421 Fax +886-2-2948-4860

E-mail brandon.kao@a-circle.com.tw

URL http://www.a-circle.com.tw

URL http://www.a-circle.com.tw/en page/en home.html

Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)



Using Tencel TM as the mattress cover and 100% natural latex providing additional comfort

### Household goods and equipment

mattresses

### Frei Green Environmental Spring Mattress

### Environmental performance

Consist high volume of 77% high-carbon steel provides extra product life cycle. All springs sustain up to maximum 190kgf/mm<sup>2</sup>. The product's volatile formaldehyde concentration is only 0.01mg/m<sup>3</sup> with TVoC 0.005mg/m<sup>3</sup>.

### Product performance

The vertebra is the most important part supporting the entire body. Frei Green Environmental Spring Mattress is the best place offer of rest for your vertebra. Two main layers of Frei Green Environmental Spring Mattress:

- 1. The middle section: With the high-carbon steel of the springs plus the "Steel Net" (as a shape of spider web), it maintains the shape of your vertebra; in order to relax and recover your exhausting body.
- 2. The upper and lower sections: The green environmental latex forms as a buffer to take the body weight. It relaxes every inch of our muscle and

### **Acircle Corporation**

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E-mail brandon.kao@a-circle.com.tw URL http://www.a-circle.com.tw

URL http://www.a-circle.com.tw/en page/en home.html

Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)





Using Tencel<sup>™</sup> as the mattress cover providing additional comfort

Air/Water/Soil High quality

LC

### EP-6-012

### Household goods and equipment

Material

mattresses

Long-life

### Frei Green Environmental Euro-Top Pocket-Spring Mattress

### Environmental performance

Consist high volume of 72% high-carbon steel provides extra product life-cycle. With 100% pure natural latex on the top provides a better and comfortable sleep. The product's volatile formaldehyde concentration is only 0.01mg/m<sup>3</sup> with TVoC 0.005mg/m<sup>3</sup>.

### Product performance

The hand-made and delicate pocket-spring couples with the comfortable 100% pure green environmental natural latex on the top provides extra comfort. The pocket-springs efficiently absorb the shake of changing sleep postures. Feel free to change your posture without disturbing your partner's sleep. Average the weight of each parts of your body, relieve your stresses to fall in a deep and comfortable sleep.

# **Acircle Corporation**

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E-mail brandon.kao@a-circle.com.tw

URL http://www.a-circle.com.tw

URL http://www.a-circle.com.tw/en\_page/en\_home.html





Available in: Japan, North America, U.S.A, Taiwan (Rep. of China)

All materials do not consist any of carcinogenic chemical substances

Material

End-of-life

High quality

Production

Transport

. Use/repair

Recycled materials

LC

Stage

### **UMEZUMI Charcoal Paper Products**

### Environmental performance

UMEZUMI (plum-charcoal) Paper, made with a combination of regular pulp and high-quality plum-seed charcoal, has a deodorizing effect. The local umeboshi (pickled plum) processing industry creates huge volumes of ume (plum) seeds as by-products, which is recovered and made into charcoal. The unique technique does not use any glue or resin. Shoe bags inside of which this same UMEZUMI Crepe Paper was sewed inside were presented to the heads of state at the Toyako G8 Summit as gifts.

### Product performance

Not just effective with odors, this paper can also be used to clean up acids, formaldehyde, ammonia and other toxic substances. In addition to eco-kukku, which makes it easy to absorb shoe odors by just slipping it into your shoe, there is a wide range of products from shoe bags and shoe boxes, to sheets for placing in your closet or cupboard, and even suit bags.

### Sanyo Paper Co.,Ltd. (Ecotowaza Co.,Ltd)

1-6-12 Naka Kunitachi-shi, Tokyo, 186-0004, Japan

Tel +81-42-573-5613 Fax +81-42-573-5613

E-mail info@ecotwaza.com

URL http://www.eco-friendly-japan.com/

URL http://www.eco-friendly-japan.com/product-group/19

Just slipping into the shoe, this paper absorbs odor and moisture



Available in: Worldwide

### EP-6-014

### Household goods and equipment

paper

# Kyokawarakami

### Environmental performance

\*Reduction of Waste

- (1) The total amount of clay-roof-tile waste caused by the dismantling of buildings reaches approximately 2 - 3 million tons a year in Japan, which is either reclaimed or discarded in the ocean.
- (2) The clay-roof-tiles disposed of in Kyoto are crushed and controlled in size, then alien substances are removed before the product is processed into powder to realize 100% recycling. The recycled material is used as material for paving and soil conditioner.
- (3) The more recycled, the more waste is cut.

### Product performance

This product can be used as paper for Buddhist scripture and paper for shoji sliding doors.

- \* Paper for shoji sliding doors
  - Filtering out ÚV rays as efficiently as or better than paper specifically designed to cut UV rays.
- \* Paper of Buddhist scripture Resistant to yellowing (hardly deteriorates)

# Kokuyou CO.,Ltd

92-1 Miyanogo, Simomisu, Yokoooji, Husimi, Kyotosi, Kyotofu, 573-0021, Japan

Tel +81-756224417 E-mail info@kokuyou.jp URL http://www.kokuyou.jp

URL http://www.kokuyou.jp/sogo.html

Available in: Japan, Worldwide





### Household goods and equipment

wet sheet

### The sndek cleaning cloth series

### Environmental performance

The sndek cleaning cloth series is a range of environmentally friendly cleaning cloths (primarily selected from natural materials such as pulp, cotton and eucalyptus fiber) impregnated with NaHCO<sub>3</sub> electrolysis water. Biodegradable materials are used due to the disposable nature of these cloths, which can wipe off large amounts of dirt before being composted (excluding SN-W3W9W11W13).

### Product performance

The sndek cleaning cloth series offers a variety of cleaning sheets to deal with various types of household dirt and stains. Their attractive, compact packaging means they can be kept in a handbag for use while out and about as well as in the home. The safety of the materials used means that double wiping is not needed. The sndek brand is aimed at keeping both houses and the earth clean.

### HATTORI PAPER MFG.Co.,Ltd.

171-1 Yamadai, Kinsei-cho, Shikokuchuo-city, Ehime, 799-0112, Japan

Tel +81-896-58-3005 Fax +81-896-58-3048

E-mail info@sndek.com

URL http://www.hattoripaper.co.jp URL http://www.sndek.com





### EP-6-016

### Household goods and equipment

craft tapes

### More than 40% of the base material is recycled paper

### Environmental performance

The product maintains the same performance, appearance and quality as conventional kraft tape.

This high-standard ecological tape responds to today's environmental trends, while allowing you to imagine that recycled paper is not being used.

### Product performance

Excellent holding power and stable quality. It is easy to tear by hand, providing excellent workability. It is most frequently used as generalpurpose tape for sealing cardboard boxes. A special resin treatment makes it highly moisture-proof and highly durable at high or low temperatures.

Main applications: For sealing cardboard boxes (medium and light weight)

# LC Stage Transport End-of-life . Use/repair 工口商品

# SEKISUI CHEMICAL CO., LTD.

2-3-17 Toranomon, Minato-ku, Tokyo, 105-8450, Japan

Tel +81-3-5521-0562

E-mail ctk01@sekisui.jp

URL http://www.tutuminet.com/eng/index.html

URL http://www.tutuminet.com/eng/product/kraft/product/1182530 4666.html



Eco-product // Household goods and equipment

### Household goods and equipment

fit light tapes

### **Environmentally-considerate Tape for Moving and Construction Curing**

### Environmental performance

Uses PET products such as PET bottles and clothes as raw materials. Segmented and recycled at the molecular level.

Uses recycled PET fiber in the vertical threads.

### Product performance

Flexible and sticks well even on uneven surfaces.

Can stick on polyethylene and polypropylene laminated paper and is also stackable. Easy to write on with oil-based ink.

Can be removed completely with special glue.



### SEKISUI CHEMICAL CO., LTD.

2-3-17 Toranomon, Minato-ku, Tokyo, 105-8450, Japan

Tel +81-3-5521-0563 E-mail ctk01@sekisui.jp

URL http://www.tutuminet.com/eng/index.html

URL http://www.tutuminet.com/eng/product/cloth/index.html



### **EP-6-018**

### Household goods and equipment

fragrances

### KP CARE S-330/new house syndrome removal product

### Environmental performance

Formaldehyde emissions, ammonia, and other harmful chemical materials are reduced or eliminated.

### Product performance

Helps cure sick house syndrome, made from cypress extract and herbal ingredients.

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.





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URL http://gombalbadak.com/





### Household goods and equipment

fragrances

### KP CARE S-300/new house syndrome removal product

### Environmental performance

Formaldehyde among air, ammonia, Organic chemistry material improve indoor air as is not.

### Product performance

Helps cure sick house syndrome, made from cypress extract and herbal

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.





### Gukpyeong R.I.C Corporation

646 Soonchunyang University #413 Venturecenter B With shinchang-Myun, Asan City, Chung-Nam, 336-745, South Korea Tel +82-41-544-6119 Fax +82-41-545-6525

E-mail gomkp@hanmail.net URL http://gombalbadak.com/

Available in: Republic of Korea

### EP-6-020

### Household goods and equipment

fragrances

### KP CARE S-1000/new house syndrome removal product

### Environmental performance

Formaldehyde emissions, ammonia, and other harmful chemical materials are reduced or eliminated.

### Product performance

Helps cure sick house syndrome, made from cypress extract and herbal ingredients.

Reacts with formaldehyde and other hazardous substance to collect, absorb, oxidize, and reduce harmful effects. Removes offensive odors including the smell of tobacco smoke. Pitonchideu effect and Aromatherapy effect also possible through this cypress extract.

### Air/Water/Soil Purification Material Production LC Stage Transport End-of-life

# Gukpyeong R.I.C Corporation

646 Soonchunyang University #413 Venturecenter B With shinchang-Myun, Asan City, Chung-Nam, 336-745, South Korea Tel +82-41-544-6119 Fax +82-41-545-6525 E-mail gomkp@hanmail.net

URL http://gombalbadak.com/

Available in: Republic of Korea



Eco-product // Household goods and equipment

### Household goods and equipment

wood plastic composite

### **Wood Plastic Composite**

1. Environmental friendly
Our planking is 100% recyclable and is manufactured from local raw materials, including wood and resins. Our production site
is economic in both energy terms and water consumption, and does not produce secondary pollution. The production process
causes a minimum of adverse side-effects, and does not generate waste or pollutants.

2. Stop the global warming

- Most important issue is to solve the global warming which is the most serious environment destruction issue.

- One of the most important key to solve the global warming is to prevent the deforestation.

- E-WOOD KOREA, as replacement of the rain forest is extremely important and will become increasingly valued.

- Product performance

  I. Certifications of E-WOOD KOREA by Public Institutions

   Korea Eco-labeling Program in KOREA (Korea Eco-Products Institute)

   Eco Mark in JAPAN (Japan Environment Association)

   HB Mark in KOREA (Korea Air Cleaning Association)

  I. What Is E-WOOD KOREA

  WPC (Plastic Wood Composites) eliminates the moisture content in Wood Flour to 0%

  WPC solves most of the problems associated with conventional Plastic Wood Composites as well as natural wood.

   Similar to Aluminum in Dimensional Stability

   Heat Resistant up to 120°C. (248°F)

   Retains Water Resistance and Flexural Strength at repeated testing in -30°C (-22°F) Temperatures

   Screw Holding Power 3 times greater than natural wood

   Surgenia Strength

   Absorbs under 3% moisture after 30 days submersion in water

   Paintable and stainable

   Looks and feels like natural wood

   Can be finished with the look of fine high quality furniture

   E-WOOD KOREA can be Extruded and Injection Molded

   Can be produced using PVC, PE, PP, ABS, PS

### E Wood Korea Co.,Ltd

#508, Goldentel3, 114, Gwangjang-dong, Gwangjin-gu, Seoul, Republic of

Tel +82-2-446-0347 Fax +82-2-446-0361

E-mail ewood@hanmail.net URL http://www.ewood.co.kr/

Available in: U.S.A, Republic of Korea



EWD-22

### EP-6-022

### Household goods and equipment

laundry soap

### arau. Laundry Soap. Vegetable based, additive free & natural herbs.

### Environmental performance

Contains no synthetic detergents, brighteners, preservatives, perfumes or colors.

Rinses away with less water, and quickly biodegrades, returning to the earth without polluting.

### Product performance

Additive free soap made from vegetable based ingredients. High cleaning power, high biodegradability and gentle on your bare skin. Pleasantly scented with natural herbs (lavender & spearmint).





### SARAYA CO.,LTD

2-2-8 Yuzato, Higashisumiyoshi-ku Osaka, 546-0013, Japan Tel +81-6-6797-2525

URL http://www.saraya.com/

URL http://www.saraya.com/com\_profile/

URL http://www.saraya.com/env

Available in: Japan, Asia, Europe, Southeast Asia, Republic of Korea, Taiwan (Rep. of China), China

(Left) arau. Laundry Soap 1.2L, (Right) arau. Laundry Soap 1L Refill



### Household goods and equipment

detergents

### **Attack Neo**

CO<sub>2</sub> emission within the process of raw procurement, production, distribution, and final disposal is reduced by approx. 21% (\*1) compared with conventional products, owing to the product size reduction that has contributed to save package resin and to enhance transport efficiency. By setting washing machine to a single-rinse mode, users can save water and electricity to reduce CO<sub>2</sub> emission by approx. 22% (\*2), compared with double-rinse mode.

All in all, CO<sub>2</sub> emission throughout laundry is reduced by approx. 21% (from a viewpoint of lifecycle assessment).

- \*1 Compared with Kao's conventional liquid detergent, bottle: refill = 2:8
- \*2 Kao's survey, conducted in June 2009, automatic washing machine (capacity 8 kg), amount of clothes 4 kg, quantity of water 47 L

### Product performance

Attack Neo has realized detergent concentration up to 2.5 times\* higher than conventional products, to reduce the product weight from 1kg to 400g. Less amount of detergent guarantees high washing performance. Since washing components are less clingy to fibers, rinsing process ca be saved once. Amounts of detergent residues on laundry after rinsing once are almost the same as those after rinsing twice.

\*Compared with Kao's conventional liquid detergents

### **Kao Corporation**

1-14-10, Nihonbashi Kayabacho, Chuo-ku, Tokyo, Japan

URL http://www.kao.com/index en.html

URL http://www.kao.com/group/en/group/csr.html







Attack Neo

### EP-6-024

Available in: Japan

### Household goods and equipment

detergents

# **UIC Big Value Dishwashing Liquid**

### Environmental performance

UIC Big Value Dishwashing Liquid consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other dishwashing liquids, it is Sodium Tripoly Phosphate (STTP) free.

### Product performance

UIC Big Value Dishwashing Liquid has a special formula to remove dirt, grease, fishy smell and unpleasant odor effectively. It is gentle to hands. For the antibacterial variant, it kills bacteria effectively to keep dishes bacteria free. UIC Big Value Dishwashing Liquid comes in Enviro-Friendly Refill Pack, which saves money and the environment.

# Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore Tel +65-6267-4523 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d Dishwashing Liquid.html





Available in: Singapore

UIC Big Value Dishwashing Liquid

### **UIC Laundry Liquid Detergent**

### Environmental performance

UIC Laundry Liquid Detergent consists of 3 main components: Surfactants, which is are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in the product formula.

### Product performance

UIC Laundry Liquid Detergent is "Tough on Stain, Gentle on Hands". It has a long lasting fragrance and is specially formulated to remove stubborn stains (mud, curry, lipstick) effectively. For the Anti-bacterial variant, it kills 99.9% bacteria effectively to keep clothes bacteria-free. Comes in Enviro-Friendly Refill Pack, which saves money and the environment.

### Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore

Tel +65-6267-4523 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d Liquid Detergent.html















Available in: Singapore

**UIC Laundry Liquid Detergent** 

LC

Stage

### EP-6-026

### Household goods and equipment

Material

End-of-life

detergents

Production

Transport

# The sndek spray-type cleaner series

### **Environmental performance**

The sndek spray-type cleaner series uses soda electrolysis water (an aqueous solution obtained by electrolyzing sodium hydrogen carbonate (NaHCO<sub>3</sub>) solution) and malic acid electrolysis water (an aqueous solution obtained by electrolyzing malic acid water solution). Both types of water constitute safe materials, with neither containing any synthetic surface-active agents. This cleaning product, which is friendly to both the human body and the environment, is available in original sndek bottles that can be reused by refilling.

### Product performance

sndek spray-type cleaner for the kitchen and living room uses soda electrolysis water, and completely removes persistent greasy stains, finger marks, etc. sndek spray-type cleaner for windows uses malic acid electrolysis water, which prevents smearing and cleans glass. The safety of both materials means that double wiping is not needed.

# HATTORI PAPER MFG.Co..Ltd.

171-1 Yamadai, Kinsei-cho, Shikokuchuo-city, Ehime, 799-0112, Japan Tel +81-896-58-3005 Fax +81-896-58-3048

E-mail info@sndek.com

URL http://www.hattoripaper.co.jp URL http://www.sndek.com



Eco-product // Household goods and equipment

### Household goods and equipment

detergents

### all purpose detergent

### Environmental performance

We use surfactant extracted from palm oil, and it is not included any fluorescent material, phosphorus, and hydrogen chloride at all in the detergent.

### Product performance

The "detergent revolution" is used for multipurpose which is able to do disinfection, bleaching, and deodorizing all together. It's economical detergent of enriched type the rinsing is simple not much bubles.



### SARIENS CO.,Ltd.

#120-8 Ohyang-ri, Gamgok-myun, Eumseong-gun, Chungcheongbuk-do, 369-853. Korea

Tel +82-43-883-9919 Fax +82-43-883-9920

E-mail sariens@hanmail.net URL www.sariens.co.kr



all purpose detergent

### **EP-6-028**

# Household goods and equipment

detergents

### Yashinomi Detergent. Palm based detergent-Easy on the skin and the environment.

### Environmental performance

Yashinomi is made from palm fruit, without any fragrances or colors. It quickly biodegrades in the drain water without polluting at the same level as highly biodegradable soap and many times better than LAS-based detergents.

1% of sales are contributed to the Borneo Conservation Trust NPO.

### Product performance

Shows powerful detergency while being gentle on the skin. Since 1971, Yashinomi is still loved for its quality, formula and concept.



# SARAYA CO.,LTD

2-2-8 Yuzato, Higashisumiyoshi-ku, Osaka, 546-0013, Japan Tel +81-6-6797-2525

URL http://www.saraya.com/

URL http://www.saraya.com/com\_profile/

URL http://www.saraya.com/env

(Left) Yashinomi Detergent 600mL, (Center) Yashinomi Detergent 500mL, (Right) Yashinomi Detergent 500mL Refill



Available in: Japan, Asia, Asia and Oceania

### Household goods and equipment

detergents

### Plus White Concentrated Powder

### Environmental performance

Plus White Concentrated Powder consists of 3 main components: Surfactants, made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike most detergents, Sodium Tripoly Phosphate in Plus White Concentrated powder is minimized in the product formula.

### Product performance

Plus White Concentrated Powder is a super concentrated detergent with special non-ionic active agents that results in a cleaner and brighter wash. Plus White Concentrated Powder is suitable for both hand and machine washing.

### **Universal Integrated Corporation Consumer Products Pte Ltd**

No 3 Jalan Besut Jurong Town, 619556, Singapore

Tel +65-6267-4523 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d\_Plus\_White.html

Available in: Singapore





### EP-6-030

### Household goods and equipment

detergents

### **UIC Big Value Detergent**

### Environmental performance

UIC Big Value Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, it is Sodium Tripoly Phosphate (STTP) free.

### Product performance

UIC Big Value Detergent consists of active ingredient Bio-3TM Action Formula for brighter clothes and is able to remove stubborn stains & odors effectively. Long lasting fragrance with "Floral and Fruity" in Regular variant and "Citrus Splash" for Antibacterial variant. For the Anti-Bacterial variant, it has antimicrobial action that prevents bacterial re-growth & enables a long-lasting disinfection to the fabric.

### **Universal Integrated Corporation Consumer Products Pte Ltd**

No 3 Jalan Besut Jurong Town, 619556, Singapore Tel +65-6267-4523 Fax +65-6264-0260

E-mail marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d powder detergent.html

Available in: Singapore







### Household goods and equipment

detergents

### Spinmatic Low Suds Detergent

### **Environmental performance**

Spinmatic Low Suds Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in product formulation.

### Product performance

Spinmatic Low Suds Detergent suits all kinds of washing machines and is specially formulated for Singapore's water condition. Spinmatic Low Suds Detergent eliminates stubborn stains and dissolves faster in water and brightens colored & white clothes. Spinmatic also comes in an Anti-bacterial variant that penetrates deep into the fabric and eliminates more than 99.9% of harmful pathogenic bacteria.



### **Universal Integrated Corporation Consumer Products Pte Ltd**

No 3 Jalan Besut Jurong Town, 619556, Singapore

Tel +65-6267-4527 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d SPIN.html



Available in: Singapore

Spin

### EP-6-032

### Household goods and equipment

detergents

# **Topload Spin Detergent**

### Environmental performance

Topload Spin Detergent consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, it is Sodium Tripoly Phosphate (STTP) free.

### Product performance

Topload Spin Detergent is specially formulated for top load washing machines. It has Bio-Enzymes & Surfactants Action that enhance washing effects of clothes and brightens colors. With easy ironing effects and fabric softening effects, it provides users with an incredible laundry experience.



No 3 Jalan Besut Jurong Town, 619556, Singapore Tel +65-6267-4523 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d Topload Spin.html







Available in: Singapore

Topload Spin

Eco-product // Household goods and equipment

Material

End-of-life

Production

Transport

Use/repair

### **Compet Ultra Concentrated Powder**

### Environmental performance

Compet Ultra Concentrated Powder consists of 3 main components: Surfactants, which are made of bio-degradable organic raw materials, Builder, and Filler, which is comprised of inorganic minerals. We are stringent in our product ingredients and formulas. Our product reduces risk of environment hazard and pollution. They are bio-degradable, certified by Singapore Green Label. Unlike other detergents, Sodium Tripoly Phosphate (STTP) is minimized in the product formula.

### Product performance

The all-new Compet Power Xction's amazing stain-lifting power comes from its advanced Biotechnology formula, which takes action deep inside the fibres of fabrics. It penetrates and attacks the toughest stains, and removes even microscopic dirt effectively without damaging your clothes.

### Universal Integrated Corporation Consumer Products Pte Ltd

No 3 Jalan Besut Jurong Town, 619556, Singapore

Tel +65-6267-4527 Fax +65-6264-0260

E-mail Marketing@uiccp.com

URL www.uiccp.com

URL http://www.uiccp.com/d Compet.html



Stage

Compet Powder

Available in: Singapore

### EP-6-034

### Household goods and equipment

detergents

### Soapnuts (soapnut shells)

Ecological and economical compared to other brands of detergent. Two pounds of soapnuts can be used for more than 100 loads of laundry. The soapnut can be easily used in your washing machine. Unlike common washing powders and liquids that contain considerable amounts of chemicals, the soapnut is environmental friendly and is gentle on the skin. Used for ALL fabrics and with ALL temperatures

- Natural washing of clothes & laundry
   Mild and soft cleaning for your washing machine
- 3. Natural washing of gold jewellery for natural shine
- Natural washing of oily hair
   Forms good & natural leather when rinsed

The advantages in a nutshell

- \* Pure and natural washing detergent that leaves your laundry fresh and clean.
- Perfect for cloth nappies
- Keeps your colors bright.
- \* Allergy-free, good for your skin.
  \* Environment-friendly. Chemical free.
- \* Cultivated through sustainable agriculture.

### S S Herbals

485/2, Katra Ishwar Bhawan, Khari Baoli, New Delhi, 110006, India Tel +91-9212481877 Fax +91-11-23964221

E-mail info@herbsnherbalextracts.com URL www.herbsnherbalextracts.com

URL www.soapnuts.in





Soapnut Shells

### Household goods and equipment

detergents

### Soapnut shells powder

The somewhat sticky saponine in the shells acts similarly to normal soap. As soon as the shells come in contact with water, natural saponine soap is released and creates a mild suds

Place 8 to 10 half shells in one of the provided cotton bags. Tie the bag and place it with your laundry in the washing machine. Start your machine as usual, with or without prewash. The remains of the soapnuts can be composted or disposed of through organic refuse. Advantages
\* Environmentally friendly and chemical free

- \* Cultivated through sustainable agriculture

- \* No need for fabric softeners
- \* Works well with delicate fabrics such as silk and wool
- \* When washing in cold or warm water, soapnuts can be used a second time on the same day Advantages
- \* Pure and natural washing detergent that leaves your laundry fresh and clean
- \* Perfect for cloth diapers
- Keeps your colors bright
- \* Allergy-free, good for your skin

### S S Herbals

485/2. KATRA ISHWAR BHAWAN. KHARI BAOLI. NEW DELHI. 110006. **INDIA** 

Tel +91-9810631790 Fax +91-11-23964221 E-mail info@herbsnherbalextracts.com URL www.herbsnherbalextracts.com





Soapnut Shells Powder

### EP-6-036

### Household goods and equipment

washing powder

Yashinomi Neo Laundry Detergent. Gentle laundry detergent made from natural ingredients.

### Environmental performance

Yashinomi Neo contains no soap or synthetic detergents, only sophorolipids made from fermenting natural yeast and food grade ingredients, so it has little effect on drain water. The packaging and scoop are made from vegetable based biomass plastic, which contribute to preventing global warming.

1% of sales are contributed to the Borneo Conservation Trust NPO.

### Product performance

Yashinomi Neo is the laundry detergent of the future. Because it contains no perfumes, colors, synthetic brighteners or bleach, it can gently wash clothes for anyone in the family, even those with sensitive skin. It completely dissolves in the water, and removes dirt and stains with little foaming and without affecting water quality. Compatible with drum laundry machines.

# SARAYA CO.,LTD

2-2-8 Yuzato, Higashisumiyoshi-ku, Osaka, 546-0013, Japan Tel +81-6-6797-2525

URL http://www.saraya.com/

URL http://www.saraya.com/com\_profile/

URL http://www.saraya.com/env

Available in: Japan





Yashinomi Neo Laundry Detergent 900g

Eco-product // Household goods and equipment

### Household goods and equipment

decorated plastic plates

### **Wood Plastic Composite**

Environmental friendly
 Our planking is 100% recyclable and is manufactured from local raw materials, including wood and resins. Our production site is economic in both energy terms and water consumption, and does

Causes a minimum or averse successes and account growth of the country of the cou

- Product performance

  I. Certifications of E-WOOD KOREA by Public Institutions

   Korea Eco-labeling Program in KOREA (Korea Eco-Products Institute)

   However, and the Common of the Co

### E Wood Korea Co.,Ltd

#508, Goldentel3, 114, Gwangjang-dong, Gwangjin-gu, Seoul, Republic of

Tel +82-2-446-0347 Fax +82-2-446-0361

E-mail ewood@hanmail.net URL http://www.ewood.co.kr/

Available in: U.S.A, Republic of Korea





EWR-086

### EP-6-038

### Household goods and equipment

decorated plastic plates

# **WOOZEN - Wood Plastic composite for interior wall & floor panel**

### Environmental performance

less indoor air pollutants reduced harmful substances



### LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com



Available in: Worldwide

Wood plastic composite panel

decorated plastic plates

Deco foil (Eco Plus) - Decorative synthetic resin sheets

### Environmental performance

less indoor air pollutants reduced harmful substances non PVC, using olefin resin



### LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com



Available in: Worldwide

Natural wood pattern interior sheet

### EP-6-040

### Household goods and equipment

decorated plastic plates

# LG Floors Static Pulse / Synthetic Resin Indoor Covering

### Environmental performance

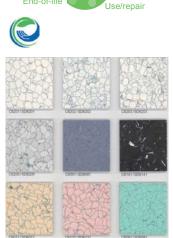
less indoor air pollutants reduced harmful substances recycling available resources



# LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com

Available in: Worldwide



LG Floors Static Pulse

### Household goods and equipment

bowls

### Plant-derived, eco-friendly soup bowl (large)

### Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, goldlacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

### Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

### HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City, Morito, 2-Chome, 1st Area, 1, 921-8061,

Tel +81-76-240-0891 Fax +81-76-240-6800

E-mail info@hakuichi.jp URL http://www.hakuichi.co.jp/

URL http://www.hakuichi.co.jp/style/eco.html

Available in: Japan





### EP-6-042

### Household goods and equipment

bowls

### Plant-derived, eco-friendly soup bowl (small)

### Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, goldlacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

### Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

### HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City, Morito, 2-Chome, 1st Area, 1, 921-8061,

Tel +81-76-240-0891 Fax +81-76-240-6800

E-mail info@hakuichi.jp URL http://www.hakuichi.co.jp/

URL http://www.hakuichi.co.jp/style/eco.html

Available in: Japan





### Household goods and equipment

glassware

### e-glass

### Environmental performance

By reusing the glass from discarded fluorescent light tubes, after the mercury has been safely removed, it has made possible environmentally safe glass.

### Product performance

Because e-glass is carefully created from recycled glass and by skilled craftsmen, small air bubbles in the glass are purposely not removed to keep a warm texture and to emphasize the special hand-made finish.





e-glass

### Shotoku Glass CO.

4-10-4. Kinshi. Sumida-ku. Tokyo. 130-0013. Japan Tel +81-3-3625-3511 Fax +81-3-3625-0083

E-mail mail@stglass.co.jp

URL http://www.stglass.co.jp/index\_e.html

### EP-6-044

### Household goods and equipment

chopsticks

### Plant-derived chopsticks and chopstick case

### Environmental performance

Biodegradable plastic (polylactic resin), which is an eco-friendly polymer material, is converted into a high-value added, heat resistant biodegradable material and used as the base of this product after its crystallinity has been increased using advanced molding technology. New on the market, this excellent product was realized using special foil decorating, lacquering, gold-lacquering techniques and the like on biodegradable products, which until now had proved difficult due to adhesive properties and other durability issues.

### Product performance

A heat resistant biodegradable material is used as the base of this product after its crystallinity has been increased using advanced molding technology.

### HAKUICHI CO. Ltd.

Ishikawa Prefecture, Kanazawa City, Morito, 2-Chome, 1st Area, 1, 921-8061,

Tel +81-76-240-0891 Fax +81-76-240-6800

E-mail info@hakuichi.jp URL http://www.hakuichi.co.jp/

URL http://www.hakuichi.co.jp/style/eco.html

Available in: Japan





Eco-product // Household goods and equipment

### Household goods and equipment

chopsticks

### Splittable wooden chopsticks of Japan cedar"YOSHINOSUGI" that defends timber resources

### Environmental performance

The forest is defended by using the afforested Japan cedar "SUGI", and it contributes to the reduction of  $CO_2$ .

Decreasing the imported wood becomes forest conservation in the world.

The raw material of this chopsticks is good quality "YOSHINOSUGI" all afforested. It produces it by using "Wood that remains because of the processing thrown away" in Yoshino,Nara-Prefecture. It contributes to protection and the forestry promotion of timber resources, and there is an important role to defend foresting.

### Product performance

Highest class Japan cedar"YOSHINOSUGI". A preservative and bleach aren't being used. The smell of the tree improves the taste of the dish.

It is possible to use it also for the European food. MArvec original design chopsticks cover that improve grade of table.

The chopsticks cover is a high-Quality three fold type. The explanation of ecology has been described on the reverse.

### MArvec Co,Ltd.

1-2-11 Hirano-Miyamachi Hirano-Ku Osaka-City, Japan

URL http://www.marve.jp/

URL http://www.marve.jp/hashi/





EP-6-046

Available in: Japan

### Household goods and equipment

chopsticks

### Eco chopsticks made from scallop shells a resource material from Aomori

### Environmental performance

In Aomori, most scallop shells are currently disposed of by piling them in fields, and their negative impact on the surrounding environment, such as their smell, has become a serious problem. With the aim of reducing the amount of resources used, such as petroleum plastic resin, as well as reducing  $\rm CO_2$  emissions, a compound eco raw material has been developed. The newly-developed raw material has a general-purpose polypropylene resin (PP resin) as the matrix, and consists of 28.4% wood cellulose, 28.4% scallop shells (biomass ratio: 56.8%) and 41.2% PP resin. The development of the raw material has led to a 56.8% reduction in the amount of used petroleum plastic resin.





2-16-1 Minamitukuda, Aomori, Aomori, Japan



Available in: Japan

### **Corn Chopping Board**

### Environmental performance

It usually takes hundreds years to decompose plastics in the natural environment or sometimes they do not degrade, thus they are accused of environmental contamination because non-degradable packing materials, plastic bags or styrofoam are not properly handled. In addition thousands of plastic products (used plastic bags, nets) are dumped into the sea every year. These wastes are accumulated in the ocean and cause damage to the fishing grounds and marine ecosystem. Therefore, the need for biodegradable materials that do not cause environmental problems gets stronger.

Below are some of the features of the raw material that we use for our corn chopping board.

- 1) Free of environmental hormones (VOCs, Bisphenol, Phthalates)
- 2) Reduces toxic gases while incinerated Minimizes human casualties at fire
- 3) Reduces CO<sub>2</sub> and realizes clean environment
- 4) 100% compostable within 45 days under proper conditions

### Livingwisdom Co.,Ltd

202, Inhyang, Bldg, 377-9 Cheongcheon Dong, Bupyung-Gu, Incheon, Korea Tel +82-32-521-7101 Fax +82-32-507-7101

E-mail webmaster@ecomasskorea.com

URL www.ecomasskorea.com





Large and medium size available

### **EP-6-048**

### Household goods and equipment

**Ironware** 

### Nambu Ironware "Naked Pan"

### Environmental performance

Nambu ironware, traditional, Japanese art, is cast by pouring molten iron into a sand mold. The NakedPan frying pan is made with 75% recycled iron content.

NakedPan uses an advanced, certified casting technique which excels in antirusting quality by generating an oxidized layer on the surface. Without using any chemical for such property, it is also environmentally friendly. It is said that cast-iron pots can last for 100 years.



# OIGEN Foundry Co., Ltd. (Ecotwaza Co., Ltd)

1-6-12 Naka Kunitachi-shi. Tokyo. 186-0004. Japan

Tel +81-42-573-5613 Fax +81-42-573-5613 E-mail info@ecotwaza.com

URL http://www.eco-friendly-japan.com/ URL http://www.nakedpan.com/

Available in: Worldwide



Nambu Ironware "Naked Pan"

### Household goods and equipment

faucets

### **ONEWAY SELF-CLOSING VALVE**

### **Environmental performance**

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3~50 seconds)
- Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

### Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





### EP-6-050

### Household goods and equipment

Air/Water/Soil

Material

faucets

Transport

### ONE HOLE DECK TYPE FAUCET

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

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  - Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

# Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434 E-mail bbosya21@naver.com

Available in: Worldwide

URL www.preo.co.kr



LC

Stage

### Household goods and equipment

faucets

### ONE HOLE DECK TYPE FAUCET

### **Environmental performance**

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3~50 seconds)
- Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

### Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com

URL www.preo.co.kr

11 Air/Water/Soil Material Production LC Stage Transport End-of-life . Use/repair **Self Closing Faucet** PS 75133 은 냉수혼합 자매 세로꼭지 (세먼기용

Available in: Worldwide

### EP-6-052

### Household goods and equipment

faucets

### **SELF-CLOSING FAUCET**

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- Set the variable timer (3~50 seconds).
  - Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

# Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





Eco-product // Household goods and equipment

### Household goods and equipment

faucets

### SINGLE LEVER ONE KITCHEN (SWIVEL SPOUT)

### Environmental performance

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation. Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

### Product performance

The the 3-STEPS CARTRIDGE function reduces waste in the water consumption by the lever you can control easily.

With the 3-STEPS CARTRIDGE function you can save energy.

Due to the special design and position of the 3-STEPS CARTRIDGE function, by simply lifting the lever you can get any water supply between 50% and 100%.

### Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





### EP-6-054

### Household goods and equipment

faucets

### Water-saving faucet WELSTAR

### Environmental performance

Water saving

### Product performance

- 1. Semi-permanent
- 2. Easy to use
- 3. Water-saving dial use



### SAMLIP ENGINEERING CO., LTD.

270, GEUMGOK-DONG, SEO-GU, INCHEON, 404-330, KOREA Tel +82-32-562-4401 Fax +82-32-562-3602

E-mail samlip11@hotmail.com URL http://www.samlipeng.com URL http://samlipeng.com/main.htm



### Household goods and equipment

metal sanitary ware

### Automatic faucet saving water and electricity

### Environmental performance

This automatic faucet saves water and is economical, because the sensor to spout and stop water flow automatically prevents wasted water. The generation unit of water power covers electric power for the sensor and electromagnetic valve, so this mechanism saves electric power.



### TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan Tel +81-3-5451-1110 Fax +81-3-5451-1110 URL http://www.toto.co.jp



Available in: Japan

### EP-6-056

### Household goods and equipment

metal sanitary ware

### Automage-e: automatic sensor faucet with hydraulic power generation

### Environmental performance

Automage-e, a sensor-equipped faucet, supplies water automatically when the user places his or her hands in front of it. This sensor faucet also has a built-in waterpower generator that effectively converts spouting power into electrical energy, enabling it to operate using the energy from this self-power generation. Additionally, the use of a water-saving spray flow for the spout means that less water splashes around the faucet, enabling hands to be washed thoroughly with less water. Automage-e reduces water usage up to 80% compared with two handle faucets (comparison with this company's products).

### Product performance

Automage-e automatically supplies water when the user places his or her hands near it thanks to sensor-based detection. This hands-free operation keeps the faucet and the area around the basin clean, thus maintaining the level of hygiene in the washbasin area.

# **INAX** Corporation

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp URL http://www.inax.co.jp/





Automage: AM-91K

Available in: Japan

301

### "I-Tube" The washing power of water

### Environmental performance

I-Tube makes your living style much ecological, simple and easy. I-Tube gives natural energy to water and the water performs maximum properties. You could clean dishes, cloths, your body and hair without soap or detergent. Your discharge water will have no chemical contaminants because of it. No detergent washing means no rinsing so you save water and energy.

### Product performance

I-Tube lasts over 10 years easily without maintenance. we warrant it 10 years. I-Tube meets to Japanese city water standard and law. This unique product is supported by Japanese traditional skills and ideas.

### Air/Water/Soil Long-life Material Production LC Stage Transport End-of-life . Use/repair



Spring water generation device

### ILS.co

2-63-18 Higashiikebukuro Toshima-ku Tokyo, 170-0013, Japan Tel +81-3-5954-6123 Fax +81-3-5954-6124 E-mail info@my-simplelife.com

URL http://www.my-simplelife.com

Available in: Japan, Worldwide

### EP-6-058

### Household goods and equipment

water purifier

### Detergent-free kitchen w. good water.

### Environmental performance

"Food Clean" produces Organic Water which contains power of washing. "Food Clean" makes your dished clean without detergent and rinsing. It is easy, ecological and simple. "Food Clean" water gives no damage to organic products when you wash them with it.

"Food Clean" stops contaminating water with chemical solvents like detergent. Organic Water gives vital energy to bacteria in the water and they clean rivers and the sea. This one step a head of time product keeps water and the earth clean

### Product performance

"Food Clean" comes with 1 year warranty. Inside of "Food Clean", there is a charcoal filter that is needed to be replaced every 6 months. It stops or reduces chlorine and some other contaminants. "Food Clean" has the function of back washing the filter. It gives longer life of filter and comfortable water amount.

### ILS.co

2-63-18 Higashiikebukuro Toshima-ku Tokyo, 170-0013, Japan Tel +81-3-5954-6123 Fax +81-3-5954-6124 E-mail info@my-simplelife.com URL http://www.my-simplelife.com

Available in: Japan, Worldwide





Spring water generation machine that purifies ingredient"Food clean'

# Household goods and equipment

End-of-life

bath supplies

Production

Transport

. Use/repair

# "Organic Shower" Comfortable bus time without soap.

# Environmental performance

"Organic Shower" makes your bath time ecological, simple and easy.

"Organic Shower" cut chlorine in water and gives natural energy to water. Then, you could enjoy washing body and hair without soap or shampoo.

"Organic Shower" water has a very more proporties. "Organic Shower" water has a very more proporties. "Organic Shower" water has a very more proporties. "Organic Shower" water has a very more proporties.

"Organic Shower" water has even more properties. "Organic Shower" water gives viral energy to bacteria in the water and they clean rivers and the sea. This one step a head of time product keeps water and the earth clean.

# Product performance

"Organic Shower" comes with 1 year warranty. Inside of "Organic Shower", there is a charcoal filter that is needed to be replaced every 6 months. It stops or reduces chlorine and some other contaminants. This unique product technology is supported by Japanese traditional skills and ideas.

# ILS.co

2-63-18 Higashiikebukuro Toshima-ku Tokyo, 170-0013, Japan Tel +81-3-5954-6123 Fax +81-3-5954-6124

E-mail info@my-simplelife.com URL http://www.my-simplelife.com



LC

Stage

It is comfortable without the detergent. "Organic Shower"

Available in: Japan, Worldwide

# EP-6-060

# Household goods and equipment

bath supplies

# Water-saving shower head attachment

# Environmental performance

This shower allows you to start and stop the water flow by simply pushing the button on the shower head. This function avoids water continuously running while you are washing your hair, resulting in significant water saving and reduced energy for hot water supply.





# TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan Tel +81-3-5451-1110 Fax +81-3-5451-1049 URL http://www.toto.co.jp

Available in: Japan

# Household goods and equipment

bath supplies

# **Energy-saving bathroom**

# Environmental performance

This product's wrapping the bathtub with double thermal insulation and an insulating cover can keep the water in the bathtub warm, similar to the structure of a thermos bottle. This structure allows the temperature of water in the bathtub to drop only two degrees in six hours, and this insulating performance is four times as high as existing products. This means water in the bathtub does not need to be reheated when a person takes a bath,resulting in saving energy.





# TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan Tel +81-3-5451-1110 Fax +81-3-5451-1049 URL http://www.toto.co.jp

Available in: Japan

# EP-6-062

# Household goods and equipment

bath supplies

# SINGLE OUTLET SELF-CLOSING SHOWER

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3~50 seconds).
- Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

# Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434 E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





Energy

LC

Stage

Material

End-of-life

4

Air/Water/Soil

Production

Transport

. Use/repair

# DOUBLE OUTLET SELF-CLOSING SHOWER

# Environmental performance

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO" is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

# Product performance

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3~50 seconds).
- Press the lever group once to begin showering.
- The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

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E-mail bbosya21@naver.com URL www.preo.co.kr

Self Closing Faucet

PS 7001
지택식 시위를 무고객 시위기 (윤인스틱트)
Double cullet self-doing shower

Available in: Worldwide

# **EP-6-064**

# Household goods and equipment

bath supplies

# **DOUBLE OUTLET SELF-CLOSING SHOWER**

# Environmental performance

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO" is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

# Product performance

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3~50 seconds).
  - Press the lever group once to begin showering.
- The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

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E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





**Eco-product** // Household goods and equipment

# CATRIDGE TYPE SINGLE OUTLET SELF-CLOSING SHOWER

# Environmental performance

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- 1. Set the variable timer (3∼50 seconds)
- Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

# Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com URL www.preo.co.kr

Available in: Worldwide





**EP-6-066** 

# Household goods and equipment

bath supplies

# CARTRIDGE TYPE SELF-CLOSING SHOWER

Kiseung Metal Co., Korea's leading developer of self-closing faucets, has continued to devote its highly-qualified research staff and advanced technological capabilities in an ongoing pursuit of technological innovation.

Developed as Korea's first self cut-off faucet, "PREO"is a water-saving faucet made with precision technology.

The faucet is designed to shut itself off after a pre-set amount of water has been released.

Push to use, pull to stop!

Adjustable timer control.

Water output duration can be adjusted to last 3 to 50seconds.

Pulling the lever even while the water is still flowing will immediately cut off the water flow to conserve water.

- Set the variable timer (3~50 seconds).
  - Press the lever group once to begin showering.
- 2. The water will flow for the duration set by the timer, then automatically cut off. Pull the lever cluster once to stop the water flow at any time.

# Kiseung Metal. Co.Ltd

361-5, Yeonnam-dong, Mapo-gu, Seoul, 121-866, Republic of Korea Tel +82-10-5287-5224 Fax +82-2-332-6434

E-mail bbosya21@naver.com

URL www.preo.co.kr

Available in: Worldwide





306

# Household goods and equipment

bath supplies

# RBT700A thermostatic bath & shower set

# Environmental performance

- Water saving effect
  - How to control the water volume
- \* Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

\* Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm<sup>2</sup>

- 1. Shower use: 25 seconds to 35 seconds
- 2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F. 36-8. NONHYUN-DONG, KANGNAM-GU, SEOUL. **KOREA** 





RBT700A Thermostatic Bath & Shower set

# **EP-6-068**

# Household goods and equipment

bath supplies

# RBT701A self closing thermostatic bath & shower set

# Environmental performance

- Water saving effect
  - How to Control Water Volume
- \* Water supply volume control

Turn the check knob of eccentric union to the right for smaller water volume, and to the left for larger volume.

- \* Water discharge volume control
  - Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm<sup>2</sup>

- 1. Shower use: 25 seconds 35 seconds
- 2. Spout use: 3L 4L

This setting may not be suitable depending on the condition of the place

# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 





RBT701A Self-closing Thermostatic Bath & Shower set

bath supplies

# RBT710A self-closing thermostatic bath & shower set

# Environmental performance

- Water saving effect

How to control the water volume

\* Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

\* Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm<sup>2</sup>

- 1. Shower use: 25 seconds to 35 seconds
- 2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA





RBT710A Self-closing Thermostatic Bath & Shower set

# **EP-6-070**

# Household goods and equipment

bath supplies

# RBT711A self closing thermostatic bath & shower set

# Environmental performance

- Water saving effect
  - How to control the water volume
- \* Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

\* Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm<sup>2</sup>

- 1. Shower use: 25 seconds to 35 seconds
- 2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA





RBT711A Self-closing Thermostatic Bath & Shower set

# Household goods and equipment

bath supplies

# RBT721A thermostatic bath & shower set

# Environmental performance

- Water saving effect
  - How to control the water volume
- \* Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

\* Water discharge volume control

Volume and time of water discharge are set as follows for proper use of the product:

Under water pressure of 2kgf/cm<sup>2</sup>

- 1. Shower use: 25 seconds to 35 seconds
- 2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place of use.

# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F. 36-8. NONHYUN-DONG, KANGNAM-GU, SEOUL. **KOREA** 





RBT721A Thermostatic Bath & Shower set

# EP-6-072

# Household goods and equipment

bath supplies

# RBT730A thermostatic bath & shower set

# Environmental performance

- Water saving effect
  - How to control the water volume
- \* Water supply volume control

Turn the check knob to the right for smaller water volume, and to the left for larger volume.

- \* Water discharge volume control
  - Volume and time of water discharge are set as follows for proper use of the product:
  - Under water pressure of 2kgf/cm<sup>2</sup>
- 1. Shower use: 25 seconds to 35 seconds
- 2. Spout use: 3 to 4 liters

This setting may not be suitable depending on the condition of the place

# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 





RBT730A Thermostatic Bath & Shower set

toilets

# Energy-efficient personal hygiene system:DL-WB50,DL-WB60

# Environmental performance

This product is equipped with an instant heating system of the washing water and also equipped with a quick heating system of the toilet seat. Thanks to those technologies, this product significantly reduced the seasonal power consumption as the toilet seat and water are warmed only when the toilet is in use. And this product achieved the highest level in the Japan's industry.

About75% of energy saving is realized. "304kWh/y to 75kWh/y" compared with FY 1998 model (DL-G3).

# Product performance

This product is cosmetically designed in smooth form and its surface has less unevenness. This product is equipped with various functions such as: Wash and dry of buttocks, bidet, heating of the toilet seat, deodorization.

# Panasonic Corporation, Home Appliances Company

800, Tsutsui-cho, Yamato-Koriyama-shi, Nara-ken, 639-1188, Japan Tel +81-743-56-9877 Fax +81-743-56-9934 URL http://panasonic.net/csr/





Available in: Japan

Personal hygiene system:DL-WB50,DL-WB60

# EP-6-074

# Household goods and equipment

toilets

# SATIS: the water-saving ECO5 to ilet

# Environmental performance

SATIS, tankless toilet, is a super water-saving ECO5 toilet, full flush (5 liters) and partial flush (4 liters) product line, it cleans the entire bowl and provides water savings of about 67% and electrical savings of 61% compared with existing products. With Progurad treatment surface, prevents inorganic scale accumulating and drastically lowers water volume for cleaning. Also due to easily decomposable design and marking of materials it contains, easy recycling is possible when it reaches the end of its service life.

# Product performance

Tankless toilet "SATIS" has a sophisticated design, making it more aesthetically pleasing, comfortable, and high quality. As the compact and simple form, it helps to free up space in the surrounding area. It is also equipped with a function to electronically move the hygienic function unit up and down to ensure easy cleaning.

# INAX Corporation

3-6-8 Kyobashi, Chuo-ku,Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp URL http://www.inax.co.jp/

Available in: Japan



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# Household goods and equipment

toilets

# The Sensor Urinal: achieving excellent Water and Energy Saving

# Environmental performance

The Sensor Urinal flushes automatically after use. It has a built-in hydroelectric generator with a power generation function that effectively converts spouting water into electrical energy. It uses just 1 to 2 liters of water to flush monitoring the time of use, saving of about 70% compared with existing products.

# Product performance

The Sensor Urinal has an ISO standard antibacterial ceramic surface and an easy-to-clean rim shape. It features a stylish design in addition to ease of maintenance.



# **INAX** Corporation

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp URL http://www.inax.co.jp/



Senser Urinal: AWU-506RAMP/BN8

Available in: Japan

# EP-6-076

# Household goods and equipment

toilets

# **NEOREST RH type: A toilet saving electricity and water**

# Environmental performance

This toilet incorporates our "Hybrid Ecology System," which is a cleaning system of water flow from the direct water pipes and a new pump developed especially for this product. This technology reduces the quantity of water for cleaning the toilet to 4.8 liters, resulting in a significant water savings compared to 13 liters for existing products. In addition, our "Wonder Wave Cleaning" function, special technology for personal hygienic cleaning, sprays waves of water in strong and weak water jets at more than 70 cycles a minute. This reduces the quantity of water used to nearly less than half compared to existing products yet leaves the user with the feeling of being fully washed. Also, this toilet saves electricity.



# TOTO LTD.

2-24-2 Sakurashinmachi, Setagayaku, Tokyo, 154-8540, Japan Tel +81-3-5451-1110 Fax +81-3-5451-1049 URL http://www.toto.co.jp



NEOREST RH type

Available in: Japan

311

# Household goods and equipment

toilets

# **BKC-701R**

# **Environmental performance**

"Water is not only our life but also valuavle resource for th future generation." This is motto of our product, Luvue. To save water in this era of water shortage of the 21st century, Bokwang ceramics. Ltd has developed super water-saving flush toilets that consume only about 30% of water usage of an average household.

<Advantages of Luvue>

The current products spend 9L water when you using toilet. However, Luvue is only 4.8L of the super water-saving type.Our prouduct can be complete washing with just one flushing after use, minimization of discharge noise, and qucik water reloding.

# Product performance

# Award.

2001.04 Won a special prize at the 100th international exhibition of inventions in Paris, France.

2001.11 Won a gold medal at the exhibition of inventions in Nuremberg, Germay.

2003.11 Won a gold medal at the exposition of inventions sponsored by the Korean Intellectual Property Office.

# **Bokwang Ceramics. Ltd.**

#34-11, Nowon3dong, Buk-Gu, Daegu, Korea







# **EP-6-078**

# Household goods and equipment

toilets

# Toilet bowl (Luvue -701R and water-saving effect)

# Environmental performance

Water-saving effect

- 8 liters for the current water-saving type
- 4.5 liters for the super water-saving type

# Product performance

- 1) Noise reduction effect
  - Reduction of more than 10db (about one-third)
- Perfect washing power
   Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading

# Bokwang Ceramics. Ltd.

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-701R, Korea Tel +82-2-3444-6711 Fax +82-2-3444-6725

E-mail projectpark@empal.com

URL http://www.boce.co.kr/

URL http://www.boce.co.kr/index.php?status=menu5&code=menu5 1





Low-tank Type

# Household goods and equipment

toilets

# Toilet bowl (Luvue-702R and water-saving effect)

# Environmental performance

Water-saving effect

- 8 liters for the current water-saving type
- 4.5 liters for the super water-saving type

# Product performance

- 1) Noise reduction effect
  - Reduction of more than 10db (about one-third)
- 2) Perfect washing power Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading





Low-tank Type

# **Bokwang Ceramics. Ltd.**

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-702R, Korea

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E-mail projectpark@empal.com URL http://www.boce.co.kr/

URL http://www.boce.co.kr/index.php?status=menu5&code=menu5 1

# EP-6-080

# Household goods and equipment

toilets

# (Luvue-101R and water-saving effect) **Toilet bowl**

# Environmental performance

Water-saving effect

- 8 liters for the current water-saving type
- 4.5 liters for the super water-saving type

# Product performance

- 1) Noise reduction effect Reduction of more than 10db (about one-third)
- 2) Perfect washing power Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.
- 3) Quick water reloading

# Material Production LC Stage Transport End-of-life , Use/repair



Flush-valve Type

# **Bokwang Ceramics. Ltd.**

34-11, Nowon3dong, Buk-gu, Daegu, Bkc-101R, Korea

Tel +82-2-3444-6711 Fax +82-2-3444-6725

E-mail projectpark@empal.com

URL http://www.boce.co.kr/

URL http://www.boce.co.kr/index.php?status=menu5&code=menu5 1

Water-saving effect

8L of the current water-saving type

4.5L of the super water-saving type

# Product performance

1) Noise reduction effect Reduction of more than 10db (about one-third)

2) Perfect washing power Existing water-saving toilets need flushing 2-3 times because excretions get stuck to the ceramic due to insufficient water.

3) Quick water reloading





Flush-valve Type

# **Bokwang Ceramics. Ltd.**

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Tel +82-2-3444-6711 Fax +82-2-3444-6725

E-mail projectpark@empal.com URL http://www.boce.co.kr/

URL http://www.boce.co.kr/index.php?status=menu5&code=menu5 1

# EP-6-082

# Household goods and equipment

toilets

# **RWC-126** (one-piece toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



One-piece Toilet

toilets

# (one-piece toilet, 6-liter) **RWC-127**

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-127

# EP-6-084

# Household goods and equipment

toilets

# **RWC-143** (one-piece toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-143 (One-piece Toilet (6 Liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of conventional products.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-147 (One-piece Toilet, 6 Liter)

# **EP-6-086**

# Household goods and equipment

toilets

# RWC-211 (close-coupled toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-211 Close-coupled Toilet (6L)

# Household goods and equipment

toilets

# (close-coupled toilet, 6-liter) **RWC-216**

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-216 Close-coupled Toilet (6L)

# **EP-6-088**

# Household goods and equipment

toilets

# (close-coupled toilet for children, 6-liter) **RWC-229**

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-229 Close-coupled Toilet for Children (6L)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-333 Wall hung Toilet

# EP-6-090

# Household goods and equipment

toilets

# RWC-142 (one-piece toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-142 One-piece Toilet (6L)

# Household goods and equipment

toilets

# RWC-144 (one-piece toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-144 One-piece Toilet (6L)

# EP-6-092

# Household goods and equipment

toilets

# RWC-149 (one-piece toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-149 One-piece Toilet (6L)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-213 Close-coupled Toilet (6L)

EP-6-094

# Household goods and equipment

toilets

# RWC-217 (close-coupled toilet, 6-liter)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# ROYAL TOTO CO., LTD.

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, KOREA



RWC-217 Close-coupled Toilet (6L)

# Household goods and equipment

toilets

# (close-coupled toilet, 6-liter) **RWC-303**

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-303 Close-coupled Toilet (6L)

EP-6-096

# Household goods and equipment

toilets

# **RWC-1001** (one-piece toilet)

# Environmental performance

Water saving effect

There is no wasted water; just 6 liters is used compared to the 13 liters of normal flushing.



# **ROYAL TOTO CO., LTD.**

ROYAL TOTO BLDG 5F, 36-8, NONHYUN-DONG, KANGNAM-GU, SEOUL, **KOREA** 



RWC-1001 One-piece Toilet

# Household goods and equipment

solar power systems

# **R3plas Solar Sprinkle System and Ponds**

# Environmental performance

Environmental Innovation Energy saving Costing saving Water saving

# Product performance

100% using renewable energy.

# Material Production Transport Use/repair

Solar power consumer products

# WINRIGO (S) PTE LTD

No.21 Toh Guan Road East #04-09 Toh Guan Centre, 608609, Singapore

Tel +65-98715058 Fax +65-65154557 E-mail salewin@singnet.com.sg URL www.winrigo.com.sg URL www.winrigo.com.sg

URL www.winrigo.com.sg

Available in: Worldwide

# **EP-6-098**

# Household goods and equipment

photovoltaic inverter

# Photovoltaic Inverter with Industry's Highest Power Conversion Efficiency

# Environmental performance

----< E : Energy · Energy saving >>-----

This photovoltaic inverter for house use in Japan by mass production realizes the industry highest 97.5% in power conversion efficiency (at rated power input/output of PV-PN40G) in our investigation at December 2008. The industry first "gradation control inverter method" generates pseudo sine wave nearly the same as alternating current using three inverter units. Newly developed MOSFET module for the gradation control reduces 44% of power conversion loss from conventional models.



# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





# **JET TOWEL, Environmentally Friendly Hand Dryer**

# Environmental performance

It eliminates paper waste and fewer natural resources are consumed.

----< M: Material · Resource saving >>----

DC brushless motor has the durability of seven years by 1,000 times of use per one day, which realizes its longer life.

---<< E : Energy · Energy saving >>----

Low consumption electricity, reduced 15% compared with that of the conventional model, is industry No. 1. (Our investigation as of February 1,

It is equipped with a newly developed "hyper nozzle" that blows off drops of water on hands with a filmy jet blow at a stretch and improves its drying

----< T: Toxicity · · Global warming prevention >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, Worldwide





JT-SB116GN / JT-SB216GSN

# EP-6-100

# Household goods and equipment

cultivators

# Honda Pianta FV200 Gas-Pawered Mini-Tiller

# Environmental performance

The Pianta FV200 is designed to provide easy fuel handling and operation, and for easy transport and storage. Designed to use butane gas canisters, widely available for home-use portable stoves, it enables easy engine startup and refueling so that even a novice can enjoy flower and vegetable gardening more casually. It comes with a carrying box to help keep the storage area clean and a carrying stand with built-in wheels (standard equipment), to ensure easy transport and storage for outstanding all-round convenience. The Pianta's butane-powered engine emits 10% less CO2' than a gasoline engine of the same displacement.

\* Honda calculations

# High quality Material Stage End-of-life

# Honda Motor Co., Ltd.

2-1-1. Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/

URL http://world.honda.com/CSR/



Available in: Japan

Honda Pianta FV200 Gas-Powered tiller

# Household goods and equipment

# Honda EU26i Ultra-Quiet Generator equipped with Sine-wave Inverter

The EU26i employs Honda's original sine-wave inverter technology to deliver high-quality electrical output in a compact, low-noise design. Honda's high-efficiency inverter combines with the Eco-Throttle system to allow engine speed to be adjusted automatically for an optimum match with the power requirements of the device in use.

# Product performance

**EP-6-101** 

Rated AC Output (50/60Hz): 100V 2.6kVA

Continuous Operating Hours (hr): 7.7\*1 ~4.3 (1/4 load~Rated load)

Overall Length (mm) : 622\*2 /913 Overell Width (mm): 379 Overall Height (mm): 489\*2 /538 overall Equipment Weight (kg): 40.1 Effective Fuel Tank Capacity (L): 5.9 Displacement (cm³): 163 Starting system : Manual

\*1 During operation with Eco-Throttle

\*2 With handle foided down

# Honda Motor Co., Ltd.

2-1-1. Minami-Aoyama, Minato-ku, Tokyo, 107-8556, Japan

URL http://world.honda.com/

URL http://world.honda.com/CSR/





Available in: Japan Honda EU26i

# EP-6-102

# Household goods and equipment

End-of-life

cooking stoves

Production

# Gas Cooking Stove with High-efficiency Burners

# Environmental performance

This burner with 56% thermal efficiency has produced economic and energy-saving advantages over conventional cookers. The safety has been improved by being equipped with sensors for preventing overheating in all burners. The glass or doublecoated surface reduces the cleaning time and labor.

The introduction of a new type of burner which prevents the flame from spreading has enabled the thermal efficiency of 56%.

Compared with induction heating cookers, the gas cooking stove emits 60% less annual CO<sub>2</sub> emissions (336kg-CO<sub>2</sub>), which is equivalent to the effect of planting 20 cypress trees.

# Product performance

The safety has been improved by installing sensor-equipped burners that enable the safety features to control or put out flames to prevent overheating in all models. With the help of the sensor, automatic cooking, such as rice cooking and fish grilling, are possible.

# Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL http://www.osakagas.co.jp/indexe.html URL http://www.osakagas.co.jp/csr\_e/index.html



Air/Water/Soil High quality

LC

Stage



Available in: Japan Sensor-equipped cooking stove

# Household goods and equipment

home IT systems

Visualization of Electricity Consumption and Charges at Home to Contribute to the Reduction of CO<sub>2</sub> Emissions

# Environmental performance

- Mitigation of climate change: Visualization of power consumption allows users to recognize which appliances use a lot of electricity because CO<sub>2</sub> emissions, electricity charges, etc. are indicated. 6%\* reduction of CO<sub>2</sub> emissions
- \* Target at the time of commercialization

# Product performance

- Visualization of electricity consumption: Electricity consumption, CO<sub>2</sub> emissions, and electricity charges are displayed for each circuit breaker.
- Batch control of home appliances: Capable of batch control of air conditioners, lighting equipment, floor heating, etc.
- Control via a mobile phone: Check the operation of home appliances via a mobile phone and control them from a remote location.

# TOSHIBA HOME APPLIANCES CORPORATION

2-15, Sotokanda 2-chome, Chiyoda-ku, Tokyo, 101-0021, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Feminity with an IT unit for electricity measurement

# EP-6-104

# Household goods and equipment

ventilators

Energy Recovery Ventilator: Recycling Air-conditioning Energy by Heat Exchange Ventilation

# Environmental performance

----< E : Energy Energy saving >>-----

- "Lossnay" is an energy-saving ventilation system using a specially treated paper heat exchanger that recycles heat energy which is normally wasted by ventilation.
- DC brushless motors powered by a DC power source, significantly reducing power consumption compared with conventional models.
- The Hyper Eco Element heat exchanger greatly boosts heat exchange efficiency to realize even further energy savings.

----< T : Toxicity · Chemical substances reduction >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.

# Product performance

This system is a single unit that ventilates an entire household. The heat exchanger ensures ventilation without sacrificing the comforts of air-conditioning, and its large air flow ensures that even in large housing complexes and cluster housing with numerous rooms, a single system suffices for one floor ventilation.

# Mitsubishi Electric Corporation

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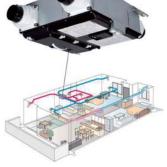
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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





VL-20ZMH3-L/-R

3

6

Eco-product // Household goods and equipment

9

Global

Material

End-of-life

High quality

Production

Transport

. Use/repair

# Environmental performance

----< M : Material · Resource saving >>----Saving industrial resources.

----< E : Energy Energy saving >>----Saving total heat energy.

----<< T : Toxicity · Chemical substances reduction >>----

Eliminated the use of the six substances specified by the EU's RoHS directive.

# Product performance

Loaded with the Hyper Eco Core which offers the industry-leading total heat exchange efficiency, the LGH-50RX5 is an Energy Recovery Ventilator that is both environmentally conscious and energy efficient. Thanks to the new ventilation pattern function, this product offers more precise control of ventilation to reduce the air conditioning/heating load caused by ventilation.

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Asia, Europe

LGH-50RX5



LC

Stage

**EP-6-106** 

# Household goods and equipment

air conditioners

# Gas engine heat pump air conditioner equipped with power generator

# Environmental performance

It realizes air conditioning and power generation simultaneously. A compressor driven by a gas engine provides space heating/cooling and an engine generates electricity supplied to air conditioner pumps and buildings. It exercises a maximum rated capacity of 3 to 4 kW and supplies 2 to 3 kW of electricity per outdoor unit in the building. With its high energy-saving features, this system contributes to cutting electricity consumption in the peak hours of electricity demand.

CO<sub>2</sub> emission reduction: 24%\*

Electricity consumption saving: 29%\*

\* Compared to an electric heat pump with equivalent air-conditioning capacity, powered by grid electricity.

# Product performance

It boasts the industry-leading seasonal efficiency (\*1), reaching 1.86, and the generating efficiency (LHV (\*2)), 44%, exceeds the average generating efficiency at the consuming end of thermal power plants in Japan 40%

power plants in Japan, 40%.

\*1 Annual Performance Factor (primary energy base): rate of air conditioning capacity of consumed energy on a year-round operation under certain conditions.

\*2 LHV. Lower Heating Value. The amount of heat generated by complete combustion of the combustion gas, minus the latent heat of vaporization of the water vapor generated in the process.

# Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL http://www.osakagas.co.jp/indexe.html

URL http://www.osakagas.co.jp/csr\_e/index.html

Available in: Japan



326

equipment

# Household goods and equipment

air conditioners

# High performance, energy-saving air conditioner

# Environmental performance

To respond precisely to customer needs, a lineup of outdoor units is available with power ranging from 5 to 54 HP. Up to 64\* indoor units can be individually controlled in a single refrigerant tubing system. The system also can air condition each room individually, which is ideal for the constantly changing occupancy of a typical building.

\* Using 40-54 HP outdoor units.



# DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp URL http://www.daikin.com

URL http://www.daikin.com/global ac/products/

URL http://www.daikin.com/csr



VRV III Series

# **EP-6-108**

# Household goods and equipment

air conditioners

# High performance, energy-saving air conditioner

# Environmental performance

A special version of the VRV III for small offices and shops.

Daikin have remodeled the acclaimed VRV III system aiming to provide the precise power and compactness required by small offices and shops.



# DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan Tel +81-6-6374-9304 Fax +81-6-6373-4380

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URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr

Available in: Outside Japan only



VRV III-S Series

Eco-product // Household goods and equipment

# Household goods and equipment

air conditioners

# High performance, energy-saving air conditioner

# Environmental performance

A water-cooled intelligent individual air conditioning system which is suitable for tall multi-storied buildings.

Water-cooled VRV II is an individual air conditioning system that utilizes water as a heat source. In this unique system, water is piped from a cooling tower or boiler to the VRV-WII (which is the equivalent of the outdoor unit of an air cooled conditioning system) and after heat exchange, refrigerant is piped from the VRV-WII to each indoor unit.



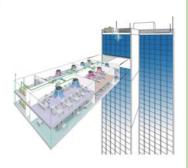
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URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr



VRV-WIII

# **EP-6-110**

# Household goods and equipment

air conditioners

# **High-efficiency Heat Pump Chillers for Factories and Office Buildings**

# Environmental performance

- Air-cooled heat pump chillers, suitable for large-scale air conditioning tasks, such as office buildings, factories and hospitals.
- Scroll compressors and DC inverter motors for fan drive achieve control with high load responsivity, to save energy.
- The air side heat exchangers are hexagonal, which expands surface area, saves energy and also saves space through layout efficiency.

# Product performance

- Unique integrated control system "ZU:NOS" can optimize control of up to 20

units to suit air conditioning load. Large-capacity units can be linked together up to a maximum of 800hp, with the units controlled to operate in rotation for longer lifespans.

# DAIKIN INDUSTRIES, LTD.

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URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr

Available in: Japan





HEXAGON

# Household goods and equipment

Global

warmina

Material

End-of-life

air conditioners

Production

Transport

. Use/repair

# Replacement Multi Air Conditioner Reusing Existing Refrigerant Tubing

# Environmental performance

----< M : Material · Resource saving >>----

Compact design in outdoor unit enables to be carried by an elevator for 6 people. Automatic refrigerant charge and automatic mineral oil collection enables great shortening of term of construction.

It collects oil through general air conditioning operation.

----< E : Energy Energy saving >>----R410 refrigerant marks COP 4.16.

# Product performance

"Replace Multi" is an air conditioning system for building using existing refrigerant tubing, which basically contributes to resource saving.

LC

Stage

Replace Multi E ECO

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan

# EP-6-112

# Household goods and equipment

air conditioners

# **Compact Design "City Multi" Air Conditioner**

# Environmental performance

----< M : Material · Resource saving >>----

The manageability of the outdoor unit has been improved due to a drastic reduction in weight, leading to easy transportation, installation, and reduction in withstand load. Approx. 33kg reduction in weight from the previous model.

----< E : Energy Energy saving >>-----

VRF (Variable Refrigerant Flow) is a multi and direct expansion type air conditioning system whereby one outdoor unit can be connected to multiple indoor units.

The amount of refrigerant can be regulated freely according to the load on the indoor unit by the inverter driven compressor in the outdoor unit.

Energy conservation is easily handled because individual indoor units can stop and start as needed.

----< T: Toxicity · Chemical substances reduction >>----

R410 refrigerant is zero ODP (Ozone Depletion Potential)

# Product performance

Due to the compact design of the outdoor unit, industry leading space saving is realized.

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Asia, Oceania, Europe, North America





PUHY-P250YHM-A

Eco-product // Household goods and equipment

# Household goods and equipment

air conditioners

# **Energy-Efficient Package Air Conditioners: Mr Slim ER Clean Plus Series**

# Environmental performance

- -<< M : Material · Resource saving >>-
- Pipe cleaning and pipe replacement has become unnecessary.
- Frictional heat from the compressor's moving parts has been reduced.
- An originally developed highly stable alkylbenzene refrigerant oil (Models P40-P63).
- -<< E : Energy · Energy saving >>--<Indoor Unit>
- The "Move Eye 360" determines radiant floor temperature.
- The "Area Move Eye" and unique air-flow control delivers energy-efficient operation with minimal unnecessary running.
- The "Automatic Filter Cleaning Unit" cuts power consumption by 10% (Slim ER Clean Plus).
- <Outdoor Unit>
- The scroll compressor with an original "frame compliance mechanism" greatly reduces refrigerant gas leakage and friction loss (Slim ER Models P112-P240).
- A cross-stair fin heat exchanger and large-diameter fan improves performance (Slim ER Models P112-P240).

# Global warmina Material Production LC Stage Transport End-of-life . Use/repair



# Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan

MPLZ-ERP140BECM

# EP-6-114

# Household goods and equipment

water/space heaters

# Prior Eco-Jozu - Highly-efficient Central Heating Boiler

# Environmental performance

Employing a latent heat recovery-type heat exchanger, the system utilizes the thermal energy of exhaust gas which was previously wasted, achieving a high thermal efficiency of 95% in hot water supply and 89% in space heating.

With its smaller energy consumption, Eco-Jozu has reduced annual CO<sub>2</sub> emissions by 238kg, which is equal to the amount of CO2 absorbed by 24 eucalyptus trees.

# Product performance

It produces enough hot water for the bathroom and kitchen. The lineup includes units that are equipped with an automatic control system for hot water supply and additional boiling and can be connected to floor heaters and/or bathroom heaters/dryers.

# Osaka Gas Co., Ltd.

4-1-2. Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040 URL http://www.osakagas.co.jp/indexe.html

URL http://www.osakagas.co.jp/csr\_e/index.html

Available in: Japan





Eco-Jozu

# Household goods and equipment

heat pump water heater floor heating systems

"Econucool Pico" Heat Pump-type Hot water Floor Heating System for Considerable Energy Saving

# Environmental performance

----< M : Material · Resource saving >>---

Succeeded in 67% of weight reduction (36kg to 12kg) from our previous model (made in the year 2001) by optimizing layout of component parts, making thinner heat exchange unit, and lightening its pump.

---<< E : Energy Energy saving >>----

30% up energy consumption ratio from our previous model (made in the year 2001) by making thinner heat exchange plate, adoption of DC motor for outer unit fan and circulating pump, and optimizing refrigeration cycle control.

---<< T : Toxicity · Chemical substances reduction >>-

R410A refrigerant does not deplete ozone laver.

Eliminated the use of the six substances specified by the EU RoHS directive.

# Product performance

"Econucool Pico" is a heat source for hot water heat radiators such as floor heating panel.

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





VEH-406HCA- κ

# **EP-6-116**

# Household goods and equipment

heat pump water heating systems

# Heat pump hot water system; energy-saving: HE-KU37BXS

# Environmental performance

To maximize energy efficiency, the high-performance "CO2-scroll compressor" and "water-refrigerant heat exchanger" have been developed, and this product has achieved at APF 3.7 in Japan as a top energy-saving device.

# Product performance

This hot water system has many functions such as automatic hot water supply control, different temperatures can be set in bath and kitchen, etc.



# Panasonic Corporation, Home Appliances Company

2-3-1-1 Noji-higashi, Kusatsu City, Shiga, 525-8520, Japan

Tel +81-77-561-3370 Fax +81-77-567-9874

URL http://panasonic.jp/sumai/water/

URL http://panasonic.net/csr/



Available in: Japan

HE-KU37CXS

# Household goods and equipment

heat pump water heating systems

# CO<sub>2</sub> refrigerant heat pump water heater (Eco Cute)

# Environmental performance

Eco Cute is a household water heater that offers dramatic energy savings on the use of hot water, which normally accounts for about a third of a household's entire energy consumption. It generates hot water using atmospheric heat by means of a heat pump system and offers energy savings compared with a conventional combustion type water heater together with drastic reduction in green house gas emission. The use of natural refrigerant  $\mathrm{CO}_2$  contributes to environmental conservation including the prevention of global warming.



# **Tokyo Electric Power Company**

1-1-3 Uchisaiwai-cho Chiyoda-ku, Tokyo, 100-8560, Japan Tel +81-3-6373-1111 Fax +81-3-3596-8517

URL http://www.tepco.co.jp/en/index-e.html

URL http://www.tepco.co.jp/en/challenge/environ/report-e.html



CO<sub>2</sub> refrigerant heat pump water heater (Eco Cute)

Available in: Japan, Europe

# EP-6-118

# Household goods and equipment

heat pump water heating systems

# Heat pump hot-water supply system

# Environmental performance

"Daikin's Eco-cute" is a heat pump type boiler using natural refrigerant  $(CO_2)$ .

Achieving a high efficiency of heat transfer by cutting grooves in pipes of water heat exchanger, in addition to the existing dimple work, to improve the level of agitation.

Furthermore, the hot water storage unit is covered by foamed material as its insulation depending on the shape of tanks, which enable to reduce heat radiation loss by approximately 15%.



# DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan

Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp URL http://www.daikin.com URL http://www.daikin.com/csr

Available in: Japan



# **Home Heating and Cooling Solution**

# Environmental performance

This product is an air to water heat pump type boiler consisting of an outdoor unit, hydro-box and secondary equipment, researched and developed by Daikin Europe. N.V.

In the system, hot water is circulated to secondary equipment such as under floor heating and radiators to warm rooms. Air to water heat pump type boilers provide energy efficient heating and are getting famous in the European heating market.

Heat pump type boilers are cheaper and less laborious than the alternatives such as combustion type boilers. 66 to 80% of the heat produced by this heat pump comes from the ambient air and is free of charge.

With this heat pump, you can personally contribute to a better environment because heat pumps consume little energy. This heat pump emits no direct CO<sub>2</sub> and also, emits far less CO<sub>2</sub> than fossil fuel boilers.





# DAIKIN INDUSTRIES, LTD.

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E-mail kankyo@daikin.co.jp URL http://www.daikin.com URL http://www.daikin.com/csr

Available in: Europe

# EP-6-120

# Household goods and equipment

heat pump water heaters

# Heat Pump Hot Water Supply Machine using CO<sub>2</sub> Refrigerant

# Environmental performance

- Mitigation of climate change: 35% reduction in CO<sub>2</sub> emissions in energy saving mode compared with high power mode
- Efficient use of resources: It is possible to use as life city water etc. by silver ion having the disinfection deodorization. Cardboard packaging

# Product performance

- Clean: High-efficiency operation to heat water using air heat.
- Selectable functions: Functions are selectable by remote control.
- Parallel connection: Parallel connection is possible for a site that consumes much hot water.

# Production LC Stage Transport End-of-life

# **Toshiba Carrier Corporation**

3-23-17. Takanawa, Minato-ku, Tokyo, 108-0074. Japan Tel +81-3-6409-1735 Fax +81-3-6409-8388

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm

Available in: Japan



(left) HWH-FB450CU (right) HWH-FB370CT

333

# Household goods and equipment

heat pump water heaters

# **Heat Pump Water Heater for Domestic Use**

# Environmental performance

SRT-HP46W4 Heat Pump Water Heater makes use of ambient heat in the air to attain energy savings of one-third compared with Mitsubishi Electric's conventional electrical water heaters. As this model uses natural  $CO_2$  as a refrigerant, it causes no damage to the ozone layer and has a global warming potential 1/1700 of that posed by CFC refrigerants. Moreover, it does not produce  $CO_2$  emissions because it does not require the combustion of fuel. The heat pump unit features an original rotary compressor\* for  $CO_2$  refrigerant hot-water supply. In addition, it incorporates Mitsubishi Electric's unique open core coil-wound "Poki Poki Motor". This high-density coil technology helps realize significant performance improvements.

\* The high-efficiency rotary compressor was awarded the fiscal 2007 Technology Prize of the Japan Society of Refrigerating and Air Conditioning Engineers (JSRAE).

# Global Resource Energy High quality saving Material Design Production Resource Stage Transport Use/repair





# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan EP-6-122

# Household goods and equipment

hot water supply systems

# Heat Pump Water Heater for Commercial Use (Eco Cute for commercial applications)

# Environmental performance

- ----< E : Energy · Energy saving >>---
- With a newly developed inverter-type scroll CO<sub>2</sub> compressor, it achieves a COP rating of 4.1.
- Thermal energy absorbed from the atmosphere heats the water that passes through the heat exchanger. The system produces approximately three to four times the amount of electrical energy used (high efficiency).
- ----< T : Toxicity · Chemical substances reduction >>----
- The CO<sub>2</sub> natural refrigerant has an ozone depletion potential of zero and a global warming potential of one.
- Volume of  $CO_2$  emissions is 40% lower than that of a combustion-based boiler. Generation of NOx is also reduced.

# Product performance

- The  ${\rm CO_2}$  heat pump and inverter capacity control technologies facilitate an optimum hot water output of up to  $90^{\rm o}{\rm C}$ .
- 10th Electric Load Leveling System Awards
- Ministry of Economy, Trade and Industry, Agency for Natural Resources and Energy Director-General's Prize

# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





QAHV-N560B

soil conditioner

# Superchikara

\*Reduction of waste

- (1) The total amount of clay-roof-tile waste caused by the dismantling of buildings reaches approximately 2 - 3 million tons a year in Japan, which is either reclaimed or discarded in the
- (2) The disposed clay-roof-tiles are crushed and controlled in size before alien substances are removed to realize 100% recycling. The recycled material is used as material for soil and soil improvement agents as well as mulching material.

The more recycled, the more disposed is cut.

- \*Reduction of  $CO_2$  (1)  $CO_2$  emitted by the production of green materials >  $CO_2$  constantly emitted by plants planted using this material In this case, afforestation will lead to an increase of CO<sub>2</sub>.
- (2) Production of Superchikara emits 1.49kg of CO<sub>2</sub> per m<sup>3</sup>

Depending on the size of crushed roof-tiles, they are classified into soil, soil improvement agents or mulching material.

Soil made from the product has good permeability and is water-retentive.

Its good permeability and water-retentiveness are hard to corrupt thanks to its high anti-tread power.

# Kokuyou CO.,Ltd

92-1 Miyanogo, Simomisu, Yokoooji, Husimi, Kyotosi, Kyotofu, 573-0021, Japan

Tel +81-756224417 E-mail info@kokuyou.jp URL http://www.kokuyou.jp

URL http://www.kokuyou.jp/sogo.html

Available in: Japan, Worldwide



1.49kg-CO<sub>2</sub> not Inspection

Resource/Materials/Production/ Transfer/Use/End-of-Life

. Use/repair



# EP-7-002

# **Building and civil engineering**

concrete board

# Woodchip-board 'Artificial soil for re-vegetation'

# Environmental performance

This product recycles woodchips from trees that have been cut down and abandoned after land formation. A grout coating ensures that the chips combine firmly, producing a woodchip board with outstanding durability. It has consecutive voids, providing an environment where plants can grow even in severe conditions such as acid soil or concrete walls.



# **Obayashi Corporation**

Shinagawa Intercity Tower B, 2-15-2, Konan, Minato-ku, Tokyo, 108-8502,

Tel +81-3-5769-1006 Fax +81-3-5769-1065

URL http://www.obayashi.co.jp/english/index.html

URL http://www.obayashi.co.jp/english/environment/index.html

Available in: Japan



Tip-board (500An X500An X30mm)

Eco-product // Building and civil engineering

# EP-7-003

# **Building and civil engineering**

air purifier

# **Earth Air Purifier EAP**

# Environmental performance

EAPs are an environmentally-friendly way of improving urban air quality by taking advantage of naturally-occuring biological and biochemical processes. EAPs pump polluted air into a wind tunnel under specially-designed 'gardens'. As the air passes through the soil (and through the root-zone of the plants in the bed) physical, biochemical and biological processes combine to remove pollutants from the air stream.

# Product performance

The performance of our EAPs have so far been very encouraging. On an annual basis Fujita's eight Japanese pilot plants have been shown to remove more than 80% of nitrogen oxides from polluted air. They also remove more than 90% of suspended particulate matter.



# **FUJITA CORPORATION**

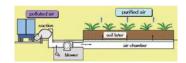
4-25-2 Sendagaya, Shibuya-ku Tokyo, 151-8570, Japan

Tel +81-3-3402-1911 Fax +81-3-3404-8477

E-mail info@fujita.co.jp

URL http://www.fujita.com/index2.html URL http://www.fujita.com/products/eap.html URL http://www.fujita.com/finance.html

Available in: Japan, Worldwide



EAP system on roadside

# EP-7-004

# **Building and civil engineering**

vertical greening system units

# The Unit Vertical Greening System "Parabienta"

# Environmental performance

The surface temperature is about 11 degrees lower than that of metal walls by the transpiration from plants and soil. It is effective in mitigating the heat island phenomenon. There is a difference of 14 degrees between the temperature of concrete walls and that of walls covered by "Parabienta". It reduces the thermal load for air conditioning.

# Product performance

Parabienta, a unit vertical greening system, consists of greening units (made of a solidified soil base and stainless steel wire) and U-shaped channels provided on the wall of a building. With this simple system, the units need only to be fastened to the channels to achieve wall greening. Special fibers are used in the solidified soil base, which is heated to form a molded, solidified planting soil. This soil has outstanding water retention and drainage properties, making it possible to grow various types of plants in just 5 centimeters of soil.

# SHIMIZU CORPORATION

SEAVANS SOUTH No. 2-3, Shibaura 1-chome, Minato-ku, Tokyo, 105-8007, Japan

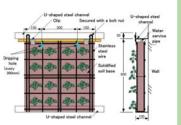
Tel +81-3-5441-1111

URL http://www.shimz.co.jp/english/index.html

URL http://www.shimz.co.jp/english/csr/environment/report/index.html

Available in: Japan, Singapore





Details of the Unit

# **EP-7-005**

# **Building and civil engineering**

solar lighting systems

Glass with multiple functions Electric power generation+Heat Shield, Taiyo Seethrough Solar

# Environmental performance

Dual functions of New Energy (Electric power generation  $40\sim50 \text{W/m2}$ ) and Energy Savings (reduction of Air Conditioning (sunlight cut 89.8%)/Light load (visible light transmittance 10.6%)) greatly reduce overall energy costs. TSS is effective in curbing the generation of  $\text{CO}_2$ , and enhances the value of your building as an environmentally friendly facility.

# Product performance

TSS (Taiyo See-through Solar is a high performance glass which can generate infinite and clean electric power through photovoltaics. Moreover, the glass functions as a heat shield preventing excessive solar heat gain. TSS is a new building material that strikes a balance between environment friendliness and a high level of comfort to building occupants. TSS is a prime example of a futuristic technology available today.

# TAIYOKOGYO CORPORATION

3-16-19 Higashiyama,meguro,tokyo, 153-0043, Japan Tel +81-3-3714-3470 Fax +81-3-3791-4464 URL http://www.taiyokogyo.co.jp





Available in: Worldwide

# **EP-7-006**

# **Building and civil engineering**

binders

A recycled inorganic material manufactured from fly ash (coal ash) and paper sludge ash

# Environmental performance

Construction costs are reduced and the construction period is shortened thanks to the omission of the conventional foundation work involved in afforestation. This reduces  $\mathrm{CO}_2$  emissions from the construction machines used in foundation work.

# Product performance

Alpha Green stabilizer for slope afforestation is a recycled inorganic material produced primarily from fly ash (coal ash) and paper sludge ash, unlike the conventional cementing material (paste) made of synthetic polymeric resin. It contains minerals (such as magnesium, which promotes plant growth) and brings variety of secondary effects such as enabling the active utilization of inorganic basic vegetation materials, improved water permeability of vegetation bases, promotion of organic matter decomposition, and mitigation of aluminum-related damage.

# Alfa Green, Itd

99-1-207 Yamashita-cho,Naka-ku,Yokohama-city, Kanagawa-Pref, 231-0023, Japan





# **EP-7-007**

# **Building and civil engineering**

binders

# Waste wood from construction sites can be reused onsite

# Environmental performance

This method uses conventional construction machinery to achieve excellent rooting on and base-layer stability of bedrock and slopes under severe conditions, by just replacing the spray-on material paste with our MC binder. As a result, work periods can be shortened and costs reduced. The method also contributes to zero emission by making use of wood chips processed from trees cut on site.

# Product performance

With conventional methods using waste wood chips from construction sites, problems such as the high cost of on-site mixing with composted chips, UV damage caused by the use of polymer pastes in curing compounds, and deterioration caused by frost heaving and foundation erosion often occurred. These problems can be avoided by using this product.

# Alfa Green, Itd

99-1-207, Yamashita-cho, Naka-ku, Yokohama-city, Kanagawa-Pref, 231-0023,





# EP-7-008

# **Building and civil engineering**

civil engineering work, except otherwise classified

# Kyokawaramichi

# Reduction of waste

- (1) The total amount of clay-roof-tile waste caused by the dismantling of buildings reaches approximately 2 - 3 million tons a year in Japan, which is either reclaimed or discarded in the
- (2) The disposed clay-roof-tiles are crushed and controlled in size before alien substances are removed to realize 100% recycling. The recycled material is used as material for paving and soil
- (3) The more that is recycled, the more disposed is cut.

# \*Efficiency

- (1) The product's strength is comparable to recycled waste concrete aggregates (hereinafter called
- (2) Since the optimum moisture content is slightly over 20 %, which is twice that of RC 30, it is less
- likely to become mud, even at sites along rivers and in rain.

  (3) Since the specific gravity is less than RC 30 by 20%, a larger amount of the product can be
- transported at once, reducing CO<sub>2</sub> emissions during transportation.

  \* The used product can be recycled as surplus soil by burying it.

# Kokuyou CO.,Ltd

92-1 Miyanogo, Simomisu, Yokoooji, Husimi, Kyotosi, Kyotofu, 573-0021,

Tel +81-756224417 E-mail info@kokuyou.jp URL http://www.kokuyou.jp

URL http://www.kokuyou.jp/sogo.html

Available in: Japan, Worldwide





# **Building and civil engineering**

continuous subterranean diaphragm wall members

# Continuous subterranean diaphragm wall members

#### Environmental performance

urban subterranean structures reduces the waste soil by reducing wall thickness. It also shortens the construction period by eliminating the need for concrete reinforcing bars.

#### Product performance

Nippon Steel's NS-BOX (continuous subterranean diaphragm wall members) for the walls of urban subterranean structures reduces the generation of waste soil by reducing wall thickness. It also shortens the construction period by eliminating the need for concrete reinforcing bars, reduces the space required at construction sites, and eases traffic congestion in urban areas.

# Material Material Resource Stage Design Production Transport Use/repair



# **Nippon Steel Corporation**

2-6-1, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan Tel +81-3-6867-2566 Fax +81-3-6867-4999 E-mail kankyo@nsc.co.jp

URL http://www.nsc.co.jp/en/eco/index.html

# EP-7-010

# **Building and civil engineering**

paving work

# Sidewalk'Wet'pavement system to counter heat island phenomenon

#### Environmental performance

The 'wet pavement' system (water sprinkling road system),can reduce summer daytime temperature of road surfaces by approximately 25 degree Celsius lower than asphalt pavement. The wet pavement surface reduces sunlight reflection, relieving both heat and glare. A dripping water supply pipe and a special textile provide a continuous cooling effect even if fine weather continues for several days. Water quantity required is 5-6l/m² for a typical fine day in summer.



# Obayashi Corporation

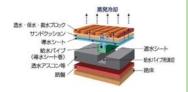
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Tel +81-3-5769-1006 Fax +81-3-5769-1065

URL http://www.obayashi.co.jp/english/index.html

URL http://www.obayashi.co.jp/english/environment/index.html

Available in: Japan



Wet Pavement System (Uchimizu-Pave)

# **Building and civil engineering**

paving work

# **Photoroad Method**

# Environmental performance

The Photoroad Process is a method for treating atmospheric pollutants, such as nitric oxides (NOx) found in motor vehicle exhaust, by creating a photocatalytic coating on the surface of roads.

We have done more than 20 constructions with the method.

#### Product performance

This method has the following two characteristics;

- A large amount of NOx is absorbed because photocatalyst coated pavement is quite near the source of car exhaust.
- The supply of power such as electricity or special maintenance is not needed.



# **FUJITA CORPORATION**

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E-mail info@fujita.co.jp

URL http://www.fujita.com/index2.html URL http://www.fujita.com/finance.html

Available in: Japan, Asia, Europe, North America



The construction site of Photoroad.

# EP-7-012

# **Building and civil engineering**

paving work

# Solid Surface (Volcanics)

### Environmental performance

Product certification program for low emitting interior building materials, furnishings

# Product performance

Low chemical emissions performance



Volcanics



# LG Hausys, Ltd.

20 Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-721, Republic of Korea Tel +82-2-3773-3478 Fax +82-2-785-3996

E-mail hanbc@lghausys.com URL www.lghausys.com URL www.lghi-macs.com

Available in: Asia, U.S.A, Republic of Korea

# **Building and civil engineering**

paving work

#### **Engineered Stone** (Viatera)

#### Environmental performance

Product certification program for low emitting interior building materials, furnishings

#### Product performance

Low chemical emissions performance



Volcanics

# LG Hausys, Ltd. 20 Yeouido-dong, Yeongdeungpo-gu, Seoul, 150-721, Republic of Korea

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#### EP-7-014

# **Building and civil engineering**

High quality

LC Stage

Material

End-of-life

Energy saving

Production

Transport

block pavement systems with long-term water-holding function

# Earth-cool Block Pavement System with long-term water-holding function

#### Environmental performance

As an anti-heat island measure, Mitsubishi Materials Corp. and Tokyohoso Co. jointly developed the "Earth-cool Block Pavement System" that integrates water retainable blocks, water conveyance sheets, and a water-retaining base course

#### Product performance

- 1. Under weather conditions in which the surface temperature of asphalt pavement is over 60 °C, "Earth-cool Block Pavement System" makes it possible to lower the temperature by 15 °C and more in comparison with normal asphalt pavement.
- 2. Water retention ability is about 56 l/m<sup>2</sup>, and reduced effect of road surface temperature continues for two weeks.
- 3. There is no need to greatly change the conventional pavement structure, and it is applicable for the renewal of the existing pavement.

# Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-Ku, Tokyo, 100-8117, Japan Tel +81-3-5252-5308 Fax +81-3-5252-5344

E-mail kkawabat@mmc.co.jp

URL http://www.mmc.co.jp/corporate/en/index.html URL http://www.mmc.co.jp/corporate/en/csr/csr.html

Available in: Japan

System outline chart

# **Building and civil engineering**

insulation material

# Non-Freon spray-on thermal insulating material 'Ceramilite-eco®

#### Environmental performance

In this construction method, We use spray-on thermal insulating material onsite.It does not use Freon-gas, Freon-gas substitute or VOCs which cause 'sickhouse'syndrome.It also contributes to environmental conservation by using recycled products from fractured styrene foam waste as a main material of an insulator. Moreover, because Ceramilite-eco (Semi-non flammable) and Ceramilite-ecoG (Non frammable) does not cause explosive burning like Polyurethane foam does,it obtained high safety against fire. This method received a prize of Ministry of Land, Infrastructure and Transport Government on the 1st Ecoproducts award 2004.



# **Obayashi Corporation**

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Tel +81-3-5769-1006 Fax +81-3-5769-1065

URL http://www.obayashi.co.jp/english/index.html

URL http://www.obayashi.co.jp/english/environment/index.html

Appearance of Ceramilie-Eco sprayed on wall

Available in: Japan, Asia

# EP-7-016

# **Building and civil engineering**

green roof systems

# **PEG System - Your Portable Greening Solution**

#### Environmental performance

Prefabricated Extensive Green Roof System (PEG) is an innovative lightweight modular green roof tray system manufactured using thermal plastic which can be recycled. It has a built-in reservoir that retains rainwater to sustain plant growth. PEG System allows instant greening for extensive roof garden and is suitable for most new and existing buildings.

The benefits of the PEG System:

- Allows owners to dismantle and move PEG to a new place with ease
- Designer can rearrange PEG trays to achieve different aesthetic look
- Enables a neat and quick installation process on site
- Stores water to sustain the plant growth
- Improves energy efficiency and softens the urban landscape
- High durability and low maintenance
- Reduces surface temperature

# **United Premas Limited**

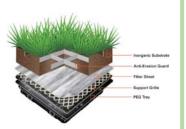
Block 750 Oasis, Chai Chee Road Technopark @ Chai Chee #01-01, 469000,

Tel +65-6876-0088 Fax +65-6538-8146

E-mail info@ugl-premas.com

URL www.ugl-premas.com





Bitec Soil, a "green" infrastructure that enables users to reduce the environmental burden by the separation technology using microbes

#### Environmental performance

Bitec Soil is artificial humic soil produced by fermenting and decomposing thinned wood using microbes. Since humus and microbes are contained in the soil, no chemical fertilizer is required to grow plants. Analyses in various tests prove the soil to be harmless. Thanks to microbes, destructive fungi are sterilized and harmful components are resolved.

#### Product performance

- No chemical fertilizer and soil improvement agents are required to grow plants.
- No maintenance, such as additional fertilization, is needed.
- Vegetation can be grown on acidic soil.
- \* Harmless vegetation can be grown for surrounding ecosystems.
- Animal wastes are resolved into compost.
- Control of destructive fungus and improvement of soil on cultivated land are possible
- \* Effective in the growing and reproduction of seaweeds



5-3-13-1, Nisioka, Toyohira-ku, Sapporo-city, Hokkaido, 062-0035, Japan





Available in: Japan

# **EP-7-018**

# Building and civil engineering

carpet tile

Production

Transport

# Recycled Carpet Tile: Sumi Green SG-300 400

#### Environmental performance

SUMI-GREEN is a brand name of carpet tile products whose backing material is made from recycling powder which is finely milled from backing layer of used carpet tile that was collected from the market. Because the process of backing material manufacturing is not a way to paste several recycled sheets together, but a way to blend the recycling powder into the virgin material, the process requires little energy expenditure and additional processes for reproducing. The spun-dyed Sumitron which is recycled polyester for SUMI-GREEN reduces water usage because its dyeing process produces no waste liquid.

During the entire product lifecycle, SUMI-GREEN reduces 19% of CO<sub>2</sub> emission than the standard nylon loop carpet tiles manufactured by Suminoe.

# End-of-life . Use/repair エコ商品 ねっと掲載

# SUMINOE TEXTILE CO., LTD.

2-30-4, Nishi-gotanda, Shinagawa-ku, Tokyo, 141-0031, Japan Tel +81-3-5434-2317 Fax +81-3-5434-2315 E-mail Kiyotoshi Tsurube@sin.suminoe.co.jp URL http://www.suminoe.jp/english/index.html



LC

Stage

Sum Green SG 400

# **Building and civil engineering**

board

# Standard Board - It creates beautiful and pleasant space

#### Environmental performance

The standard board is suitable for all kinds of dry work method for walls and ceilings and it can be adapted to various buildings. In addition, it helps to allow to have curved walls and ceilings in order to add artistic effects and beauty to the structure. And it has no volatile organic compounds (VOC) that are the cause of sick house syndrome. In addition, it has no asbestos and use recycled flue-gas desulfurization gypsum material.

## Product performance

- Use of recycled materials
- Reduced harmful substances



# Lafarge Plasterboard Korea

4F Rosedale building 724, Suseo-dong, Gangnam-gu, Seoul, Republic of Korea

Tel +82-2-6902-3128 Fax +82-2-6902-3197 URL http://www.lafarge-gypsum.co.kr



Standard Board

# EP-7-020

# Building and civil engineering

board

# Fire Moisturecheck - Multifunctional benefits for complex situations

#### Environmental performance

The Fire Moisturecheck is multifunctional as it provides both fire & water resistance. It is deal for place frequently exposed to high humidity like chambers for air conditioner condensing unit and bathroom whose walls are shared by next door neighbors. And it provides safety without major environmental impact.

#### Product performance

- High fire resistance performance
- Use of recycled materials
- Increased user safety
- High waterproofing performance

# Chemical substances Material Resource Stage Production Transport Use/repair



Fire Moisturecheck

# Lafarge Plasterboard Korea

4F Rosedale building 724, Suseo-dong, Gangnam-gu, Seoul, Republic of Korea

Tel +82-2-6902-3128 Fax +82-2-6902-3197 URL http://www.lafarge-gypsum.co.kr/

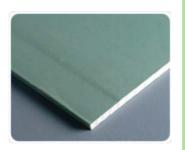
#### Product performance

- High mold resistance performance
- Use of recycled materials
- improved indoor air quality



# Lafarge Plasterboard Korea

4F Rosedale building 724, Suseo-dong, Gangnam-gu, Seoul, Korea Tel +82-2-6902-3128 Fax +82-2-6902-3197 URL http://www.lafarge-gypsum.co.kr



Moldcheck

# EP-7-022

# Building and civil engineering

plasterboard

# Tenace936-Build faster with the lightest plasterboard available

#### Environmental performance

Tenace936 which can be applied to general usage to various building is a plasterboard suitable for all light dry construction method and particularly, a specialized product for ceiling construction. Because it has lightness, it is easy to move around site and easy to handle in installation. Also is has lower energy consumption. In addition, it has eco-friendly environmental impact on indoor air and use recycled flue-gas desulfurization gypsum material.

## Product performance

- The lightest plasterboard
- Use of recycled materials
- Lowest carbon footprint

# Lafarge Plasterboard Korea

4F Rosedale building 724, Suseo-dong, Gangnam-gu, Seoul, Korea Tel +82-2-6902-3128 Fax +82-2-6902-3197 URL http://www.lafarge-gypsum.co.kr





Tenace936

Eco-product // Building and civil engineering

# **Building and civil engineering**

ceiling

# Silver Nano Gyptex-A smart and healthy ceiling

#### Environmental performance

Gyptex is a next generation plasterboard ceiling material. It is welcomed by customers thanks to its outstanding decorative appearance, constructability, quality and safety. The addition of silver nano particles gives health benefits through elimination of VOC, odors and germs.

#### Product performance

- Adsorbs and reduces bad odor
- Adsorbs and decomposes VOC
- Use of recycled materials
- Reduces renovation waste





Silver Nano Gyptex

# Lafarge Plasterboard Korea

4F Rosedale building 724, Suseo-dong, Gangnam-gu, Seoul, Korea Tel +82-2-6902-3128 Fax +82-2-6902-3197 URL http://www.lafarge-gypsum.co.kr/

# EP-7-024

# **Building and civil engineering**

floor materials

# LG EQ Floor - indoor floor covering

### Environmental performance

less indoor air pollutants reduced harmful substances

## Product performance

Excellent shock absorption

:shock acceleration coefficient level from JIS 93Gs

The cushioning effect minimizes surface noise: -24dB

# Chemical substances Material Design Resource Chemical Purification Material Chemical Purification Design Production Production Transport Use/repair



# LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com

# **Building and civil engineering**

tiles

# Thermo Tile: saying good-bye to chilly bathroom tiles

#### Environmental performance

Thermo Tile is a floor tile for bathrooms that offers the function of preventing the chill often felt when walking on tiled floors. It does not need energy sources such as electricity or gas; rather, it works on the principle of forming a heat-insulating layer on the tile surface. Thermo Tile has a surface layer that contains many small hollow balloon-like bubbles, which lowers the thermal conductivity of the tile itself and reduces the heat transfer rate (i.e., the thermal flux value). Consequently, those walking on the tiles do not feel much of a chill.

#### Product performance

The surface of Thermo Tile offers good drainage. In addition, its rugged surface means that it is not slippery even with wet feet. The coefficient of slip resistance for bathrooms (CSR-B) is set at a value suitable for use in large bathhouses

# **INAX Corporation**

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp/





TERMO TILE:IFT-300/ML-201,ML-301

Available in: Japan

# EP-7-026

# **Building and civil engineering**

tiles

# Ecocarat: superior health-promoting building materials to support both comfort and health

# Environmental performance

Ecocarat, a material produced from waste glass and other recycled materials, controls by itself the humidity of rooms where it is used by absorbing moisture in the air in humid conditions and giving off moisture when the air is dry. The low-temperature firing used in its production means that energy consumption and  ${\rm CO_2}$  emissions are reduced compared with those of existing tiles.

#### Product performance

Ecocarat, a material that controls by itself the humidity of rooms in a natural way, also works to absorb VOCs (the airborne compounds that cause Sick Building Syndrome), thus providing a comfortable and healthful interior environment. This is Japan's first formaldehyde-reducing building material certified by the Building Center of Japan.

# **INAX** Corporation

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ECOCARAT:ECO-275NET/R01

Available in: Worldwide

347

tiles

# SANDROCK: Permeability ceramics building materials with recycle materials

#### Environmental performance

"Sandrock," an environmental symbiosis pavement made using porous ceramics, avoids underground drought and lightens rainwater runoff to rivers and drainage channels through high water permeability that helps return rainwater to the soil. The large number of micropores in its composition prevents puddles and water splashing, reduces slipperiness, gives a soft walking feel to pedestrians, and absorbs the heat of road surfaces. SANDROCK is a product from recycled material that utilizes crushed tile, ash from incinerated sewage sludge, etc. in the production process. It is authorized as an ECO MARK PRODUCT with an environmental symbiosis function.



# INAX Corporation

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp URL http://www.inax.co.jp/



Available in: Japan SANDROCK

**EP-7-028** 

# **Building and civil engineering**

tiles

# MICROGUARD, INAX anti-fouling technology for the external wall of housing and building

# Environmental performance

Tile that is treated with MICRO-GUARD functions to prevent the fouling of the external walls of houses and buildings and to maintain the beautiful appearance of the wall for a long period.

MICRO-GUARD is a technology to process tiles with INAX's original antifouling method in order to maintain and beautify the landscape of urban areas in severe environmental conditions including air pollution.

MICRO-GUARD enhances the surface hydrophilicity of conventional tile. Thereby, the condition of the tile surface is always covered with a water film that absorbs water molecules from the air. As a result, it prevents the generation of static electricity which attracts air-borne dust. Moreover, the tile effectively becomes "self-cleaning" since dust and grime are flushed from tile surface when it rains thanks to the MICRO-GUARD treatment.



MICROGUARD STANDARDNEO:COM-255/MGN-14

# **INAX Corporation**

3-6-8 Kyobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp URL http://www.inax.co.jp/

Available in: Japan

Material

End-of-life

Long-life

LC

Stage

Production

Transport

, Use/repair

# Re-tile: renovation tile for use with the tile-wrap construction method

#### Environmental performance

With this product, INAX has halved the weight of tiles while maintaining their original functions, strength and material textures, thus significantly reducing the loads that act on building structures. As a mineral-based ceramic product, Re-tile offers good weather ability including high resistance to ultra-violet rays, and its color does not fade even over periods of up to 40 vears.

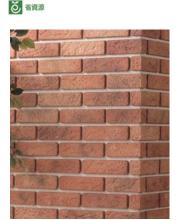
#### Product performance

Re-tile is a lightweight tiling product designed for the exterior renovation of housing walls using the newly developed "tile-wrap" construction method. which involves attaching Re-tiles directly to the existing exterior wall. Special wire nets are screwed to the wall, and the tiles are then stuck directly on top, thus preventing them from becoming detached.

# **INAX** Corporation

3-6-8 Kvobashi, Chuo-ku, Tokyo, 104-0031, Japan Tel +81-3-4332-5164 Fax +81-3-4332-5160 E-mail inaxpr@i2.inax.co.jp

URL http://www.inax.co.jp/



RE-TILE: (JR) RTL-2/ARL-4

Available in: Japan

# EP-7-030

# Building and civil engineering

# Recycled-material Tile: wall and floor materials made from waste resources

#### Environmental performance

Recycled-material Tile is a wall/floor tile made from recycled materials. INAX makes every effort to use up all materials generated during the various production processes at its factories, ranging from mill ends and waste materials to the clay contained in wastewater. Materials used in large quantities are "ceramic-industry waste-mud" (recovered from the excavation of ceramic raw materials), "Kira" (a material generated during the mining of silica sand - one of the raw materials of glass), and "pottery chips" (formed by crushing ceramic products such as tiles).

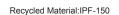




# **INAX** Corporation

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Available in: Japan





# Environment-conscious Polyvinyl Chloride MatTile, REFINEBACK EXA

#### Environmental performance

REFINEBACK EXA is produced under Kawashima Selkon Textiles' original recycle system, "e-RECYCLED," using recycled backing amounting to 55% of the total ratio by weight, whose main material is recycled floor covering (post-consumer material). The system holds the only Eco Mark in the industry.

In addition, this is the first Polyvinyl Chloride product to receive the Green Energy Mark certification in the industry and is certified as an environmentally-friendly no-carbon-dioxide product manufactured with "green power" (biomass). The product conforms to the Green Purchasing Law.

#### Product performance

- \* Anti-static film standard specification: Anti-static film is used for the top film, controlling static generation.
- \* Use in combination with tile-carpets is available.
- Molding is not used for the 500 x 500-size products, and it is possible to use on OA floors (double flooring) as a mat (peel up method).
- \* The Real Edge type is used for 150 mm -wide wood-type products

Since the designed film layer is a Real Edge type, a natural finish is realized unlike with conventional all-side chamfering products.

# Kawashima Selkon Textiles Co., Ltd.

6th Floor, NBF Toyosu Garden Front, 5-6-15 Toyosu, koto-ku, Tokyo, 135-0061, Japan

Tel +81-3-5144-3853 Fax +81-3-5144-3854

URL http://www.kawashimaselkon.co.jp

URL http://www.kawashimaselkon.co.jp/interior/contract/pvc/refine.html

URL http://www.kawashimaselkon.co.jp/csr/index.html

Available in: Japan, Worldwide





REFINEBACK EXA (CKR9000-54)

#### EP-7-032

# **Building and civil engineering**

wall materials

# Interior finish plaster made from Diatom Earth to work

#### Environmental performance

This finish plaster is environmental cleanup product with healthy and safety. The major contents are the DIATOM EIRTH and lime. The lime is the major product of finish plaster which has been used for 1300 yeaes in Japan. Antioxidant effect Clean up IAQ and strong alkaline inhibit mold activity.

Diatom Eirth is highly-porous structure, it has thousandfold porous condition than charcoal, and becomes easy to catch smell & noxious chemicals with a large surface area of Diatom Eirth. and also exerts high humidity conditioning. that's why it is good as

 $\mbox{\sc mildew-proofing agent, dew condensation prevention and sick house syndrome measures.}$ 

We has succeeded in developping KEISOU-KUN with one of the amio acid that decomposed formaldehyde.

# Onewill Co., Ltd

9F, 1-2 Tokiwa-cho, Naka-ku, Yokohama-shi, 235-0015, Japan Tel +81-45-664-5211 Fax +81-45-664-5210

E-mail kiyo40618@onewill.co.jp URL http://www.onewill.co.jp URL http://www.keisoukun.com





Keisou-kun (finish pleaster)

# **Building and civil engineering**

wall materials

# As external wall & pavement, may help energy-saving & reduce UHI

#### Environmental performance

We have discovered that sludge incineration ash has low thermal conductivity and become increasingly viscous and water-retaining function. We has developed COOL SOIL has the energy saving and reduce the heat island effect as joint result of this ash and Diatom Eirth. We make effective use of this product with recycle sludge incineration ash from Yokohama city





# Onewill Co., Ltd

9F. 1-2 Tokiwa-cho, Naka-ku, Yokohama-shi, 235-0015, Japan

Tel +81-45-664-5211 Fax +81-45-664-5210

E-mail kiyo40618@onewill.co.jp URL http;//www.onewill.co.jp URL http://www.keisoukun.com

Available in: Worldwide

# EP-7-034

# Building and civil engineering

construction materials

# Protection of houses from earthquakes and fire, fireproof and durable material, Dailite

- Shirasu (volcanic ash), an untouched natural resource abundant in nature and found in iron slag, is utilized to produce this epoch-making high-intensity, fireproof and high-durability
- Zero-asbestos and low formaldehyde are realized to protect the health of residents and the environment.
- With Dailite, the first one meter of a structure from ground level up does not need preservative and anti-termite treatment, which is required for wooden sub-frames against exterior walls to prevent corrosion and termite attack. (However, wooden parts, such as pillars, studs and foundations, require the treatment.)

#### Product performance

- The 12-mm thick wooden-framework product is acknowledged to have 3 times higher the intensity of standard walls as defined by the Building Standards Law. Flame-retardant and mineral Dailite is approved as a semi-inflammable material for fire-
- protection construction and semi-fireproof construction.

  Outstanding durability as well as permeability (lets in roughly three to four times more moisture
- than plywood), and the external-wall aeration-construction method prevents condensation and the corrosion inside of walls

# **DAIKEN CORPORATION**

Dojima Avanza 6-20, Dojima 1-chome, Kita-ku, Osaka, 530-8210, Japan





Available in: Japan

# **Building and civil engineering**

construction materials

# Photocatalytic road-paving method, Optical Randix Method

#### Environmental performance

Optical Randix Method is air purification technology for pavement by using photocatalytic coating. Resin, which is developed for photocatalysis and has excellent durability and adherability, is used as a binder in this construction method, resulting in roads becoming more tolerant against wear from vehicles. Thanks to excellent effect to decrease road temperature, this method can also be utilized as a countermeasure against the heat-island phenomenon.

#### Product performance

- 1) Dense grade asphalt concrete pavement, semi-flexible pavement and porous asphalt pavement are available.
- 2) Excellent adhesive strength and durability
- 3) According to the results a year after the test construction, NOx removal performance was superior (1.94  $\mu$  mol\*), having long-term durability.
- 4) The method's remarkable construction property allows traffic to resume more quickly than conventional construction.
- \* Test conducted under the air purification test procedure, JIS R1701-1

# Mitsubishi Materials Corporation

KeidanrenKaikan 1-3-2, Ohtemachi, Chiyoda-ku, Tokyo, 100-8117, Japan Tel +81-3-5252-5331 Fax +813-5252-5344

E-mail kkawabat@mmc.co.jp

URL http://www.mmc.co.jp/corporate/en/index.html URL http://www.mmc.co.jp/corporate/en/csr/csr.html

Available in: Japan





Construction sample for parking lot

#### EP-7-036

# **Building and civil engineering**

construction materials

#### **Holcim Green**

### Environmental performance

Conservation of natural resources.

#### Product performance

Product performance is better than normal natural fine aggregate concrete, higher compressive strengths, better durability, lower paste porosity, similar external appearance, and higher workability.



# Holcim (Singapore) Pte Ltd

No. 16 Jalan Tepong, 619331, Singapore Tel +65-62651933 Fax +65-62684027 E-mail jitendrapragji.desai@holcim.com



Available in: Singapore

Holcim Green Label Products

# **Building and civil engineering**

construction materials

# **Holcim Supercrete HS**

#### Environmental performance

Lower carbon footprint. CO<sub>2</sub> emissions reduced by 65%. 45% savings in concrete volume, thus savings in natural resources.

#### Product performance

Durable, faster constructions, more usable floor space.



# Holcim (Singapore) Pte Ltd

No. 16 Jalan Tepong, 619331, Singapore Tel +65-62651933 Fax +65-62684027 E-mail jitendrapragji.desai@holcim.com



Available in: Singapore Holcim Supercrete HS

# EP-7-038

# **Building and civil engineering**

construction materials

# **Holcim Green FA**

### Environmental performance

Lower carbon footprint.  $CO_2$  emissions reduced by up to 50%. Higher strength development at a later age. Higher resistance against sulphates, chlorides and aggressive effluents/gases. Increased durability, strength growing for number of years.

#### Product performance

Durable and denser product. Lower permeability.

# Global Resource Recycled materials Material Design Production Resource Stage Transport Use/repair

# Holcim (Singapore) Pte Ltd

No. 16 Jalan Tepong, 619331, Singapore Tel +65-62651933 Fax +65-62684027 E-mail jitendrapragji.desai@holcim.com



Available in: Singapore

# **Building and civil engineering**

construction materials

# **Holcim Green SL**

#### Environmental performance

Lower carbon footprint. CO<sub>2</sub> emissions reduced by up to 70%. Higher resistance against sulphates, chlorides, and aggressive effluents/gases and increased durability.

#### Product performance

Durable and denser product. Lower permeability.



# Holcim (Singapore) Pte Ltd

No. 16 Jalan Tepong, 619331, Singapore Tel +65-62651933 Fax +65-62684027 E-mail jitendrapragji.desai@holcim.com



Available in: Singapore

Holcim Green Label Products

#### EP-7-040

# **Building and civil engineering**

construction materials

#### (WPC) Deck

- Construction materials from wood and plastic composites Has 80% wood powder content Green technology

- Green technology
  Energy efficient
  Reduces global warming through a smaller carbon footprint
  Quality ISO 9001 and Environmental ISO 14001
  Recycles available resources
  Contains no harmful substances

- 100% recycling is possible
   Contains no chemical adhesives and does not release harmful substances upon decay or incineration

USE: Concourses, greenways, hiking trails, boardwalks, terraces, roof gardens, benches, interiors

- Strongly resistant to moisture Will not crack, split, or warp
- Termite-proof
- Strongly resistant to mold
  Requires no painting
  Requires little upkeep or preservation expense
- Contains no heavy metals
  Contains no formaldehyde
  Does not emit toxic fumes when burned

# **ENWPC CORP.**

5th floor, Yeoksun B/D, #779-2, Yeoksam-dong, Kangnam-gu, Seoul, 135-928,

Tel +82-2-555-2285 Fax +82-2-555-2103

E-mail enwpc@paran.com URL http://www.enwpc.com







Deck (WPC)

Material

End-of-life [

Long-life

Production

Transport

. Use/repair

- Construction materials from wood and plastic composites Has 80% wood powder content Green technology

- Energy efficient
  Reduces global warming through a smaller carbon footprint
- Quality ISO 9001 and Environmental ISO 14001 Recycles available resources Contains no harmful substances

- 100% recycling is possible
   Contains no chemical adhesives and does not release harmful substances upon decay or incineration

USE: Concourses, greenways, hiking trails, boardwalks, terraces, roof gardens, benches, interiors

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- Contains no heavy metals
   Contains no formaldehyde
   Does not emit toxic fumes when burned

# ENWPC CORP.

5th floor, Yeoksun B/D, #779-2, Yeoksam-dong, Kangnam-gu, Seoul, 135-928,

Tel +82-2-555-2285 Fax +82-2-555-2103

E-mail enwpc@paran.com URL http://www.enwpc.com

LC Stage

Louver (WPC)

Available in: Republic of Korea

# EP-7-042

# **Building and civil engineering**

wallpaper

# **Z:IN wallcovering NATURE**

### Environmental performance

less indoor air pollutants reduced harmful substances using Non-PVC material

#### Product performance

no harmful gas on fire Eco-friendly coating method applied



# LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com



# **Building and civil engineering**

wallpaper

# Interior wallpaper covered with Diatom Earth to work for purify IAQ

#### Environmental performance

This wallpaper is environmental cleanup product with healthy and safety. This wallpaper consist of with one of the amino acid, it has some superior abilities

as follows; odor eliminating, formaldehyde which is noxious chemicals decomposition

Keisou-kun wallpaper has higher content rate of Diatom Earth any other

product, so it exerts high humidity conditioning. We can say it is good as mildew-proofing agent, dew condensation prevention and sick house syndrome measures.





#### wallpaper

# Onewill Co., Ltd

9F. 1-2 Tokiwa-cho, Naka-ku, Yokohama-shi, 235-0015, Japan

Tel +81-45-664-5211 Fax +81-45-664-5210

E-mail kiyo40618@onewill.co.jp URL http://www.onewill.co.jp URL http://www.keisoukun.com

Available in: Worldwide

# EP-7-044

# Building and civil engineering

Material

End-of-life

Resource Stage

water synthetic resin paints

LC

Production

Transport

, Use/repair

# Water-based paints that can reflect solar energy radiation

#### Environmental performance

This is the paint which saves 2-5°C air conditioning electric power\* at indoor temperature by painting a roof. This product provides a thermal screening function. Unlike the conventional solvent type paint, twice more than durability of paint film is improved\* in order not to invade the old paint film. Because this is the water-based paint which considered environment, this product reduces a volatile organic compound by 30% or more\*.

\*Compared with Histar-ASC (1993)

#### Product performance

· This product is nonflammable, which enables safer operations.

# Hitachi Chemical Industrial Materials Co., Ltd.

5-12-15. Namekawa Honcho, Hitachi-shi, Ibaraki, 317-0051, Japan Tel +81-294-22-1313 Fax +81-294-22-1782



Available in: Japan

Energy saving effect

# **Building and civil engineering**

# Heat ray shielding paint with energy saving and CO<sub>2</sub> reduction effects

#### Environmental performance

Due to the characteristics of its good weatherability and radio-wave permeability, as well as high-transparency, our heat-rays shilding paint has been widely applied to glass for automobile, train, and housing windows. This paint contributes significantly to reduce both energy consumption and CO<sub>2</sub> emission as a result of reducing the air conditioning load.

#### Product performance

Our heat-rays shielding paint is a clear coating-material containing highly dispersed ultra-fine ceramic particles absorbing heat rays in sun light. Application of this paint as direct glass coating or coated film on glass surface enables glass to reduce insolation permeability ratio to less than 70% while keeping 90% of visible radiation permeability.

# Global Energy saving Material Production LC Stage Transport End-of-life . Use/repair

# Mitsubishi Materials Corporation

1-6-1 Yokoami, Sumida-ku, Tokyo, 130-0015, Japan Tel +81-3-5819-7325 Fax +81-3-5819-7327

URL http://www.mmc.co.jp/corporate/en/index.html URL http://www.mmc.co.jp/corporate/en/csr/csr.html

Available in: Worldwide

Film coated with IR cutting paint

# Building and civil engineering

paints

# Hybrid Insulating Coat "KILUCOAT"

**EP-7-046** 

Heat insulation capacity
 Maximum 90% of sunlight is reflected and the heat is kept out, contributing to improved air-conditioning effects and reducing costs.

Over 200% of expansion can be expected to fill up cracks on buildings, maintaining good conditions of exteriors for long periods.

Autherities
 Degree of tackiness reaches 1.7 N/m (JIS Standards: 0.5N/mm² or more, JIS 6909 interior and exterior thin lacquer E).
 Any materials can be coated. Hard to be peeled off.

4. Durability On the accelerated weathering test, no quality deterioration is confirmed after a lapse of 4,000 hours and the coating remains in good condition for more than 10 years.

Energy and environmental design Quantification limit of formaldehyde level is 0.03 mg/L or below. Since the product is water paint, a low VOC is realized.

Kilucoat water paint is mainly developed for buildings. The paint contains minute hollow beads in special emulsions to make heat-insulating properties.

The hollow beads prevent heat conducting in and radiating from rooms, saving energy and costs with a high air

The floriow beaus prevent near consociant in the conditioning effect. Conditioning effect. In addition, thanks to special emulsions, the combination percentage of the hollow beads is high. So the product is effective not only in heat in summer but also coldness in winter, being useful in all seasons.

# NHK SALES CO..LTD.

2-13-1 Edagawa, Koto-ku, Tokyo, 135-0051, Japan





Eco-product // Building and civil engineering

# **Building and civil engineering**

paints

# **New material special paint WALLFACE**

#### Environmental performance

Healthy architectural finishing with no VOC (volatile organic compounds), which has become even more important recently because of sick house syndrome, and the use of harmful levels of formaldehyde, mercury, and lead

Samjin liquid WALLFACE supports elegant living and good health with eco-friendly construction finishing materials with more quality than mere wallpaper, using liquid instead of paper.





Samjin WALLFACE is your competitiveness!







Beautiful Grand Nature is Utopia which is pursued by Samjin Industrial studying and developing environment-friendly, new constructionish products.

Contact Address : Hwabuk 2-dong, jeju City, jeju island, Tel: 82-(064)722-0756 Fax: 82-(064)724-0756 Cel: 82-11-698-0756

# SAMJIN INDUSTRIAL

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# EP-7-048

# **Building and civil engineering**

paints

#### **WHE**

#### Environmental performance

This product is special exterior wall paint featuring additional primer coating quality and is applicable to bricks, cement, and concrete walls without primer.

Samjin exterior wall paint (intermediate coating) has excellent osmosis, alkali resistance, and water and air resistance with definite cover-up qualities and strong adhesion.



# **SAMJIN INDUSTRIAL**

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# **WALLFACE-F**

#### Environmental performance

On-spot direct construction for individual design and pattern. For top coat and direct on-spot presentation of design

- Applicable on plastic
- Applicable on zinc galvanized sheets
- Applicable on interior steel plate
- Applicable on acryl



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# EP-7-050

# Building and civil engineering

Purification

LC

Stage

Material

End-of-life

paints

Production

Transport

# Natural Antibacterial Water Paint "Fragrance of the Forest"

# Environmental performance

- 1. Natural Paint is an environment-friendly paint developed from pure and healthy natural resources, such as wild plants and minerals.
- 2. Throughout the entire process of producing, painting and disposing, Natural Paint does not release harmful substances which could threaten the environment or human
- 3. "Fragrance of the Forest" is a Natural Antibacterial Water Paint which is Heavy Metal, Mold, Germ FREE and is effective for chemical toxin interception.

#### Product performance

- 1. Be free from sick school syndrome, sick house syndrome, sick building syndrome with natural anion-emitting and air-purifying water-based paint
- 2. Mold, Germ, Atopy FREE
- Natural Anion-Emitting and Air-Purifying Matte Finish Water-based Paint
   First Paint Guaranteed as Anti-Bacterial "Fragrance of the Forest" is the first and only paint in Korea to win the AB (Anti-Bacterial) Mark

"Enjoy Forest Aromatic Bath Indoors! Inhale Pure Anion Air that Mother Nature Provides!"

# HANKOOK SHINHWA PAINT

101-7, Yangbeol-ri, Opo-eup, Gwangju-si, Gyeonggi-do, Korea Tel +82-31-766-2983 Fax +82-31-766-6654 E-mail red237@korea.com URL http://www.hshpaint.com



Available in: Worldwide

Fragrance of the Forest

# **Building and civil engineering**

window

# **Z:IN System Window - PVC window**

#### Environmental performance

reduced harmful substances Energy saving



# LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea URL www.lghausys.com URL www.z-in.com



Available in: Worldwide

Z:IN System window

LC Stage

End-of-life

# EP-7-052

# **Building and civil engineering**

window

High quality

Design Production

Transport

# EX'1001 (Tilt & Turn)

#### Environmental performance

EX' 1001 is a high energy-efficient window system. It consists of an aluminum/polyamide composite-framed and a double-glazed window. It contributes to an environment preservation, heat insulation and energy saving in buildings. The frame is made of an aluminum raw material, which is not harmful to the human body and is reusable and recycle material. There is no material waste of sealant, while the glass is retrofitted. Therefore, it can reduce environmental pollution in advance.

#### Product performance

EX' 1001 is an European-style window system (Tilt & Turn) .

High Energy-Efficient High Air Tightness High Water Tightness Secure Structure High Thermal & Sound Insulation Fire Resistance & Harmlessness

It is a 2-way window system (Tilt & Turn) and very easy to handle. It is applicable by itself in buildings and curtain wall facade. Also it has very various color proper for your taste.

# Alutek Ltd.

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Available in: Worldwide

EX'1001 (Tilt&Turn)

# **Building and civil engineering**

window

#### EX'2002 (Lift & Sliding)

EX' 2002 is a high energy-efficient window system. It consists of an aluminum/polyamide composite-framed and a double-glazed window. It contributes to an environment preservation, heat insulation and energy saving in buildings. The frame is made of an aluminum raw material, which is not harmful to the human body and is reusable and recycle material. There is no material waste of sealant, while the glass is retrofitted. Therefore, it can reduce environmental pollution in advance.

EX' 2002 is an European-style window system (Lift & Sliding).

High Energy-Efficient High Air Tightness High Water Tightness Secure Structure High Thermal & Sound Insulation Fire Resistance & Harmlessness

It consists of a laminated glass for safety. Its high strength guarantee the security. It has reinforced & narrow-designed frame. It makes a wide view. It suits not only apartment, high-rise building but all buildings.

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Available in: Worldwide EX' 2002 (Lift & Sliding)

#### EP-7-054

# **Building and civil engineering**

chemicals and allied products

# Hi-MACS - Solid Surface, Engineered Stone

#### Environmental performance

Product certification program for low emitting interior building materials, furnishings

### Product performance

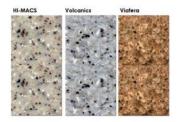
Low chemical emissions performance

# Material Production LC Stage Transport End-of-life Use/repair

# LG Hausys, Ltd.

LG Twin Towers, Yeouido-dong, Yeoungdeungop-gu, Seoul, Republic of Korea Tel +82-2-3773-3478 Fax +82-2-785-3996

E-mail hanbc@lghausys.com URL www.lghausys.com URL www.lghi-macs.com



Available in: Asia, U.S.A, Republic of Korea

MMA Acrylic Solid Surface, Engineered Stone

Eco-product // Building and civil engineering

# **Building and civil engineering**

breakwater

#### Wave dissipation block, **Mecca Tetraport (Dimple)**

#### Environmental performance

- This product may help sea resource recovery depending on circumstances (multi functional
- 1) Great habitats for seaweeds or crabs.
- 2) Spawning, sanctuary and hideouts for fishes.
- 3) Creates eddy current to promote the growth of horizontally moving antherozoids (seeds moving in the sea with )

#### Product performance

- Firm structure
- Mecca tetraport has A regular tetrahedron where each point is rounded and the curve of each plane is concaved in to make A joint.
- Excellent reliability
- Due to the characteristic shape of the block, you can expect A limited wave dissipation structure with Firm joints.
- Excellent wave dissipation effect

the Unique concave area of the block can generate excessive roughness ON the porosity surface, as A result, various shapes of porosity can be created between each block. Due to the concave and convex structure, the wave energy is absorbed and scattered to reduce the effect







# MECCA OCEAN RESEARCH & INSTITUTE CO., LTD

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Available in: Republic of Korea

#### EP-7-056

# **Building and civil engineering**

breakwater

Production

Transport

. Use/repair

Recycled materials

LC

Stage

#### Mecca Oceanic Block (triangular B block) Seaweed block,

- Sea resource recovery
- (multi functional block)
- Great habitats for seaweeds or crabs.
- Spawning, sanctuary and hideouts for fishes.
- 3) Creates eddy current to promote the growth of horizontally moving antherozoids (seeds moving in the sea with a hair).

#### Product performance

- Excellent Stability
  - This block makes three points contacts with the ground. Thus, it is easy to install it ON A bulgy area and you can expect High reliability.
- easy arrangement of curvatures and corners
- its basic shape is A triangle to support easy arrangement in A corner or curvature.
- Joining and facing walls
  - it is vulnerable to the breaking power.
- Preventing A falling accident
- This structure can effectively prevent such casualties.

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Air/Water/Soil

Material

End-of-life



Air/Water/Soil

Material

End-of-life

breakwater

Production

Transport

. Use/repair

Recycled materials

LC

Stage

#### **Mecca Waterside Block** (step block)

#### **Environmental performance**

- This product may help sea resource recovery depending on circumstances (multi functional block)
- 1) Great habitats for seaweeds or crabs.
- 2) Spawning, sanctuary and hideouts for fishes.
- 3) Creates eddy current to promote the growth of horizontally moving antherozoids (seeds moving in the sea with a hair).

#### Product performance

- the Mecca waterside block is designed as A human image to create A resting place near the sea.
- to prevent damages caused by the foothold, the front area of the block has A straigh line shape, not A concave-convex or curvature.
- Elliptical protrusions are added to the cross section of the block to preven sliding and to help easy walking.
- concave-convex shapes in the horizontal direction make Firm joints while giving flexibilities. Firm and stable seaside with low tilts.



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Available in: Republic of Korea

# EP-7-058

# **Building and civil engineering**

Air/Water/Soil

Material

End-of-life

breakwater

Production

Transport

Recycled materials

LC Stage

# Wave dissipation block, Mecca Triangular Block (Heavy industry triangular block)

# Environmental performance

- Sea resource recovery (multi functional block)
- Great habitats for seaweeds or crabs.
- 2) Spawning, sanctuary and hideouts for fishes.
- 3) Creates eddy current to promote the growth of horizontally moving antherozoids (seeds moving in the sea with a hair).

#### Product performance

- Excellent wave dissipation effects
  - It absorbs and reduces the energies from all directions (dynamic, breaking power). You can expect excellent wave dissipation effects
- Protecting the ecological system
- After installation, the space within the block is used as a habitat and hideout for various fish or sea organisms. Since this block has various planes and curves in it, crabs and seaweeds are highly likely to reside there. It has a great effect on preserving the ecological system in the seas
- Beautiful scenery
  - This block as great geometry and beauty. Multiple layered structure is very popular for its beautiful shape

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Available in: Republic of Korea

# **Building and civil engineering**

pavement blocks for preventing air pollution by photo-catalysis

# Pavement block "NOXER" for preventing air pollution by photo-catalysis

#### Environmental performance

NOXER is a pavement block that has a function to decompose harmful substances by oxidation in the surface layer of concrete blocks. The function is based on the photocatalytic reaction that is caused by titanium

Formation of active oxygen takes place by the action of photocatalytic reaction when titanium oxide in the surface layer of the block is exposed to ultraviolet rays in sunlight.

The formed active oxygen oxidizes the harmful substances, and decomposes them.

#### Product performance

1m<sup>2</sup> of "NOXER" removes 1.5mmol of nitrogen oxides (field test result).

# **Mitsubishi Materials Corporation**

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URL http://www.mmc.co.jp/corporate/en/index.html

URL http://www.mmc.co.jp/corporate/en/product/construct/10.html

URL http://www.mmc.co.jp/corporate/en/csr/csr.html

Available in: Japan





Chigasaki City, Japan

### EP-7-060

# Building and civil engineering

steel pipe materials

# Geo Wing Pile<sup>™</sup> II steel pipe pile for the rotary penetration method

### Environmental performance

Geo Wing Pile™ II steel pipe pile is an environmentally friendly method which produces no excavation surplus soil and which involves low noise and vibration.

# Product performance

Geo Wing  $\mathsf{Pile}^{\mathsf{TM}}\:\mathsf{II}$  , a new-structure steel pipe pile installed by the rotary penetration method and used for the construction of medium-height buildings. has a truncated cone shape wing on the front end of this pile. The product is characterized by its improvement to the workability of the penetration process.



# Sumitomo Metal Industries, Ltd.

1-8-11 Harumi, Chuo-ku, Tokyo, 104-6111, Japan Tel +81-3-4416-6183 Fax +81-3-4416-6793 E-mail chikyu-kan@sumitomometals.co.jp URL http://www.sumitomometals.co.jp

GEO WING PILE™ II (front end) GEO WING PILETM I Diagram of penetration method

Available in: Worldwide

Geo Wing Pile II

# **Building and civil engineering**

mirror duct systems

# Mirror-duct System "Energy-saving with bright sunlight"

#### Environmental performance

"Mirror-duct System" can extend daylight deep within interior spaces. The proposed system that we have developed captures natural sunlight from the building exterior and sends it via a highly efficient, light-transmitting ductwork (or tubes) into the building interior, where it is dissipated uniformly and economically throughout the interior. When the exterior light source is deficient due to variations depending on the time of day or seasonal or climatic changes, the system will compensate to 100% requirement by augmenting artificial light with an automatically-controlled dimmer. The proposed system is expected to find widespread application in communal housing, underground spaces, vegetation-cultivating facilities, etc. and above all as a realistic way to drastically cut the energy cost of lighting an office building.



# It is integrated in the exterior could not be considered in the exterior catural ligit efficiently. This unit transmitting unit transmitting unit contently light without looking as internally. It is integrated in the exterior catural light efficiently. This unit transmitting unit contently in without looking as internally. It is integrated in the exterior catural light exterior catural light exterior catural light efficiently.

Mechanism of the Mirror-duct System

# Nikken Sekkei Ltd

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Available in: Worldwide

#### **EP-7-062**

# **Building and civil engineering**

architecture

# NIKKEN SEKKI Tokyo Building "Prototype Openings for Next Generation Buildings"

## Environmental performance

- Technologies

Electric exterior blinds can block solar radiation effectively to reduce a cooling load. Heat-generating double glazing has a transparent metal layer on the inside glass. The glass temperature can be kept warm to prevent cold drafts, and condensation by electric current. Horizontal integration system with Open Network Interface connects automatic controls of the electric exterior blinds, heat-generating glasses and air conditioning on the same floor, and can get interoperability.

#### Product performance

Features

This system can reduce energy consumption of air conditioning and electric lighting for perimeter zone. Perimeter air conditioning systems are not needed due to enhanced thermal performance. Further, this system creates comfortable space near the window glass and expands the effective working space. The appearance of facades change by angle of exterior blind slats and moving up and down.

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# **Building and civil engineering**

architecture

# Pola Museum of Art "In harmony with the Existing Topography and Vegetation"

#### Environmental performance

Pola Museum of Art nestles among the trees in Fuji-Hakone-Izu National Park. We carried out a ten-year project on the theme of how to protect and coexist with the natural environment. The first year, we surveyed the flora and fauna of the site in detail, the position allowed the conservation of all the beech trees. The substructure is hemispherical to avoid interrupting the flow of aquifers. Only indigenous local plants were planted on the site, to avoid bringing in outside strains. Cypress trees that had been planted on the site were felled and seeds gathered on the site were grown into saplings and planted, in an attempt to restore the forest to its underlying vegetation types. The saplings included a variety of beech that only yields seeds once in seven years. As trees grow, they help prevent global warming by absorbing carbon dioxide from the air, storing carbon in the trees and soil.

# Global Resource Energy saving Material Design Production Resource Stage Transport Use/repair





Cross section: The hemispherical substructure was designed to avoid interrupting the flow of groundwater.

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# EP-7-064

# **Building and civil engineering**

architecture

# Toyota Institute Global Learning Center "Blending into nature"

#### Environmental performance

This training facility, standing on a small mountain and surrounded by greenery, is the center of the Toyota Institute. The building was situated with the aim of leaving all of the existing trees standing on the site and using the borrowed scenery of the foliage to create a rich interior environment. The T-shaped building layout conforms to the topography of the site. To minimize excavations and reduce fossil-fuel use and emissions of heavy-construction-equipment and dump trucks, the height difference within the site was exploited. So that the accommodation block has five floors on the west side and three above ground level on the east. The training block and the lecture theater have green roofs that acts as insulation from the sun and wind and can decrease energy consumption of air conditioning, to help prevent Global Warming.



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URL https://www.nikken.co.jp/en/projects/



As an environment-themed corporate training facility

#### Environmental performance

This is an Eco School, achieved without the burden of initial costs through a concentration of everyday technologies. Nakashibetsu has a wide range of temperatures, from -20°C in winter to 30°C in summer, so the reduction of thermal loads was a major theme. Reduced surface area of exterior walls, external insulation, highly-insulating sash windows and other measures were employed to enhance the thermal performance of the skin. Two multipurpose rooms with a three storey height were constructed as a way of letting in the heat and light of the sun while protecting the interior from the bitter cold outside, creating a healthy, open space. It also serves as an environmental device, as a path for wind and light. The students and teachers who attend this school have gained a greater awareness of the environment, and an environmentally-friendly kind of development has begun in the town.



The simple building form, exterior insulation and highly-insulative sash windows

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Available in: Worldwide

# **EP-7-066**

# Building and civil engineering

architecture

Amami Hospital for Foundation Jiaikai "The Wind Terrace Draws Breezes into the Wards"

# Environmental performance

The typical image of a psychiatric hospital is of sealed windows. The aim of this hospital was to make a "healing building," which would enjoy the benefits of Amami's abundant nature. The climate of Amami is subtropical, but there is a pleasant breeze in the shade of the trees. The building has deep eaves to take the strong sunlight gently into the interior. They allow open windows even on rainy days, so that the breeze flows throughout the building. The four wards have big bay windows, called "Wind Terraces." When the bay windows are opened, a natural breeze moves through the day room. Groundwater at a stable year-round temperature of 21°C is used for drinking, and also for cooling outside air. Roof planting and a solar water heating system are among other measures used, with the combined result that energy consumption is 1/3 of the consumption per unit area in a standard hospital.





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# **Building and civil engineering**

architecture

# Nippon Life Insurance Company Marunouchi Building "Pursuit of design for permanent use"

#### Environmental performance

The extension of building life spans goes beyond structural measures. The designer must take a broader perspective, including consideration for urban scenery, the formation of office spaces able to respond flexibly to social changes, and the pursuit of easy maintenance and efficient replacement of building equipment and services. We wanted to make the exterior appearance of the building something that would be loved long into the future, by considering the historic character of the surrounding urban scenery. The office space on the typical floor has 2,000 m² of flexible, columnless space, with some of the floor panels made detachable, ensuring the freedom to link floors as necessary with added staircases and multifloor openings. Each floor is equipped with two sets of toilets, so that one set can be used as the other is renewed while the floor remains occupied and in use.

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Available in: Worldwide







The floors slabs have removable portions, and each floor has two sets of toilets.

# **EP-7-068**

# **Building and civil engineering**

architecture

# Izumi Garden Tower: "The Vertical void" is ready for future changes

#### Environmental performance

In an office building it is difficult to reconcile structural elements, which are hard to change, with the routes for a horizontal extension of air conditioning services, and with fast-changing sanitary facilities. There are also limits to the potential for predicting and preparing for future social shifts. This situation led us to propose a new office form, called the "Void Core" for this building. The Void Core takes outside space and inserts it vertically through the center of the office core. This space is used as a route for natural ventilation using the chimney effect, as well as for bringing natural light. It can also be used for future expansion of building service routes, and a temporary elevator route. Thus the Void Core is a sustainable solution for high-rise buildings and can reduce carbon footprints of demolition and new construction.

# Global Resource Long-life High quality Material Design Production Transport Use/repair



The Void Core in the center of the building can be used in many ways, extending the service life of the building.

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# I-Garden Air "Joining together city-center greenery"

#### Environmental performance

The government of Japan said that they would promote decarbonization of urban areas through improving the thermal environment by Urban Greening and other heat island countermeasures in the "Kyoto Protocol Target Achievement Plan". The main theme for I-Garden Air, a district developed on the site of the lidamachi freight station, was to make the new green space of the development into an axis linking the green masses of the nearby Imperial Palace and Koishikawa Korakuen. This attitude to uniting nearby green areas was shared from an early stage with local people, government and businesses as a common development principle, bringing together design concepts for planning and landscaping. As a result, the streets have a unified setback to the building walls, creating a tree-lined pedestrian avenue that extends for 300m.





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Available in: Worldwide

# EP-7-070

# **Building and civil engineering**

urban planning and management

Harumi Island Triton Square "Urban Planning & management to cut environmental loads"

#### Environmental performance

This large-scale urban redevelopment project opened in April 2001. It has achieved an unprecedented reduction in environmental load by considering such reductions over the area as a whole, not just for individual buildings. In this concentrated business and compound zone, it is easy to deploy large scale, high-efficiency equipment, and the energy required for conveying heat can be reduced. The plant for electrical power and the district heating and cooling (DHC) system are centralized and located to achieve a compact equipment infrastructure with short conveyance distances. At the operating stage, management activities are pursued at the district level to cut environmental loads. The end result is a 23% reduction in primary energy consumption, a 36% reduction in mains water usage and a 48% reduction in waste volume in the business and multi-purpose zone.



#### Area energy management achieves a district with high energy efficiency

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# **Building and civil engineering**

floating systems

# **EcoFloat modular floating system**

#### Environmental performance

The benefits of EcoFloat: Minimum maintenance

Features:

High load capacity at 350 kg/m<sup>2</sup>

Durable built material

High Density Polyethylene (HDPE) that is resistant to UV rays, seawater, corrosion, chemicals

Non-slippery surface and sharp edges Comes in a modular form that aids easy installation, like piecing together "Lego" bricks

The EcoFloat Modular Floating System is a revolutionary highly modular floating system with excellent features. It is cost effective and environmentally friendly, suitable for any leisure activities, waterfront property, aquatic sports, military use, and engineering projects on the water. The benefits of EcoFloat:

Easy to install, no extensive construction work needed

Low cost

Environmentally friendly

Versatile; can be reconfigured to any size or shape that suits different type of applications

# Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

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Available in: Singapore, Thailand, Malaysia

**EcoFloat Floating System** 

## **EP-8-001**

# **Machines and equipment**

lighting control systems

FULL-2WAY Remote Control Wiring Devices "Energy-saving supported lighting control system"

#### Environmental performance

By combining with the passive infrared ceiling unit or program timer unit, an energy-saving supported lighting control system may be achieved.

- 1. For spaces such as restroom and locker room, 60% of energy saving may be achieved by combining with a passive infrared unit.
- For spaces such as office and entire building, 8% of energy saving may be achieved by thinned-out lighting control before start of work and at the noon time.

## Product performance

Energy saving supported components are lineup:

- Passive Infrared Ceiling Unit: Ceiling-mounting type, ceiling-mounting type under eaves and wall-mounting type.
- 2. Timer: 30 programs, solar timer and annual schedule available.
- Eight-Free Switch: Half size. ON/OFF controls in smaller area are available for energy saving.

# Panasonic Electric Works Co., Ltd.

1048, Kadoma, Osaka, 571-8686, Japan Tel +81-6-6909-1614 Fax +81-6-6906-4338

URL http://panasonic-electric-works.net/

URL http://panasonic-denko.co.jp/e/corp/csr/index.html





WRT3375K: Passive Infrared Ceiling UnitWRT3540: Program Timer UnitWRT5518: Eight-free Switch

# **EP-8-002**

# Machines and equipment

wasteliquid treatment system

# **Submerged Combustion Wasteliquid Treatment System**

#### Environmental performance

Submerged Combustion System is to treat by incineration various liquid waste discharged from various production processes of petrochemical, fine chemical, pharmaceutical, agrochemical, pulp and other industries without secondary pollution.

#### Product performance

TSKE is enjoying top share in the field.

Can be reduce the risk of public nuisance.

The complete decomposition of the organic substances in the liquid waste is achieved regardless of kind or character of the liquid waste.

# Air/Water/Soil Chemical substances Material Design Production Resource Stage Transport Use/repair



# Tsukishima Kankyo Engineering Ltd. (TSKE)

2-12-15, Shinkawa, Chuo-ku, Tokyo, 104-0033, Japan Tel +81-3-6386-3964 Fax +81-3-3537-8764

E-mail salesib@tske.co.jp

URL http://www.tske.co.jp/english/index.html

URL http://www.tske.co.jp/english/technology/haieki ekichu.html

#### **EP-8-003**

# **Machines and equipment**

fluorocarbon destruction system

# Fluorocarbon Destruction System for CDM Project

#### Environmental performance

Applications of the system are extensive, which include Freon recovery/ destruction method for highly efficient destructions of fluoride-containing waste liquid, exhaust gas by-products such as CFC and HCFC, and various fluorocarbons such as HFC, PFC, SF6, and NF6, and the Clean Development Mechanism (CDM) recommended by the United Nations.

#### Product performance

This system can decompose fluorocarbons (CFCs, HCFCs and HFCs), PFCs and SF6. Fluorocarbons are one of the causes of ozone layer depletion and global warming. This system has been developed based on our Sub-Com system and acid resistant materials selection know-how, and possesses a decomposition efficiency of 99.99% for HFCs, PFCs and SF6.

This system is accredited by the United Nations for use in CDM (Clean Development Mechanism) projects according to the Kyoto protocol for reducing greenhouse gas emissions.

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Available in: Worldwide





# EP-8-004

# **Machines and equipment**

solvent recovery system

# Solvent Recovery System

#### Environmental performance

Highly concentrated solvent or solvent that can be concentrated facilitates solvent recovery. Our system can separate and refine solvent components absorbed on activated carbon and desorbed by steam, then returning to the manufacturing process, high quality recovered solvents that are not inferior to commercial products.

#### Product performance

Solvent absorption equipment using granular activated carbon.

Absorbed solvent is desorbed in the tank under lower pressure, which saves energy and maintains solvent quality.

A steam recovery system with enhanced heat recovery system can be provided as well.

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URL http://www.tske.co.jp/english/technology/voc\_yozai.html





## **EP-8-005**

# **Machines and equipment**

**HCL** recovery system

# **HCL** recovery system

#### Environmental performance

Halogen acid handling which is recovered from the waste material treatment or is refined requires specific technical know-how.

Our extractive distillation method was developed to process exhaust gas containing hydrochloric gas by recovering and concentrating hydrochloric acid of any concentration (from low to 100%) for individual requirement.

Because of chemical plants has to avoid corrosion for continuous operation. In case of halogen organics treatment, incineration system can be applied for changing chemical formation of hydrohalogen and it can be recovered by the absorption system in accordance with our results.

#### Product performance

The system can be combined with the combustion of VCM, EDC, or waste plastic. Waste heat boiler can be used for steam recovery or electric power generation. Recovers and purifies hydrochloric acid of any concentration (including hydrochloric gas).

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Available in: Worldwide





# **EP-8-006**

# Machines and equipment

**VOC** stripper

# **VOC Stripper**

#### Environmental performance

VOCs in water are removed by conventional aeration by releasing them into the air to prevent water contamination.

BMB stripper, the gas flows closer to the plug flow, which maintains the vertical concentration difference. The liquid flows down in the tower as it contacts with gas and concentration of organic compounds decreases gradually to less than the permissible level, then discharged from the base of the tower. As steam flows upward, concentration of organic compounds increases, allowing for their recovery and reuse.

#### Product performance

Concentration of organic compounds can be processed until it is less than the environmental standard No release of toxic substances into the air Efficient recovery of components Economic with extremely low consumption of utilities Highly reliable automatic continuous operation Quick and easy start-up and stop Virtually maintenance-free

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URL http://www.tske.co.jp/english/technology/voc storipper.html





# 8

#### EP-8-007

# **Machines and equipment**

catalytic wet air oxidation system

# Catalytic Wet Air Oxidation System (WAO)

#### Environmental performance

High-efficiency liquid-phase oxidation reaction process is used effectively for treating wastewater with intermediate/low concentration of COD components. The system requires no application for the Waste Management and Public Cleansing Law as no fuel is used to treat wastewater under increased temperature and pressure. Combined with the catalytic technology from Nippon Shokubai Co., Ltd., the system achieves further space and energy savings.

#### Product performance

Combustion is not applied, requiring no fuel, and exhaust gas does not include NOx, SOx, and dioxins.

No secondary waste such as excess sludge as in biotreatment is generated. The system is applied to wastewater that is difficult to handle through biotreatment.

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URL http://www.tske.co.jp/english/technology/haieki shokubai.html

Available in: Worldwide





# **EP-8-008**

# **Machines and equipment**

kiln gasification system

# **Kiln Gasification System**

#### Environmental performance

The system is composed of a kiln, stoker and secondary combustion chamber, where gasification is conducted in the kiln, complete combustion of solids in the stoker, and complete combustion of gas in the secondary combustion chamber.

#### Product performance

The special sealing configuration if the kiln reduces air leakage from the sliding section to very low levels, maintaining furnace temperature below that for clinker generation even with large changes in the heating value of waste material, and allowing energy-saving operation.

A prong equipped at the forward end of the kiln stirs waste materials, improving agitation.

A nozzle installed in the secondary combustion chamber allows waste liquid treatment.

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URL http://www.tske.co.jp/english/technology/kokei kirun.html





#### **Machines and equipment**

melting kiln

#### **Melting Kiln**

#### Environmental performance

The capacity decrease of remaining final disposal sites in recent years has increased considerations for application of the melting process. TSKE proposes a Melting Kiln System that includes the melting process itself, unlike a system that combines an incinerator and an ash melting furnace.

#### Product performance

- 1) Significantly improves combustion with a new method for supplying combustion air (patented).
  - Design of the operation mode is provided including combustion process. Installation record of one of the world's largest facilities.
- 2) When used as a melting facility: 200 ton/day for each line
- 3) When used as a combustion facility: 600 ton/day for each line

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Available in: Worldwide





#### **EP-8-010**

#### Machines and equipment

generators

# Babcock & Wilcox Volund Wood Biomass Gas-fired Power Generation System

#### Environmental performance

Combining gasification furnace and gas engine, this system efficiently generates power from carbon-neutral biomass. It has realized a comprehensive energy utilizing efficiency rate as high as 80% or more by not only generating power but also utilizing heat.



# JFE Engineering Corporation

2-6-2, Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan Tel +81-3-3516-7300 Fax +81-3-3516-7345 URL http://www.jfe-eng.co.jp/



Ammonia manufacturing plants and beer brewaries emit high levels of carbon dioxide. Our "Liquefied CO2 Manufacturing System" is capable of capturing and recycling these emissions. It can reduce running costs by 19% such as power consumption and so forth (our in-house comparison). Unique idea of reusing a part of Liquefied CO2 is applied to reduce chiller load for this purpose.

\* The figure was obtained at a certain plant delivered in 2004.

#### Product performance

Our product produces extremely high levels of liquefied CO2 with over 99.99% purity. The recycled CO<sub>2</sub> can be used to manufacture carbonated beverages and dry ice.

#### Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG, 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan Tel +81-3-5928-8100 Fax +81-3-5928-8701

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URL www.hitachi-pt.com

URL http://www.hitachi-pt.com/products/ip/engineering/co2.html

URL http://www.hitachi-pt.co.jp/corporate/csr/report/index.html

Available in: Japan







System configuration

#### EP-8-012

#### Machines and equipment

bio green grass

#### **Eco-friendly Biodegradable Hydraulic "Bio Green Grass"**

#### **Environmental performance**

This environmentally-friendly oil is degraded by microorganisms and will not cause environmental damage if spilled onto grass, soil or into a river following a construction accident. We have developed the technology for the world's first hydraulic oil that doesn't kill grass. This satisfies the criteria for eco-label certification as biodegradable, and is certified as an Eco-label Product by the Japan Environment Association.

#### Product performance

Bio green glass has more than 90% biodegradability, the oil contains special surface-active agent, so it doesn't damage grasses. Viscosity index more than 200, so it can be used with wide temperature range. It is nice filtration performance, rubber compatibility, and can be easily mixed with mineral oil. So it has good performance as hydraulic oil. In addition, ultra pressure performance is high level, so it is able to be used as grass cutter's transmission oil.

### **KUBOTA Corporation**

1-2-47, Shikitsu-higashi, Naniwa-ku, Osaka-shi, Osaka, 556-8601, Japan Tel +81-6-6648-2111

URL http://www.kubota.co.jp/index.html





Bio Green Grass

In the operation of a conveyor belt, energy consumption grows by the roll over resistance generated when the belt passes over the rollers.

Energy-saving belt "BEATRON" can decrease the roll over resistance by uniting the optimization design of the rubber viscoelasticity and the HELLO theory (the theory of optimized belt design). As a result, about 30% and more energy-saving has been verified when applied to an actual long distance conveyor line.



#### **Bridgestone Corporation**

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan Tel +81-3-5202-6851 Fax +81-3-5202-6854 URL http://www.bridgestone.co.jp/english/index.html



Energy-saving belt "BEATRON"

#### EP-8-014

#### **Machines and equipment**

recycling systems

## **Waste Plastics Liquefaction System**

#### Environmental performance

- Mitigation of climate change: The product oil can be used as an alternative fuel for boilers and power generation, and therefore its substitute share corresponds to a  $\mathrm{CO}_2$  reduction. In addition, a higher  $\mathrm{CO}_2$  reduction effect is obtained, if feeding stock recycling in which the product oil is returned to the crude oil purification flow is carried out.
- Efficient use of resources: The user can make use of the oil, the effluent gas, the residue, the hydrochloric acid, etc. which are obtained in the recovery process, so it is possible to raise the recycling rate.

#### Product performance

This product is a system which converts the plastic mixture in general waste or industrial waste to oil by thermal decomposition. The product oil can be utilized for various applications (diesel generator fuel, boiler fuel, chemical raw materials, etc.) after the oil has been fractionated into heavy oil, medium oil and light oil. The system consists of the pre-treatment process (pelletizing of the charged material), the dehydrochlorination process (desalting, thermal decomposition), and the product oil recovery process (fractional distillation).

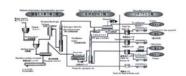
### TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-4305

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Available in: Japan

Waste Plastic Liquefaction System

recycling systems

#### Carbon Fuel Recovery System Using Pyrolysis and Gasification

#### Environmental performance

- Mitigation of climate change: The produced gas is used for fuel and power generation, and as chemical raw material. As for generation, a higher efficiency than engine power generation is possible even in a small scale facility.

- Efficient use of resources: Since various organic matter (ASR, waste plastic, biomass, etc.) can be used as the charge, and the product is gas and carbide; therefore, the total recycling ratio is high.

The product is a system to heat organic substances and wastes by heat-source equipment, to separate combustible gas and carbide of high utility value, and to use them as fuel and power generation material. The system consists of the main facilities for pre-treatment, pyrolysis in a gasification furnace, gas-reforming and gas cleaning, and the equipment of heat-source or gas-engine generation. The charged material is decomposed to a combustible gas containing CO<sub>2</sub> and H<sub>2</sub>O through pyrolysis and gas-reforming under high temperature. Namely, a gas usable as fuel is recovered. And, it is possible to take out carbide (char) of high utility value from the charge.

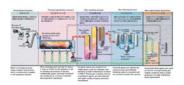
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URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Available in: Japan

Recovery system of carbon fuels by pyrolysis and gasification

#### EP-8-016

#### Machines and equipment

digital subscriber line terminal devices

#### GE-PON system uses optical fiber to realize high-speed broadband communications

-<< M : Material · Resource saving >>--

Significant reduction in use of virgin material through product size reduction and elimination of metal as a material.

Reductions from our previous model are following.

Iron components: 0.046kg to 0kg

Aluminum: 0.306kg to 0kg Plastic: 0.5kg to 0.133kg

-<< E : Energy · Energy saving >>---

Reduced electricity consumption 65% compared to previous product by eliminating use of a high-electricity-consumption part (FPGA)

<< T : Toxicity · Chemical substances reduction >>----Complies with RoHS Directive adopting lead-free solder.

The GE-PON system uses optical circuits to realize high-speed broadband communications. The GE-PON-ONU is installed in households and attached to an optical fiber cable as a terminal device.

#### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

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E-mail eqd.eco@pj.MitsubishiElectric.co.jp

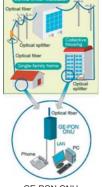
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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, Republic of South Africa, Thailand





**GE-PON ONU** 

#### **Machines and equipment**

turbine systems

Power Generation System Using Ultra-high-temperature Steam Achieves Dramatic Energy Saving

#### Environmental performance

- Mitigation of climate change: Dramatic energy saving owing to a 20% improvement in thermal efficiency.
- Efficient use of resources: The turbine system is fueled by coal, an abundant resource, which it uses very efficiently to generate power.
- Management of chemicals: Reduced emissions of CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> and soot.

# Material Design Resource Stage Transport Use/repair

#### Product performance

- High efficiency: High-temperature steam improves thermal efficiency, dramatically reducing fuel consumption. Use of high-temperature-resistant materials enables the use of high-temperature steam.
- Miniaturization: Compact system thanks to reduced fuel consumption.

#### **TOSHIBA CORPORATION Power Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-3613 Fax +81-3-5444-9238

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Advanced ultra-super-critical steam turbine (A-USC)

#### **EP-8-018**

#### Machines and equipment

hydro-power generation systems

Small-scale Hydro-power Generation System Hydro - eKIDS™ Using Renewable Energy

#### Environmental performance

- Mitigation of climate change: In comparison with fossil-fuel power generation, the consumption of resources and the discharge of CO<sub>2</sub> are suppressed. Because of small-scale hydraulic power generation, the system can be applied to places where hydraulic energy is available. Considered is the utilization of water and sewage, agriculture water, factory waste water, and water discharged from river dams, resulting in the reduction of greenhouse gases and the saving of energy. The system can be used as a dispersed power source, and it can contribute to the reduction of greenhouse gas and the saving of energy.
- Efficient use of resources: The system does not need a conventional large-scale dam, so the river environment and the natural ecosystem are not influenced.

#### **Product performance**

Brief specifications are as follows: the flow rate,  $0.03\text{m}^3/\text{s} \sim 3.5\text{m}^3/\text{s}$ ; the head,  $2 \sim 15\text{m}$ ; the output,  $1 \sim 200\text{kw}$ . Five kinds of standard units cover wide application ranges. Because of a small, lightweight pipe-in structure, the units are easily placed even in a small space. The features are a cheaper running cost and longer life than other large-scale power sources, so the economical efficiency will be displayed for long-term use.

#### **TOSHIBA PLANT SYSTEMS & SERVICES CORPORATION**

36-5, Tsurumichuo 4-chome, Tsurumi-Ku, Yokohama, 230-8691, Japan Tel +81-45-500-7342 Fax +81-45-500-7599

URL http://www.toshiba-tpsc.co.jp/english/company/act.htm URL http://www.toshiba.co.jp/env/en/report/index.htm





Hydro-eKIDS S type

#### Machines and equipment

elevators

#### **Machine-Roomless Elevator**

#### Environmental performance

By using LED (optional spec.), the life span of lamp becomes about 4 times longer than the fluorescent light, and power consumption and CO<sub>2</sub> emission can be reduced by about 30%.

Power consumption can be reduced by up to 20% by applying a system (optional spec.) that stores regenerated electric power made during the operation of elevator for a battery.

#### Product performance

The overhead size is shortened to 2850mm (R type and speed 45, 60m/ min) by removing machine room space in top part and downsizing its equipment in the elevator shaft. This improvement gives its building design more flexible.

#### Hitachi, Ltd. Urban Planning and Development Systems Company

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URL http://www.hitachi.co.jp/products/urban/em/elevator/index.html

Available in: Japan





#### EP-8-020

#### Machines and equipment

elevators

#### Elevator Without Machine Room for Safety and Energy Saving

#### Environmental performance

- Mitigation of climate change: Life span 8 times longer than that of the previous model and a 10% reduction in lighting power consumption.
- Management of chemicals: Elevator floor is made of resin that does not generate harmful gases when incinerated. Abolition of the use of lead for wire rope terminals.

#### Product performance

- Earthquake countermeasures: Prevention of locking in and the provision of information for enhanced safety and security.
- "Attentive" door: "Attentive" door system to ensure safety during entering and exiting the elevator.
- Safe and easy: Advanced universal design for ease of use.

#### TOSHIBA ELEVATOR AND BUILDING SYSTEMS CORPORATION

5-27, Kitashinagawa 6-chome, Shinagawa-ku, Tokyo, 141-0001, Japan Tel +81-3-5423-3330 Fax +81-3-5423-3425

URL http://www.toshiba.co.jp/index.htm

URL http://www2.toshiba-elevator.co.jp/elv/infoeng/index.jsp

Available in: Japan



ElevatorNEW SPACEL-EX

- --<< M : Material · Resource saving >>-
- Reduced the weight of car equipment. (Car floor: Approx. 20kg; Car balustrade: Approx. 5kg; Counterweight: Approx. 25kg)
- Employed corn-based plastic for part of the car control panel.
- -<< E ː Energy·Energy saving >>
- Switched to inverter technology for lighting, and reduced electricity consumption by up to
- Use regenerative electric power to reduce electricity consumption by about 20%. (When equipped with the optional "Ele-save" package)
- -<< T : Toxicity · Chemical substances reduction >>
- RoHS-compliant parts and materials are used.
- Reduced usage of toluene, xylene, and other atmospheric and the soil contaminants.
- In compliance with sick-house laws and regulations
- Reduced formaldehyde concentrations to levels below the standard of 100ug/m<sup>3</sup>.

To provide greater construction and design freedom, we reduced the amount of space necessary for elevator shafts.

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





AXIEZ Series P9-CO-60,6stop

#### EP-8-022

#### Machines and equipment

escalators

#### **Inverter Control Escalator**

#### Environmental performance

This escalator is equipped with eco mode control system that the speed will slow down from 30m/min to 25m/min during off-peak time.

It enables to reduce the energy consumption by about 13% (compared with MX series, 2004). (The energy saving result is based on the data measured in a large shopping center.)

#### Product performance

Inverter control escalator will stop slowly to prevent falling and stumbling of users when it stops urgently. Also it has high tread at both ends of each step and skirt guard projection to avoid shoes get caught in the escalator.



#### Hitachi, Ltd. Urban Planning and Development Systems Company

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E-mail tomonori.yamashita.gc@hitachi.com

URL http://www.hitachi.co.jp/products/urban/index.html

URL http://www.hitachi.co.jp/products/urban/em/escalator walkway/index.



#### 8

#### **Machines and equipment**

escalators

#### **Eco Consucious Designed Escalator**

#### Environmental performance

EP-8-023

----< M : Material · Resource saving >>----

- The ZJ-S design is characterized by its relatively small number of parts and light weight. Installing for floor heights of 6.5-7.0 m results in the use of less material.
- Scale down of the truss chords and other parts has resulted in overall weight reduction.
- Recyclable thermoplastic polyurethane handrails and rollers were installed as standard parts.

----< E : Energy Energy saving >>-----

The adoption of an automatic operation function helps make the escalator more energy efficient. A line of VVVF inverter-based products that stop or slow down when not in use has been prepared. And variable speed functionality results in expanded application for automatic operation functions.

- ----< T: Toxicity · Chemical substances reduction >>----
- Reduced usage of toluene, xylene, and other atmospheric and soil contaminants.

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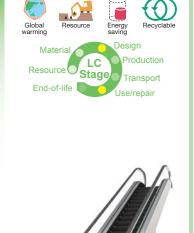
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URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, Worldwide



Escalator ZJ-S

#### **EP-8-024**

#### Machines and equipment

chiller

#### R410A Water-Cooled Screw Chiller "RCUA-WHYZ"

#### Environmental performance

Hitachi has succeeded to introduce R410A refrigerant in all its range of products, ranging from room air-conditioners, package air-conditioners to currently released SCREW CHILLER. Using R410A refrigerant, the cooling capacity per unit volume were increased. It makes the system compact and achieves less impact on the environment.

#### Product performance

Innovative technologies are applied for the design and development of the compressor, refrigerant cycle, and chiller itself to realize this R410A screw chiller. R410A refrigerant and optimized design of equipment for R410A achieved COP value dramatically improved to become more than 5.1 for all models.

#### Hitachi Appliances, Inc.

Hitachi Atago Bldg., 15-12, Nishi Shimbashi 2-chome, Minato-ku, Tokyo, 105-8410, Japan

Tel +81-3-3502-2111

URL http://www.hitachi-ap.co.jp/





Available in: Asia (Except for 60Hz Market such as Korea, Philippines and Taiwan)

LC Stage

High quality

Material

End-of-life

Global

Production

Transport

. Use/repair

#### **Eco Cooling Mat**

#### **Environmental performance**

Eco Cooling Mat is a cooling support system for many kinds of outdoor units. (refrigerator/remote-condenser/chiller/EHP/GHP)

Tap water is sprinkled over the cooling mat, and then intake air gets cooled when it goes through the mat.

What the Eco Cooilng Mat brings (at EHP 10HP)

·Energy saving:

High side pressure reduction and freezing/air cooling-ability increased by through the mat gives a 25% cut.

·CO<sub>2</sub>:

 $2.\bar{2}$  tons/year of  $\text{CO}_2$  emissions can be cut. (the electricity conversion value) Reducing "Heat-Island Effect":

The discharged air is 3-4°C cooler through the cooling mat.

#### Product performance

The mat also works as a filter for the protection of fins against dust, exhaust gas, etc.

#### **FUJIKOKI CORPORATION**

7-17-24, Todoroki, Setagaya-ku, Tokyo, 158-0082, Japan Tel +81-3-3702-5141 URL http://www.fujikoki.co.jp



Available in: Japan

#### **EP-8-026**

#### Machines and equipment

chiller

Highly-efficient, Energy-saving, Space-saving Chiller with Greatly Increased Cooling Capacity for Quick Installation

#### Environmental performance

- Mitigation of climate change: 15% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 40% reduction in weight resulting in a reduced amount of materials used. 98.4% of the materials are recyclable.

#### Product performance

- Large capacity: 60% or 45% improvement in cooling capacity compared with the standard specifications and the high-efficiency specifications, respectively.
- Modular design: 50% reduction in carbon footprint thanks to a spacesaving modular structure.
- Built-in circulation pump: Quick installation and reduced transfer power due to variable flow rate control according to the load.

### **Toshiba Carrier Corporation**

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan Tel +81-3-6409-1735 Fax +81-3-5447-8388

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm





Air-cooled Super Flex ModularChiller, RUA-TBP S series

#### **Machines and equipment**

chiller

#### **Energy-saving Condensing Unit Suitable for Various Refrigeration Systems**

#### Environmental performance

**EP-8-027** 

- Mitigation of climate change: 40% improvement in COP compared with the conventional non-inverter model.
- Efficient use of resources: 11% reduction in the weight of raw materials: 15% reduction in steel sheet and 8% reduction in copper tubing.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel sheet plating.

#### Product performance

- Optimum operation: Combination of a rotary compressor and inverter achieves all-around high efficiency operation from the low-rotation to high-rotation range.
- Low noise: Noise value is reduced by 4dB from the previous model and operation is extremely quiet. Standard features include four control modes to suit different systems.

#### **Toshiba Carrier Corporation**

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm





Out-door Inverter Condensing UnitTAM130AM-SVTAM200AM-SVTAM350AM-SV

#### **EP-8-028**

#### Machines and equipment

chiller

#### Highly-efficient, Compact Chiller with Greatly Increased Cooling Capacity

#### Environmental performance

- Mitigation of climate change: 31% reduction in primary energy consumption compared with the benchmark model thanks to improved efficiency.
- Efficient use of resources: 46% reduction in weight resulting in a reduced amount of materials used. 99.9wt% of the materials are recyclable.
- Management of chemicals: The exterior is largely uncoated, resulting in a reduced use of volatile organic compounds (VOC).

#### Product performance

- Large capacity: 58% improvement in cooling capacity compared with the previous model of the same size in the series.
- Ease of installation: Modular structure with each module sufficiently compact for transportation in an 11-passenger-class elevator.
- Ease of use: Batch control available using a touch-panel computer.

#### **Toshiba Carrier Corporation**

3-23-17, Takanawa, Minato-ku, Tokyo, 108-0074, Japan Tel +81-3-6409-1735 Fax +81-3-5447-8388 URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm





Water-cooled Super Flex ModularChiller, Type-VRUW-TBP S series

#### High-efficiency absorption chiller with two-stage absorption and evaporation

#### Environmental performance

RFW series efficiency reaches steam consumption ratio 3.5 kg/h USRT\*, by improving approximately 20% from the current running series. Besides, RFW series flow rate of chilled/cooling water is decreased with large temperature head, which contributes to savings of pumping energy.

\*USRT : Ability of refrigeration ; 2000LBS of 0 degree C water

#### Product performance

Steam-driven double effect absorption chiller RFW series is awarded "PRESIDENT OF THE JAPAN MACHINERY FEDERATION AWARD" in "IMPLEMENTATION OF ENERGY CONSERVING MACHINERY AWARDS" as high efficient absorption chiller with dual evaporation/absorption cycle. RFW series has steam consumption ratio 3.5 Kg/h USRT, highest efficient ratio in the world, covering in the range of 1,864 kW (530 USRT) to 10,549kW (3000 USRT).

#### **EBARA CORPORATION**

11-1 Haneda Asahi-cho, Ohta-ku, Tokyo, 144-8510, Japan Tel +81-3-3743-6111 Fax +81-3-5736-3100

E-mail webmaster@ebara.com URL www.ebara.co.jp





Ebara Steam Absorption Chiller RFW model

# Available in: Japan, Worldwide

#### EP-8-030

#### Machines and equipment

chiller

#### "Compact Cube" Chiller of High partial load performance and small installation space

#### Environmental performance

----< M : Material · Resource saving >>----

The weight of a unit is 1,640kg, which is 24% lighter than our previous model (CAH-J1800A) of 2.150kg.

----< E : Energy · Energy saving >>----

Improving efficiencies of compressor, heat pump, and fan, and highly-developing control of cooling cycle makes it more energy-saving.

COP in cooling condition is 4.3 (66% improvement from our previous model of 2.59), and that in warming condition is 3.85 (17% improvement from 3.29).

----<< T : Toxicity Čhemical substances reduction >>----R410 refrigerant is used (it does not deplete ozone layer)

Substances prohibited by EU RoHS directive are not used.

#### Product performance

Air-cooled heat pump type chiller is a heat reserver for air conditionig of buildings. Compared to those using gas fuel, this type can produce cool or hot water with fewer  $CO_2$  emissions.

#### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html





"Compact Cube" MCHV-P1800AE

#### **Machines and equipment**

valves

#### **Bellows Valves**

EP-8-031

#### Environmental performance

These valve products are available in a wide range of materials, including ductile cast iron, stainless steel, cast steel and forged steel, and are suitable for a broad array of applications. Hitachi Valves' bellows valves prevent leaks of various types of fluids, including steam, general gas, stench gas and corrosive gas, thereby saving energy, protecting people from hazardous substances and contributing to a better environment.





# Hitachi Valve, Ltd. 200 Obuke, Asahicho, Mie-qun, Mie. 510-8102, Japan

200 Obuke, Asanicno, Mie-gun, Mie, 510-8102, Japan Tel +81-59-377-4711 Fax +81-59-377-2714

URL http://www.hitachi-valve.co.jp/english/

URL http://www.hitachi-valve.co.jp/english/product/pr02.htm



Malleble Bellows Valve

Available in: Worldwide

#### **EP-8-032**

#### Machines and equipment

demisters

#### MIST ELIMINATOR, DEMISTER, TOWER PACKING MESH PAD TYPE, CHEVRON TYPE

#### Environmental performance

We provide "Mist Elimination equipment" for gas-liquid separation, liquid-liquid separation as well as vapor flow conditioning devices, for a broad base of petrochemicals, power generation, plup & paper, refining and sulfuric acid.

we offer a complete line of products including "Wire Mesh", "Chevron", "Coalescers", "Fiberbed and Gas distribution devices for applications such as Absorption Tower, Scrubber, Knockout drums, Evaporators, Pollution control and general mist elimination.

Products are available in a wide range of metals (stainless steel), plastics (P.P. P.E), alloy (Monel), etc.



#### DAE SHIN INDUSTRIAL CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX (45BLOCK 6LOT), 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA

Tel +82-32-814-0211 Fax +82-32-814-0213

E-mail dsdemister@naver.com URL www.dsdemister.com



CHEVRON TYPE (BAFFLED MIST ELIMINATOR)

#### **Machines and equipment**

Air/Water/Soil

demisters

#### **DEMISTER (MESH PAD TYPE)**

#### Environmental performance

- High collection efficiencies of up to 99% at the velocity of a moving fluid of 1 to 8 m/sec
- 2. Provides free area of up to 98% for operation and low pressure drop (0.1"  $\sim$  1.0" W/G)
- 3. A variety of materials in accordance with temperature and corrosion resistance
- 4. Easy to install by using M/H
- 5. Usable without any restriction and Interchangeable with existing facilities
- 6. Designed for self-cleaning (semi-permanent and economical)

#### Construction

Consists of a mat with overlapping knitted metal or plastic wire meshes, which are assembled in accordance with the densities for each style and disposed alternately.

The completion offers a complicated structure for inertial impaction, so it provides free area of 98% for operation and low pressure drop.

#### DAE SHIN INDUSTRIAL CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX  $\,$  (45BLOCK 6LOT  $)\,$  , 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA Tel +82-32-814-0211 Fax +82-32-814-0213

E-mail dsdemister@naver.com

URL www.dsdemister





DSM-193 (MESH DEMISTER SUS 316L)

#### EP-8-034

#### Machines and equipment

demisters

#### **CHEVRON MIST ELIMINATOR**

#### Environmental performance

- Used in separating and removing a great deal of dust or liquid mist in a gas stream without getting clogged, commonly in separation of relatively coarse droplets
- Provides low resistance drop and low pressure drop at high velocity. Horizontal Type: 5-7 M/S Vertical Type: 4-6 M/S
- Easy and economical to install in spite of the facilities for dispose of gas with a large capacity.
- Free choice of appropriate materials for heat-resistance and corrosionresistance according to Gas condition.

#### Application

1. Removal of noxious material in a gas (air pollution control) 2. Removal of impurities in a gas (Improvement of products purity) 3. Protection of changing materials into arsenic acid (saving costs) 4. Installment before and after plant construction (longer durability & saving energy) and separations and collection of mist

# DAE SHIN INDUSTRIAL CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX  $\,$  (45 BLOCK 6 LOT ) , 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA Tel +82-32-814-0211 Fax +82-32-814-0213

E-mail dsdemister@naver.com URL www.dsdemister.com





Eco-product // Machines and equipment

#### EP-8-035

#### Machines and equipment

demisters

#### P.P MESH DEMISTER

#### Environmental performance

- 1. High collection efficiencies of up to 99% at the velocity of a moving fluid of 1 to 8 m/sec
- 2. Provides free area of up to 98% for operation and low pressure drop (0.1"  $\sim$  1.0" W/G)
- A variety of materials in accordance with temperature and corrosion resistance
- 4. Easy to install by using M/H
- 5. Usable without any restriction and interchangeable with existing facilities
- 6. Designed for self-cleaning (semi-permanent and economical)



#### DAE SHIN INDUSTRIAL CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX (45BLOCK 6LOT), 435-6 NON-HYUN DONG, NAM-DONG GU, IN CHEON, 405-848, KOREA Tel +82-32-814-0211 Fax +82-32-814-0213

E-mail dsdemister@naver.com URL www.dsdemister.com



#### **EP-8-036**

#### **Machines and equipment**

demister filters

#### **DEMISTER FILTER**

#### Environmental performance

Structure: Assembled wire mesh or expanded metal to both sides of the products by using dimester into it.

#### Feature

- 1) High collection efficiency due to weak resistance
- 2) Items in a variety of materials
- 3) Easy to install and repair due to light weight
- 4) Semi-permanent and economical

#### Useful for

- 1) equipment for air conditioning
- 2) Air cleaner

#### Measurement

 In general 500x500x50T in size, but able to manufacture a filter with a special specification.

#### DAE SHIN INDUSTRIAL CO.,LTD

A-1, NAM DONG INDUSTRIAL COMPLEX  $\,$  (45BLOCK 6LOT  $)\,$  , 435-6 NON-HYUN DONG, NAM-DONG GU, INCHEON, 405-848, KOREA Tel +82-32-814-0211 Fax +82-32-814-0213

E-mail dsdemister@naver.com URL www.dsdemister.com





Less air consumption -20% down. New technology offers even further energy saving.

#### Product performance

The JAT710 is designed with the same concept as the JAT610: "weaving the highest quality fabric at the lowest possible cost," and boasts improved features such as higher speed, lower vibration and lower energy consumption. Plus it is equipped with the latest electronics technology such as a new Internet-capable color function panel, taking today's weaving mill into a new dimension.



#### **Toyota Industries Corporation**

2-1 Toyoda-cho, Kariya-shi, Aichi, 448-8671, Japan Tel +81-566-22-2511 Fax +81-566-27-5650

URL http://www.toyota-industries.com/

URL http://www.toyota-industries.com/product/textile/textile/textile. html#textileJ710

URL http://www.toyota-industries.com/csr/library/



JAT710

#### **EP-8-038**

#### Machines and equipment

crushers

#### Airflow Fine Powder Production System -- Dream Mill

The winner of the Chairman's 5th Prize for Promoting the Machine Industry in 2007 FY. Ultra fine powders are produced by the mutual friction grinding of materials in a rotating friction

- (1) Finely powdered old products, some of which have been scrapped, allowing waste to be greatly reduced.

  (2) Thanks to less generation of heat, no large-scale refrigerators to prevent heat denaturation
- are required.
- Since the grinder has a simple structure, it takes a short time to clean the machine.
- Lower noise compared with conventional grinder systems allows soundproof equipment to be simpler.

assembly and disassembly are simple

- Sticky and oily foods can be finely milled.
  Heat of materials is little changed during the milling process.
  Thanks to the mutual friction grinding of materials, smooth and round grains are produced. The largeness of the grains can be rigidly divided thanks to the machine's particle separation
- (5) Since stainless grinding parts and materials to deal with foods are used for parts of the mill,

#### FURUKAWA INDUSTRIAL MACHINERY SYSTEMS Co., Ltd.

2-3,MARUNOUCHI 2-CHOME,CHIYODA-KU,TOKYO, Japan





#### **Machines and equipment**

biomass boiler systems

#### **Biomass Boiler System**

#### Environmental performance

This system uses a circulating fluidized bed boiler to efficiently generate power and supply heat from carbon-neutral biomass. The biomass boiler system has been adopted and used mainly by wood biomass power plants and paper-manufacturing companies and contributes to the reduction of  $CO_2$  emissions.



#### **JFE Engineering Corporation**

2-6-2,Otemachi, Chiyoda-ku, Tokyo, 100-0004, Japan Tel +81-3-3516-7300 Fax +81-3-3516-7345 URL http://www.jfe-eng.co.jp/



#### **EP-8-040**

#### **Machines and equipment**

dust collectors

#### **New High-Efficiency Electrostatic Precipitator**

#### Environmental performance

- (1) The efficiency of the electrostatic precipitator is greatly improved compared with conventional precipitators, resulting in the more compact size of the device and achieving resource conservation as well as space and electricity saving.
- (2) Global warming prevention is achieved by reducing the precipitator's carbon foot print.

#### Product performance

- (1) The body of the machine has been downsized by greatly improving the efficiency of the precipitator.
- (2) An epoch-making mechanism has been built by combining originallydeveloped new electrodes and the principles of a bag filter.

#### FURUKAWA INDUSTRIAL MACHINERY SYSTEMS Co., Ltd.

2-3,MARUNOUCHI 2-CHOME,CHIYODA-KU,TOKYO, Japan





#### **Machines and equipment**

exhaust gas abatement system

#### Exhaust gas abatement system

#### Environmental performance

The PFC gases, very hard to be decomposed, can be decomposed more than 90% by heat source of electric power as clean energy.

The CO<sub>2</sub> emission of the electric power is 0.

The fuel piping is unnecessary.

The processed gas volume is 1/5 to 1/10 of the combustion system, and then the energy saving of exhausted gas is realized in this system.

There is no waste because the system doesn't use the dry adsorption agents.

The system has the heat exchange and the heat reservoir mechanisms.

#### Product performance

This is the abatement system of toxic and global warming PFC gases. The detoxified gases are exhausted safely.

This Trinity abatement system, the inlet scrubber, the reactor, and the outlet scrubber, is our patent.

#### Kanken Techno co., ltd.

Ota30-2,kotari,Nagaokakyo,Kyoto, 617-0833, Japan Tel +81-75-955-8826 Fax +81-75-955-8915 URL http://www.kanken-techno.co.jp Global Substances

Material Degradable Purification

Material Design

Production

Transport

Use/repair



KT1000MFS

Available in: Japan, Singapore, Malaysia, Republic of Korea, Taiwan (Rep. of China), China

#### EP-8-042

#### Machines and equipment

ozone generators

#### Produce High Concentration Ozone Efficiently, Greatly Contributes to Reducing Life-cycle Cost

#### Environmental performance

----< M : Material · Resource saving >>----

40% of weight is reduced by downsizing compared to that of our previous model.

----< E : Energy · Energy saving >>----

15% lower energy consumption compared to that of our previous model.

----<< T : Toxicity · Environmental clean-up products >>----

Different from sterilization and oxidation by chlorine, that by ozone does not pollute the environment because it turns into oxygen after treatment.

#### Product performance

High concentration ozone gas can be generated efficiently. It realizes maximum ozone concentration of  $225 g/m^3$  while our previous model was  $150 g/m^3$ .

#### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465 E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, North America, China





#### **Machines and equipment**

wire electric discharge machines

#### Next Generation WEDM: Realizing High-precision Machining and Reduced Running Costs

#### Environmental performance

EP-8-043

----< M : Material · Resource saving >>----

Larger size can be handled than the previous model without increasing the amount of cost.

Reduces the number of component parts.

Electrical instruction manual reduces paper consumption.

----< E : Energy · Energy saving >>--

Machining time is shortened 30% from previous model by newly developed power unit.

Newly added "Wake-up mode" saves standby power requirement, saves almost 69% of total energy.

----< T: Toxicity · Chemical substances reduction >>----

The use of lead is drastically restricted.

#### Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan

Tel +81-3-3218-9024 Fax +81-3-3218-2465

E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





NA series

#### EP-8-044

#### Machines and equipment

power tools

#### Cordless Driver Drill with Brushless Motor

#### Environmental performance

- · Hitachi's high efficient brushless motor "DS14DBL" works approximately 1.5 times more than our conventional brushed DC motor "DS14DSL" (started to sell in 2006) per battery charge, which will help to save
- · Less environmental load lithium-ion batteries (cadmium-less).

#### Product performance

- · Eight levels of rotations become available by mechanical high speed or low speed switching, and electric four levels of rotations. It will save wide range of works - from delicate to the one which requires a strong torque.
- · The strongest bolting torque (54 N-m) in the same class is realized. (according to our investigation in July, 2009: 14.4V class cordless driver drill)

#### Hitachi Koki Co., Ltd

15-1, Konan 2-chome, Minato-ku, Tokyo, 108-6020, Japan Tel +81-29-276-7423 Fax +81-29-276-7424

E-mail kankyo@hitachi-koki.co.jp

URL http://www.hitachi-koki.com/

URL http://www.hitachi-koki.com/powertools/products/li ion/ds14dbl/ds14dbl.html

URL http://www.hitachi-koki.com/powertools/env/envdata/index.html

Available in: Japan, Oceania, Europe



#### **Machines and equipment**

industrial machinery and equipment

#### PSA type nitrogen gas generator BELLSWING®

#### Environmental performance

<Summary> Air Water Inc. has developed the energy saving type PSA (BellswingTM). New NSP series inherits the design philosophy of our popular SP series, which retains the smallest set up space while increasing the energy saving performance.

<Characteristics> A newly developed; high-performance MSC has been adopted. Power consumption by up to 33% reduction available that means the electricity cost reduction and low  $\rm CO_2$  emission. Maintenance cycle has been extended to 1.5 times. Operation can be made by using the compressor for general purpose. Customers having over 0.7MPaG air sources need no compressor.

<Effect> When introducing KN4-60NSP, annual electricity costs will be sliced by about ¥1,350,000, and suppress CO<sub>2</sub> emissions 50ton per year.

#### Product performance

New PSA (KN4-20NSP, KN4-40NSP, KN4-60NSP) attained to generate  $N_2$  of 99.99%, 0.5MPa and 20 to 60Nm³/H by using general compressor of 11 to 30KW.

#### AIR WATER INC.

20-16, Higashi Shinsaibashi 1-chome, Chuo-ku Osaka, 542-0083, Japan

Tel +81-6-6252-1803 Fax +81-6-6252-1750

E-mail yamashita-mas@awi.co.jp URL http://www.awi.co.jp/english/

URL http://www.awi.co.jp/bp/e/pg/03.html

URL http://www.awi.co.jp/english/environment/index.html

Available in: Japan, Asia







PSA type nitrogen gas generator BELLSWING® NSP series

#### EP-8-046

#### Machines and equipment

compressor

#### "AIR ZEUS", HITACHI Oil-Free Screw Compressor

#### Environmental performance

- New type air block improving efficiency and energy consumption can reduce CO<sub>2</sub> emissions by approximately 31 tons annually\*.
- It is quipped with our unique power saving control systems. End pressure control
  with active power control (APC) can reduce CO<sub>2</sub> emissions by approximately 91
  tons annually and precision pressure control with with power saving control (PSC)
  can reduce CO<sub>2</sub> emissions by approximately 24 tons annually when average load
  factor is 70% respectively.
- \* Our in-house comparison
- \* Reduction amount of CO<sub>2</sub> emissions (CO<sub>2</sub> emission coefficient:0.555kg-CO<sub>2</sub>/kWh) is based on the comparison of previous model number SDS-IE and current SDS-U280 (motor output:280kW).

#### Product performance

Air block fluid analysis applying our advanced computational fluid dynamic technology simulates to assist in optimising shapes of air flow path, inlet, and rotor and as a result improves efficiency and energy consumption.

#### Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466. Japan

Tel +81-3-5928-8100 Fax +81-3-5928-8701 E-mail koho-senden@hitachi-pt.com

URL www.hitachi-pt.com

URL http://www.hitachi-pt.co.jp/corporate/csr/report/index.html

Available in: Japan, Europe, U.S.A, Singapore, Thailand, Malaysia, Republic of Korea, Taiwan (Rep. of China), China





View of "AIR ZEUS"

Eco-product // Machines and equipmen

8

# <u>′</u>

#### EP-8-047

#### **Machines and equipment**

gas meters

#### Gasoline Dispenser (BB26NA-QQJ)

#### Environmental performance

 $\label{eq:lightening} \mbox{ (Weight: Old model 390kg} \rightarrow \mbox{New model 370kg)}$ 

Energy Saving (Power Consumption: Old model 100W → New Model 85W)

#### Product performance

Gasoline dispenser for self-service gas stations.



#### Tokico Technology, Ltd.

3-9-27 Tsurumi Chuo, Tsurumi-ku, Yokohama City, Kanagawa Prefecture, 230-0051, Japan



Available in: Japan

#### EP-8-048

#### Machines and equipment

centrifuge

#### **Tabletop Micro Ultracentrifuge**

#### Environmental performance

Requires 20% less space on the desk and 8% lighter. (comparing to the smallest product of the tabletop ultracentrifuges in the world,  $737(W) \times 584(D) \times 409(H)$  105kg (started to sell in 2007) --> 590 (W) x 582(D) x 408 (H) 97kg)

- Makes the quietest noise in the world as a small sized ultracentrifuge, 45dBA. (as of Nov. 2009.)
- · Has thermo-module cooling system (HFC free)
- · Has regenerative brake system

#### Product performance

The CS150NX Tabletop Micro Ultracentrifuge generates the centrifugal force that is hundreds of thousands times stronger gravity by the high velocity revolution, and is used to separate micro-particles like DNA.

- The largest RCF: 1,050,000  $\times$  g, (Versus other similar ultracentrifuge, as of Nov. 2009.) \*RCF; Relative Centrifugal Force.
- Max. speed: 150,000 min<sup>-1</sup>
- · Max. capacity : 180mL

#### Hitachi Koki Co., Ltd

15-1, Konan 2-chome, Minato-ku, Tokyo, 108-6020, Japan Tel +81-29-276-7423 Fax +81-29-276-7424

E-mail kankyo@hitachi-koki.co.jp

URL http://www.hitachi-koki.com/

URL http://www.hitachi-koki.com/himac/products/cs150nx.htm

URL http://www.hitachi-koki.com/powertools/env/envdata/index.html

Available in: Worldwide





Tabletop Micro Ultracentrifuge "CS150NX"

#### **EcooPower modular power system**

#### Environmental performance

EcooPower is a truly integrated modular power system complete with a high performance battery and controller that can be recharged by a wide range of electrical sources including photovoltaic. Designed with high safety and ruggedness to withstand harsh conditions and with a long operating life.

#### Product performance

This is the power source of many wireless applications including lighting, telecommunications, security, marine, transport, recreational, and emergency relief.



#### Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com



EcooPower Modular Power System

Available in: Worldwide

#### EP-8-050

#### Machines and equipment

LC

Stage

End-of-life

turbine generators

High quality

Design

Production

Transport

#### A Small, Light and High-efficiency Turbine Generator for Thermal Power Plant

#### Environmental performance

- Mitigation of climate change: The amount of CO<sub>2</sub> exhaust was reduced; it was about 240 tons at the step of manufacturing, (23% cut at our company's ratio before 15 years). It was about 1,700 tons per year at the step of use, (18% cut).
- Efficient use of resources: Realization of a 2/3 size in comparison with the conventional generator. Development of new materials and methods. Reduction of waste and environmental load by the reuse of parts / materials at the time of repair.

#### Product performance

- High-efficiency: 20% reduction in loss compared to the conventional generator, leads to high-efficiency.
- High-reliability: High-reliability thanks to advanced analysis and verification experiments.
- Reduced manufacturing period: 30% reduction in the manufacturing period by adoption of an easy-to-manufacture structure.

#### **TOSHIBA CORPORATION Power Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-3613 Fax +81-3-5444-9238 URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Turbine generator

Eco-product // Machines and equipment

#### Machines and equipment

cogeneration

#### Cogeneration system with micro-gas engine: GENELIGHT

#### **Environmental performance**

**EP-8-051** 

GENELIGHT is an energy-saving gas cogeneration system which generates electricity with a gas engine and heats water utilizing generated exhaust heat. This system is ideal for small and mid-sized hotels, hospitals and restaurants because of its energy-saving features and capacity to supply a large amount of hot water.

CO<sub>2</sub> emission reduction: 30% or more\*

 $^{\star}$  Compared with the amount of CO $_2$  emitted under conditions where the same amount of electricity is drawn from the grid and the same amount of heat is produced by the boiler.

#### Product performance

Generation efficiency of 35 kW: 34% (the highest in the capacity class)\*

\* Achieved by employing the newly-developed Miller cycle gas engine, inverter and generator, as well as reducing pump loss.

When the power source is suspended, some models can supply electricity according to predetermined loads.

#### Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL http://www.osakagas.co.jp/indexe.html

URL http://www.osakagas.co.jp/csr\_e/index.html





**GENELIGHT 35kW** 

Available in: Japan

#### EP-8-052

#### **Machines and equipment**

Long-life

End-of-life

LC Stage

traction motors

High quality

Production

Transport

Traction Motor for Railway Rolling Stock which achieved Saving Energy, Reduction of CO<sub>2</sub> and Low-noise by using Permanent Magnet and Totally Enclosed Structure

#### Environmental performance

- Mitigation of climate change: More than 20% reduction in power consumption through the pursuit of high efficiency.
- Efficient use of resources: Reduced need of maintenance because of little internal contamination thanks to the totally enclosed structure.

#### Product performance

- Reduced loss: Around 5% improvement in efficiency compared with the conventional motor thanks to reduced internal loss.
- High reliability: Enhanced reliability of the motor thanks to the totally enclosed design.
- Reduction operating cost: Reduced running cost thanks to high efficiency.
- Low noise: Noise-reduction of about 6dBA achieved by adopting the totally enclosed structure.

#### TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

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URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

Permanent magnet synchronous motor

Available in: Japan, Worldwide

EcoWill is an energy-efficient household-use cogeneration system fueled by environmentally-friendly natural gas. It generates electricity and supplies hot water by utilizing waste heat from the gas engine. It boasts an outstanding energy-saving effect with a generation efficiency of 22.5% and exhaust heat efficiency of 63%. The total energy efficiency reaches 85.5% (LHV basis).

By utilizing waste heat associated with generation for hot water supply and space heating, it reduces the primary energy consumption by 21% and  $CO_2$  emissions by 32%. The system offers higher level of comfort while contributing to environmental conservation.

#### Product performance

The most energy-efficient generation is realized by a learning function which records and analyzes the status of generation and hot water utilization at home. The hot water is also utilized for the floor heating and bath room heater/dryer.

#### Osaka Gas Co., Ltd.

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URL http://www.osakagas.co.jp/csr\_e/index.html



ECOWILL

Available in: Japan

#### EP-8-054

#### Machines and equipment

polymer electrolyte fuel cells

LC Stage

End-of-life

High quality

Production

Transport

### Polymer Electrolyte Fuel Cell (PEFC) Cogeneration System for residential use

#### Environmental performance

Osaka Gas is currently developing the PEFC Cogeneration System jointly with ENEOS Celltech Corp., and Toshiba Fuel Cell Power Systems Corp., respectively. It generates electricity through the electro-chemical reaction of oxygen in the air and hydrogen extracted from natural gas.

It is a highly energy-saving system which has realized total energy efficiency of more than 80%(\*1) by utilizing the exhaust heat from generation for heating water. It reduces  $CO_2$  emissions by approximately 1.3 ton per annum (\*2).

\*1: LHV

\*2: When introduced at a residence of 4 people, replacing the conventional system with floor heating

#### Product performance

Power generation capacity: 700 - 250W

Power generation efficiency (700W): 31.5% (HHV), 35% (LHV)

Total energy efficiency (700W): more than  $72\%\,(\text{HHV})$  , more than  $80\%\,(\text{LHV})$ 

#### Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan Tel +81-6-6205-4605 Fax +81-6-6202-1040

URL http://www.osakagas.co.jp/indexe.html URL http://www.osakagas.co.jp/csr\_e/index.html

Available in: Japan



ENEFARM - ENEOS Celltech, Toshiba

SOFC consists of a generation unit and an exhaust heat utilization unit. Osaka Gas works on the development of these units jointly with Kyocera Corp. / Toyota Motor Corp. / Aisin Seiki Co., Ltd. and Chofu Seisakusho Co., Ltd., respectively. The compact size of each unit\* makes the system suited for residential use.

Osaka Gas strives toward the commercialization of this system by making use of the experiences and results of the field test conducted by NEDO and The New Energy Foundation.

The generating efficiency of this system is higher than that of the average thermal power plant: maximum energy saving of 36% and maximum CO<sub>2</sub> emission reduction of 50%.

#### Product performance

Power generation efficiency (700W): 40.6% (HHV), 45% (LHV) Total energy efficiency (700W): more than 77% (HHV), more than 85% (LHV)

#### Osaka Gas Co., Ltd.

4-1-2, Hirano-machi, Chuo-ku, Osaka-shi, Osaka, 541-0046, Japan

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URL http://www.osakagas.co.jp/csr\_e/index.html





Solid oxide fuel cell

Available in: Japan

#### EP-8-056

#### Machines and equipment

wind turbines

#### Downwind turbine designed to take advantage of up-flow wind in mountainous areas

#### Environmental performance

The life cycle CO<sub>2</sub> emission rate is about 29 g/kWh at the stage of manufacturing and construction (CRIEPI, 2000). It becomes almost zero at the stage of operation. The amount of 127 kt CO<sub>2</sub> is produced per the average annual electric output, 4.38GWh.

#### Product performance

Hitachi wind turbine is a 2MW pitch regulated downwind type with active yaw. When selecting wind turbine installation sites, mountainous areas are often overlooked and considered unattractive for wind development. However, its complex terrains provide a distinct concentration of high speed, up-flow wind. Our downwind turbine is specifically designed to take advantage of up-flow wind. Due to differences of blades' location and tilt angles, downwind turbine design has smaller misalignment towards up-flow wind compared to upwind turbine design. This advantage enables power generation up to 7.6% more than upwind (FHI, Wind Engineering Vol.30).

#### Hitachi, Ltd.

6-6, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8280, Japan Tel +81-3-3258-1111

URL http://www.hitachi.com/

URL http://www.hitachi.com/environment/showcase/solution/energy/wind\_ velocity.html





2MW Downwind Turbine Generator System

#### **Machines and equipment**

solar lighting systems

#### **SunChaser Solar Tracking Power Generation System**

#### Environmental performance

Due to the renewable energy which adopted by PV system, it contributes  ${\rm CO}_2$  reduction.

Output: 1.48kw

By tracking system, real output is 20% higher than normal PV system.



#### Green Tec Co.,Ltd

539 Yamabushiyama-cho, Nishikikoji-agaru, Muromachi-dori, Nakagyo-ku, Kyoto, Japan Tel +81-75-548-7077 Fax +81-75-213-3442

E-mail info@greentec-group.co.jp

URL http://www.greentec-group.co.jp/english

URL http://www.greentec-group.co.jp/images/english/business/ground\_mount/sunchaser\_01\_eng.pdf

Available in: Japan



SunChaser Solar Tracking Power Generation System

#### **EP-8-058**

#### Machines and equipment

solar lighting systems

### Solar Home System (MPPT Charge Controller + Inverter)

#### Environmental performance

The system brings solar power closer to the daily lives of the users. It allows the conversion of sunlight to power household items. The product will be most instrumental in increasing awareness of the numerous possibilities and uses of solar technology.

#### Product performance

The solar home system is an all-in-one solution for converting sunlight to energy that can be easily used for household appliances. It includes a MPPT charge controller, DC-DC converter, DC-AC converter, 2USB outputs, 1 car lighter output, and 2 AC outputs. The user can connect up to 2 solar panels and 2 batteries to the system to power various items. It carries CE and FCC certifications.



### JEMEC Japan Limited

Ueda Bldg. Rm. 701, Yamashita-cho 25-1, Naka-ku, Yokohama, 231-0023,

Japan

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Available in: Worldwide



JEMEC Solar Home System

#### **Machines and equipment**

residential fuel cells

#### **Environmentally-friendly System Generating Electricity and Heat Using City Gas or LP Gas**

#### Environmental performance

- Mitigation of climate change: 40% reduction in CO<sub>2</sub> emissions per year (equivalent to about 1 ton) for a typical household.
- Efficiency use of resources: Weight reduction of Fuel cell package to about 104kg. Easy to handling.

#### Product performance

- Increased efficiency in terms of both power and heat: Overall efficiency, combining electric efficiency and heat recovery efficiency of more than 86%
- Low noise: Quiet operation: 40dB or less. Silence is simular in a library.
- Maintenance saving: Maintenance two years interval; Reduced to visit customer
- Clean: Emissions consist of only water and CO2.

#### Toshiba Fuel Cell Power Systems Corp.

2-4, Suehiro-Cho, Tsurumi-Ku, Yokohama, 230-0045, Japan Tel +81-45-510-5920 Fax +81-45-500-2564

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



#### **EP-8-060**

#### **Machines and equipment**

distribution transformers

#### **Energy-saving, compact new series of transformers**

#### Environmental performance

Mitigation of climate change: Energy consumption reduced by about 40% compared with the previous model. CO<sub>2</sub> emissions reduced by 4.0 tons at a 40% load factor.

#### Product performance

- Reduced loss: About 40% reduction in loss compared with the previous model by the adoption of high-performance iron-core material and the use of highly conductive copper for the coil conductor.
- Saving space: Reduced footprint thanks to high-density coil technology.



#### **TOSHIBA CORPORATION Social Infrastructure Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

Tel +81-3-3457-4320 Fax +81-3-5444-9278

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



Available in: Japan

Super high efficiency Eco type Cast Resin transformer RCT-N22E

#### **Machines and equipment**

three-phase capacitance switchers

#### Automatic three-phase capacitance switching equipment

#### Environmental performance

----< E : Energy · Energy saving >>-----

This equipment is installed on electric power receiving and distributing equipment in factories, and controls association or shut off electric power capacitors in order to obtain the ideal power factor by picking up reactive power for efficient and energy saving operation.

#### Product performance

Automatic capacity grasping function enables easier installation. Larger LCD display improves visibility.

# Global Energy Warming Saving High quality Material Design Production Transport End-of-life Use/repair



VAR-12A

#### **Mitsubishi Electric Corporation**

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URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, Asia

#### EP-8-062

#### Machines and equipment

protective relays

#### Highly-reliable, Low Power-consumption Protection Relay with Five Times Faster Processing

#### Environmental performance

- Mitigation of climate change: 60% reduction in power consumption thanks to a reduced number of printed circuit boards and low-power consumption design.
- Efficient use of resources: 30% reduction in the number of printed circuit boards thanks to the adoption of high performance MPU and highcapacity FPGA.

#### Product performance

- Enhanced Reliability: Enhanced reliability thanks to a reduced number of printed circuit boards and suppressed temperature increase.
- Improved maintenability: Improved maintenability thanks to enriched guidance functions and simple structure.

#### TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Protection Relay D4 Series

#### **Machines and equipment**

gas-insulated switchgears

#### Resource Saving & Energy Saving through the Pursuit of Compactness and Space Saving

#### Environmental performance

- Mitigation of climate change: 25% reduction in the consumption of SF6 gas compared with the benchmark model thanks to downsizing. Down sizing and less weight led to a reduced consumption of raw materials and a 20% reduction in CO<sub>2</sub> emissions.

#### Product performance

- Space saving: Downsizing slashes the space required for installation.
- Enhanced operability and maintainability: The operation panel and inspection unit are almost entirely positioned on the front of the switchgear for enhanced operability and maintainability.
- Reduced manufacturing period: As the construction of the foundation for the housing involves less work, projects can be executed faster.

#### TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

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URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm



145kV gas-insulated switchgear (GIS) G3A-b

#### EP-8-064

#### Machines and equipment

switchgear

Completely new type SF6 gas-free switchgear using high-performance epoxy resin for insulation of main circuit

#### Environmental performance

- Mitigation of climate change: 62% reduction in CO<sub>2</sub> emissions as a result of SF6 gas-free.
- Efficient use of resources: Reduction 50% in mass, 40% in volume, and 50% in the number of parts.

#### Product performance

- Ease of disposal: Combination of vacuum and epoxy mold instead of SF6
- Size and mass reduction: Compactness makes it sutitable for transpotation.
- Labor-saving maintenance: Great reduction in the number of parts due to a newly developed operating mechanism with a simplified structure, making inspection simple.

#### TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Solid insulated switchgear

--<< Greenhouse gas free · Global warming prevention >>-

The adoption of a composite insulation of solid materials and low pressure, dry air (at 0.15 MPa-g with moisture removed) realizes a 72 kV C-GIS free from SF6 gas.

----<< M : Material · Resource saving >>-

The number of components was greatly reduced (to 70% from our previous type) applying a simple structure vacuum circuit breaker (VCB) with an electric magnetic operating mechanism.

----< E : Energy · Energy saving >>-----

The VCB operating energy is reduced to 70%. The power dissipation (heat loss) was reduced to 60% by optimizing device arrangement and minimizing conductor lengths that reduces the resistance of the main circuit.

#### Product performance

Mitsubishi Electric developed a series of 7.2 to 72 kV switchgear for power distribution featuring a composite insulation of solid materials and low-pressure dry air, and has been placing them on the market since 2000.

#### Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan, Asia, Central America





HG-VA switchgear

#### **EP-8-066**

#### Machines and equipment

switchboards

Resource/Materials/Production/

#### High-density Packaging-type Low-voltage Motor Control Center SM3000

#### Environmental performance

With the conventional product, the maximum mounting number of control units was 7 pieces per panel. In SM3000, this has been increased to 40 pieces per panel, owing to the miniaturization of the control unit by the use of electronics parts and the power feeding method.

The Eco-Leaf environmental label of SM3000 is acquired.



181.3kg-CO<sub>2</sub>

Inspection

# Fuji Electric Systems Co.,Ltd

1, Fuji-machi, Hino-city, Tokyo, 191-8502, Japan Tel +81-42-585-6410 Fax +81-42-587-0084

E-mail masuda-masahiko@fesys.co.jp

URL http://www.fesys.co.jp/sougou/seihin/ecodesign/index.html

Available in: Japan



Eco-product // Machines and equipment

#### 2

#### Machines and equipment

switchboards

#### Compact-type high-voltage switchgear and controlgear, "SLIMEC-V6"

#### Environmental performance

EP-8-067

This product is a high-voltage switchgear and controlgear which has reduced the conventional board depth of 2,000 mm to 700 mm by downsizing the instrument and improving the electricity feed method. The warming load has been reduced by 28%; the power consumption has been reduced by 10%. The reduction of total weight is more than 40%.

The Eco-Leaf environmental label of SLIMEC-V6 is acquired.



#### Fuji Electric Systems Co.,Ltd

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EP-8-068

Available in: Japan

#### Machines and equipment

switchboards

# Eco-type thin high-voltage switchgear and control gears

#### Environmental performance

This product is a high-voltage switchgear and controlgear used for water and sewage facilities. Owing to the downsizing of the instrument, a depth of 600mm was achieved in comparison with the 2000mm of the conventional product. As a result, the installation space has been reduced by 30%, and a reduction of electric room building costs has become possible. In addition, the dismantling time has become 1/6 of that before by the adoption of a rivet fastener structure. Environmentally-friendly materials such as ecotype electric wires are used.

The Eco-Leaf environmental label of Eco-type thin high-voltage switch gear and control gears acquired.

SLIMEC-V6 has been registered for Eco-Leaf Environmental Label, where the life cycle  $CO_2$  emission was estimated to be 336kg per year.

# Material Production Resource Stage Production Resource Stage Production Resource Stage Production Resource Stage Production Resource Materials/Production/

Inspection

Transfer/Use/End-of-Life

### Fuji Electric Systems Co.,Ltd

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URL http://www.fesys.co.jp/sougou/seihin/ecodesign/index.html



Next-generation remote terminal unit applicable in an IP network environment equipped with fault detection and waveform recording

#### Environmental performance

- Management of chemicals: Use of lead-free printed circuit boards (partial use). Elimination of the use of hexavalent chromium and other hazardous substances.
- Efficient use of resources: Change of the casing material from Sheet Moulding Compound to recyclable polycarbonate.

#### Product performance

- High performance and functionality: Equipped with distribution line fault detection, sampled-date recording, and quantitative measuring functions.
- Simple maintenance: Enhanced maintainability thanks to IT.







Remote Terminal Unit for Distribution Automation Systems TOSDAC-D24E

#### **TOSHIBA CORPORATION Transmission Distribution & Industrial Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

#### EP-8-070

#### Machines and equipment

electronic hybrid functional control panels

#### **Integration Brings Water Treatment Plants Simplicity and High Performance**

#### Environmental performance

In power instrumentation and control at water purification plants or sewage-treatment plants, each function is installed in each control panel. Electronic Hybrid Functionnal Control Panel gathers all these circuits into fewer panels which enables reduction of space, hard-wiring and interconnection, and reduced energy consumption in electrical installation.

----< M : Material · Resource saving >>----

Previous 3 control panels are able to be incorporated in 2 hybrid panels.

----< E : Energy Energy saving >>----

Almost 40% in energy saving is realized (compared to our previous model)



### Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan



MACTUS 30LCB

Eco-product // Machines and equipment

#### **Machines and equipment**

modular power management

#### Modular power management

#### Environmental performance

Phocos is one of the largest suppliers of off-grid power supply system components in the world. Headquartered in Ulm, Germany, Phocos develops, designs, and manufactures products to suit the needs of all stakeholders in the global solar power market.

Phocos is strongly committed in developing and producing products that meet the company's strict specifications in terms of quality, innovation, and technology.

#### Product performance

The award-winning Modular Power Management design sets new standards for versatility by enabling the installers to design their system as they see fit. The use of multi-functional components ensures that there are virtually no system design demands that cannot be met. This innovative concept empowers the installer to truly explore the "Art of Charge."

#### Phocos SEA Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0598 Fax +65-6579-0599

E-mail info-sea@phocos.com URL www.phocos.com





Phocos Modular Power Management

# Available in: Worldwide

## EP-8-072

#### **Machines and equipment**

uninterruptible power supplies

#### **HIVERTER-UP201i "UNIPARA"**

#### Environmental performance

High efficiency of this product reduces electric power consumption. ((400kVA) Efficiency: HIVERTER-U200(2002) 92%→UNIPARA 95%, Electric power consumption reduction: 162MWh for a year, CO₂reduction: 62t for a year)

Compact size and light weight reduce the requirement for the building structural strength and installation space.

((400kVA) Weight: HIVERTER-U200 3,700kg→UNIPARA 1,950kg, Footprint: HIVERTER-U200 2.53m²→UNIPARA 1.62m²)

Long life parts avoid frequent replacement of cooling fans and electrolytic capacitors. (Period of replacement: HIVERTER-U200 8year→UNIPARA 15year)

#### Product performance

UPS protests important equipment such as facilities of data centers against instantaneous power failure.

If the scale of equipment requires eight UPSs can be connected in parallel at maximum. With the Unit-Parallel concept, UPS system capacity becomes scalable according to the demand of facility.

#### Hitachi, Ltd.

5-2-1 Omika-cho, Hitachi-shi, Ibaraki, 319-1293, Japan

URL http://www.hitachi.co.jp

URL http://www.hitachi.co.jp/Div/ise/upshp/ (Japanese Only)





HIVERTER UP-201i "UNIPARA" 540kVA

This system is composed of free cooling system enabling long term usage in a year which produces cold water in a cooling tower using cool outdoor air and the technology optimizing heat source system operations depending on outdoor air temperatures and heat load. Furthermore it is capable of reducing energy consumption by 50% (our in-house comparison) when combined with inverters, the highly efficient control equipment.

\* The figure is based on the comparison of a certain air conditioning delivered in 2001 and its renovation into this system .

#### Product performance

It can reduce the circulation power of fans and pumps by controlling chilled water flux and temperatures depending on outdoor air temperatures, heat load conditions and equipment characteristics, in order to optimize heat source system operations. It also can be flexibly installed into existing air conditioning systems.

#### Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan

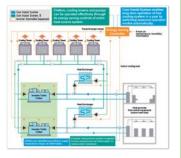
Tel +81-3-5928-8100 Fax +81-3-5928-8701 E-mail koho-senden@hitachi-pt.com

URL www.hitachi-pt.com

URL http://www.hitachi-pt.co.jp/corporate/csr/report/index.html

Available in: Japan





System configuration

#### **EP-8-074**

#### Machines and equipment

power transformers

#### A More Advanced Energy-Saving Premium Inverter "FRQROL-F700P Series"

#### Environmental performance

----< M : Material · Resource saving >>-

The principal consumables - the condenser and cooling fan - are designed to last for 10 years.

----< E : Energy · Energy saving >>-----

- Energy savings through RPM control (flow control) instead of on/off flow control.

- Optimal excitation control instead of regular V/F control.

- IPM motor can be regulated.

----< T : Toxicity · Chemical substances reduction >>----Compliant with European RoHS Directive.

#### Product performance

The FREQROL-F700P is an upgrade to the FREQROL-F700, which was awarded the fiscal 2006 Electrical Manufacturers Technology Prize by the Japan Electrical Manufacturers' Association. It can control both a general-purpose motor (three-phase induction motor) and an interior permanent magnet (IPM) motor, which enables it to meet enhanced energy-saving needs.

#### Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/index.html





Inverter FREQROL-F700P Series

#### Machines and equipment

LC

Stage

Global

Material

End-of-life

compact green laser modules

High quality

Production

Transport

. Use/repair

#### COMPACT GREEN LASER MODULE "BEAM MATE <RoHS Compliant>

#### Environmental performance

Small green laser modules are now attracting more attention from industries as a light source for laser line markers and projectors. To meet increasing market demand, Shimadzu has developed the green laser module "BEAM MATE™" for built-in applications. It is compact in size and has low power consumption. "BEAM MATE<sup>TM</sup>" is a compact green laser module that is competitively priced. Because it works with high accuracy over a wide operating temperature range, from -10°C to +50°C, it can be used outdoors.

- (1) High-quality beam characteristics thanks to our specially-designed microchip laser module technologies
- Wide operating temperature range from -10°C to +50°C
- (3) Compact body with built-in control PCB in the laser head
- (4) High efficiency and Low power consumption
- (5) Low operating voltage of 2.4 V to 3.3 V
- (6) Polarization extinction ratio is 50: 1 min.

#### SHIMADZU CORPORATION

1, Nishinokyo-Kuwabaracho, Nakagyo-ku, Kyoto, 604-8511, Japan Tel +81-75-823-1113 Fax +81-75-823-2062

URL http://www.shimadzu.com/index.html

URL http://www.shimadzu.com/products/index.html

URL http://www.shimadzu.com/about/environmental/index.html

Diameter: Φ20mm :49.5mm Length

Compact Green Laser Module [BEAM MATE™]

Available in: Worldwide

#### EP-8-076

#### Machines and equipment

vending machines

#### HFC-free Vending Machine with Heat Pump System: NS-9P36HP

#### Environmental performance

A waste heat recovery heat-pump system of the NS-9P36HP is realized by placing the two external heat exchangers, one for cooling and the other for heating cycle, together in one unit. Equipped with this technology, the model provides more than twice effective heating operation than the FY 2005 model (NS-5R30) and achieves the year 2012 energy regulation by the Japanese government.

#### Product performance

The model contains a wide range of drinks and its easy-to-find color promotes sales.

### Panasonic Corporation, Home Appliances Company

3-4-74 Noji-higashi, Kusatsu City, Shiga, 525-0058, Japan Tel +81-77-566-4805 Fax +81-77-566-4843 URL http://panasonic.net/csr/





#### **Machines and equipment**

vending machines

#### Heat Pump Vending Machine: FJ30M5RD9R-FOP

#### **Environmental performance**

The heat pump heating system is adopted to realize an economical heat balance. With the method, the heat absorbed when cooling products is sent to a heated room to warm products by radiating heat inside the room through a heat exchanger. The product's annual power consumption is reduced by approximately 40% compared with the conventional model, greatly reducing  $\mathrm{CO}_2$  emissions. In addition, the target level fixed by the Law Regarding the Rationalization of Energy Use (Top Runners Approach) for FY 2012 has been achieved.

Furthermore, the product acquired the Ecoleaf Environmental Label to make environmental information

visible.

#### Product performance

This machine allows a large quantity of various products, such as cans, plastic bottles and bottles, to be stored and sold. It is designed from a human engineering point of view to allow customers to select items and receive them smoothly.

#### Fuji Electric Retail Systems Co.,Ltd

No.15-12, Sotokanda6-chome Chiyoda-ku, Tokyo, 101-8625, Japan



Available in: Japan

#### **EP-8-078**

#### **Machines and equipment**

office air conditioners

#### Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System

#### Environmental performance

Using clathrate hydrate slurry instead of water, the Clathrate Hydrate Slurry (CHS) Heat Storage Air-conditioning System is a cooling system with excellent energy saving effects. This system substantially reduces power consumption and thereby contributes to global warming prevention. The Kawasaki shopping mall "Azalea" is one of our major clients who have adopted this system. As a form of energy conservation technology created in Japan, it was awarded the Prime Minister Prize in 2006 and the Nikkei Global Environment Technology Prize in 2007.



# 1

### **JFE Engineering Corporation**

2-6-2,Otemachi,Chiyoda-ku,Tokyo, 100-0004, Japan Tel +81-3-3516-7300 Fax +81-3-3516-7345 URL http://www.jfe-eng.co.jp/



#### \_\_\_\_\_

#### **Machines and equipment**

air conditioners

#### High performance, energy-saving air conditioner

#### Environmental performance

EP-8-079

Daikin's SUPER MULTI NX with DC inverter offers energy savings, quiet operation, and a wide range of models to provide you with maximum comfort while respecting homes and people. Furthermore, the wall-mounted type D series won the prestigious Good Design Award in Japan.



#### DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp URL http://www.daikin.com

URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr



SUPER MULTI NX

#### **EP-8-080**

#### Machines and equipment

air conditioners

#### High performance, energy-saving air conditioner

#### Environmental performance

Daikin's Super Multi Plus D and E series is now connectable to up to 8 indoor units and offers you a richer choice of indoor units to coordinate with individual room decors. Advanced technology from Daikin has improved COP and reduced sound levels to suit today's modern living environment.



# DAIKIN INDUSTRIES, LTD.

Umeda Center Bldg., 2-4-12, Nakazaki-Nishi, Kita-ku, Osaka-shi, Osaka, 530-8323, Japan Tel +81-6-6374-9304 Fax +81-6-6373-4380

E-mail kankyo@daikin.co.jp URL http://www.daikin.com

URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr



Super Multi Plus D

#### **Machines and equipment**

air conditioners

## High performance, energy-saving air conditioner

#### Environmental performance

Daikin's SkyAir Inverter series have launched a new line up achieving High COP.

The outdoor unit is equipped with Reluctance DC scroll compressor, Aero Spiral Fan, DC Fan Motors, and Super Aero Grille as the latest energy saving technologies.

The ceiling mounted cassette type (Round Flow) indoor unit which delivers 360-degree airflow brings out uniform temperature distribution and a comfortable living environment even if the setting temperature is raised by just 1 deg C in cooling.



## DAIKIN INDUSTRIES, LTD.

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E-mail kankyo@daikin.co.jp URL http://www.daikin.com

URL http://www.daikin.com/global ac/products

URL http://www.daikin.com/csr



Sky Air Inverter series

#### **EP-8-082**

#### Machines and equipment

air conditioners

Energy-saving Performance for Long Period of Time - A World Leading Model in Terms of Quality and Environmental Performance

#### Environmental performance

- Mitigation of climate change: 55% reduction in annual power consumption compared with the conventional model (a rated model of Toshiba). 1.1 tons/ year reduction in  $CO_2$  emissions compared with the conventional model.
- Management of chemicals: Adoption of lead-free soldering and chromium-free steel plating.

#### Product performance

- Self-cleaning function: Automatic cleaning to maintain energy-saving performance for a long time.
- Comfort control: New flaps for omnidirectional airflow contribute to comfort with minimal uneven temperature distribution.
- Simple installation: The monitor displays the status during trial operation for simple, quick installation.

# **Toshiba Carrier Corporation**

3-23-17 Takanawa, Minato-ku, Tokyo, 108-0074, Japan

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm



411

#### **EP-8-083** Machines and equipment

air conditioners

## TEL-CON®Eco-System contributes to energy saving & CO<sub>2</sub> reduction

TEL-CON® Eco System converts the conventional air-conditioning system to be energysaving, improving the cooling efficiency and reducing the electric power consumption.

TEL-CON® Eco System improves the condensation efficiency of the refrigerant gas, by installing TEL-CON®, additional condenser to the condenser of outdoor unit of the airconditioner.

1. Improvement in cooling efficiency: 5-10%

Without replacing the existing refrigerant (e.g. R22), the efficiency degraded by aging or malfunction can be recovered, improving cooling efficiency and reducing CO2 emission as

2. Reduction in electric power consumption: 15-25%

A reduction in electric power consumption is attained by replacing the R22 with mixed refrigerant mainly containing R134a. The air-conditioners demonstrate an energy-saving effect while in cooling mode in summer and heating mode in winter.

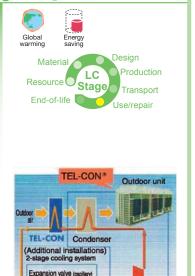
#### **TEIJIN ENGINEERING LIMITED**

1-6-7 Minami-Hommachi, Chuo-ku, Osaka, 541-8587, Japan

Tel +81-6-6268-2353 Fax +81-6-6268-2238

E-mail se.saeki@teijin.co.jp

URL http://www.teijin-eng.jp/telcon.html



TEL-CON®Eco System

Indoor unit (ev

#### EP-8-084

#### Machines and equipment

air conditioning systems

Compressor

#### (Optimized HVAC Control Systems for Energy Saving) OH Saver

#### Environmental performance

A 20% reduction in energy usage was achieved by using enhanced software, which improves the efficiency of the Primary Source System and the Secondary System. (in-house comparison)

\* The figure is based on the optimization test result conducted at our inhouse facility (2000RT turbo chiller)

#### Product performance

During the design stage, total system parameters are simulated to assist in obtaining the high energy saving, on any air-conditioning configuration.

## Hitachi Plant Technologies, Ltd.

RISE ARENA BLDG. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan Tel +81-3-5928-8100 Fax +81-3-5928-8701

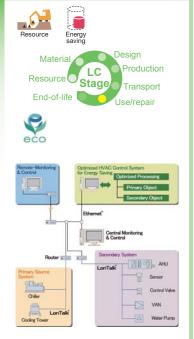
E-mail koho-senden@hitachi-pt.com

URL www.hitachi-pt.com

URL http://www.hitachi-pt.com/products/ac/building/ohsaver.html

URL http://www.hitachi-pt.co.jp/corporate/csr/report/index.html

Available in: Japan



System configuration

#### **Machines and equipment**

freezing/refrigerating/air conditioning systems

## Freezing/refrigerating/air-conditioning system

#### Environmental performance

This system achieves an energy reduction for convenience stores by integrating the freezer and refrigeration showcases with an air-conditioning system. It achieves a 50% reduction in annual energy consumption compared with existing systems by using exhausted heat from freezing, refrigerating, and air conditioning into one system provides resourcesavings.



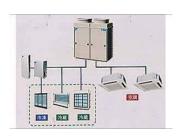
## DAIKIN INDUSTRIES, LTD.

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CONVENI-PACK

#### EP-8-086

## Machines and equipment

photovoltaic production

## Turnkey Production Line for a-Si and $\mu$ c-Si tandem junction thin-film solar cells

Silicon Thin-Film Solar Cells (TFSCs) is the one, which is in line with the trend of Resource Saving from a standpoint of the fact that consumption of Silicon and also energy required through production are much less than Crystalline Silicon solar cells.

Under such attention in the market, ULVAC had started business with Turnkey line for Single Junction type several years ago and then developed and released a Tandem Junction type TFSCs which realize higher conversion efficiency in a middle of 2009.

ULVAC's Turnkey line allows our customers to bring highly qualified solar panels to the market in short period of time without spending much time for process and product qualification, which are directly provided and supported by ULVAC.

ULVAC's standard modules in a tandem structure with amorphous and micro-crystal silicon generate the power output of 130Wp.
Current result from our demonstration/development lab shows an initial number of 150W

and also 135W after stabilization.

ULVAC is continuously pursuing for higher quality and productivity in order to keep providing high-end equipment and technology to the market.

\* In the area of solar cell production, Turnkey Business means that Equipment

manufacturer offers both major hardware and its process so that PV manufacturer can start production immediately after those are installed by Equipment manufacturer.

## **ULVAC.Inc.**

2500 Hagisono, Chigasaki, Kanagawa, 253-8543, Japan Tel +81-467-89-2033 Fax +81-467-82-9114

E-mail eco@ml.ulvac.com

URL http://www.ulvac.co.jp/eng/index.html

URL http://www.ulvac-solar.com/

URL http://www.ulvac.co.jp/eng/csr/eco/report/index.html

Available in: Worldwide





Turnkey Production Line for a-Si and  $\mu$  c-Si tandem junction thin-film solar cells

room dryers

## Bathroom Ventilation Dryer for Drying Clothing with Reduced Power Consumption

#### Environmental performance

- Mitigation of climate change: Includes an eco-drying mode that minimizes the time that electricity is supplied to the heater for drying clothes. This is controlled by changing the temperature of the air sent to the bathroom. The amount of electricity used has been reduced to 1/3 in comparison with that of the standard drying mode.

#### Product performance

Since the revised Building Standards Act, which considered sick-house syndrome, was executed in July 2003, the role of ventilation systems has varied from local ventilation to ventilation of the whole house. The carrier group in Toshiba developed the bathroom ventilation drier, "Bath Dry" which can ventilate not only bathrooms, but also other rooms.





DVB-18STD2

## **Toshiba Carrier Corporation**

3-23-17 Takanawa, Minato-ku, Tokyo, 108-0074, Japan Tel +81-3-6409-1735 Fax +81-3-5447-8388

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm

#### **EP-8-088**

## Machines and equipment

heat pump water heaters for business use

Energy-saving and cost-effective heat pump water heater with a large capacity suitable for a large facility.

#### Environmental performance

- Mitigation of climate change: While combustion-type water heaters are the mainstream, this highly efficient heat pump water heater halves CO2 emissions and the running cost is one third that of a conventional water heater.

#### Product performance

- Large-capacity water supply: Up to 40 tons of hot water consumption per day. Also capable of responding to the instantaneous demand for a large amount of hot water.
- Simple operation: Control unit with a LCD touch panel for integrated control of the entire system.
- Simple installation: Greatly reduced piping work. 25% reduction in installation space.

## **Toshiba Carrier Corporation**

Shinagawa Center Bulding, 23-17, Takanawa 3-chome, Minato-ku, Tokyo, 108-

Tel +81-3-6409-1735 Fax +81-3-5447-8388

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba-aircon.jp/aboutus/emvironment.htm





Heat Pump Water Heater for Commercial Use "Hot Power Eco Ultra-BIG"

#### **Machines and equipment**

medical equipment

## Symmetrical open multipurpose imaging system "EXAVISTA"

#### Environmental performance

The number of composition units is reduced from 7 to 5, and space-saving is realized. The total number of systems can be reduced by multiple-purpose use of this system as well as a multi-modality image display function; e.g. substitution of a urinary-organs inspection and simple PACS by this system. The packaging material is reduced for the efficient use of transport equipment. This equipment also maintains the installation capability at the same level as conventional ones while employing advanced artistic design. (compared to our multipurpose imaging system "medites CREA" [2003 model])

#### Product performance

It is possible to see through and take upper part of the top board and even lower side up to 15cm at the edge by the wide stroke 150cm, thus patients in wheel chairs can easily come to examine test of lower legs and urinary organs.

## **Hitachi Medical Corporation**

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan Tel +81-3-3526-8880 Fax +81-3-3526-8810 URL http://www.hitachi-medical.co.jp/





Appearance of EXAVISTA System

Available in: Japan, Asia

## EP-8-090

## **Machines and equipment**

medical equipment

## Whole-body X-ray CT system "ECLOS"

#### Environmental performance

- By increasing the number of the slices per scan in our X-ray CT system, the electric power consumption per slice has been reduced to 1/2-1/4 during scanning. (compared to our X-ray CT system "ROBUSTO" [2003 model])
- The weight of X-ray CT systemreduced about system 10%. (compared to our X-ray CT system "ROBUSTO" [2003 model])

#### Product performance

· Slice Number:4 slices/scan, 8 slices/scan or 16 slices/scan

# Global Waste High quality Energy saving Material Design Production Transport End-of-life Use/repair

# Hitachi Medical Corporation

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan Tel +81-3-3526-8880 Fax +81-3-3526-8810 URL http://www.hitachi-medical.co.jp/



#### Machines and equipment

medical equipment

#### **MR Imaging System APERTO Eterna**

#### Environmental performance

(1) Saves power. This system consumes less electric power than superconducting MRI equipment because it uses the magnetic field of permanent magnets.

Its power consumption power is 4KW, about 1/8 of other superconducting MRI equipment (compared to our ECELON Vega [2006 model]).

#### Product performance

- (1) A vertical field system from the technology we have built up since early development.
  - Widely open to the left and right, the characteristic of open MRI system, will give ease to claustrophobic patients.
- (2) Has various types of receiver coil which will fit respective part of human body, image measurement software, and image processing function.

## **Hitachi Medical Corporation**

Akihabara UDX, 4-14-1, Soto-kanda, Chivoda-ku, Tokvo, 101-0021, Japan Tel +81-3-3526-8880 Fax +81-3-3526-8810 URL http://www.hitachi-medical.co.jp/





Appearance of APERTO Eterna

#### EP-8-092

#### Machines and equipment

medical equipment

## Ultrasound Diagnostic Scanner HI VISION Preirus

#### Environmental performance

Our company announces "We defend human happiness and the earth environment" as our environmental policy for development, production, and sales of medical equipments. This ultrasound diagnostic scanner "HI VISION Preirus" has reduced the unit size adopting software baesd backend and ASIC, cut weight by 16% (Standard Configuration, Compared to our ultrasound diagnostic scanner "HI VISION 900" [2006 model]). and decreased the power consumption by 40% (Standard Configuration. Compared to our ultrasound diagnostic scanner "HI VISION 900" [2006 model]).

#### Product performance

HI VISION Preirus has the performance of a top class as ultrasound diagnostic equipment. It is efficient ultrasound diagnostic equipment accepted by the customer in a wide layer.

## **Hitachi Medical Corporation**

Akihabara UDX, 4-14-1, Soto-kanda, Chiyoda-ku, Tokyo, 101-0021, Japan Tel +81-3-3526-8880 Fax +81-3-3526-8810 URL http://www.hitachi-medical.co.jp/

Available in: Japan, Europe





HI VISION Preirus

#### Environmental performance

- Efficient use of resources: Test efficiency is enhanced through sample carry-over reduction technology. Use of blood collection tubes is halved for resource saving.
- Management of chemicals: Reduction in reagent consumption due to a reduction of the minimum reaction volume.

#### Product performance

- Enhanced test accuracy: The world's lowest impact on the carry-over of samples by a dispensing nozzle ensures data reliability.
- Improvement in operativity :Inheritance of the satisfactory operativity in higer rank model "C series".
- Reduced test time: Optimum operation is possible, such as the function that the priority subject according to urgency can be set up.

## Degradable Material Production LC Stage Transport End-of-life . Use/repair

## TOSHIBA MEDICAL SYSYTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan Tel +81-287-26-6280 Fax +81-287-26-6053

URL http://www.toshiba-medical.co.jp/tmd/english/index.html

URL http://www.toshiba-medical.co.jp/tmd/english/company/pdf/report09e.pdf



Available in: Japan

Biochemical Analyzer TBA-c4000

#### EP-8-094

## Machines and equipment

LC

Stage

Material

End-of-life

medical equipment

Production

Transport

## MRI System offering diagnostic efficiency and superior image quality

#### Environmental performance

- Mitigation of climate change: 44% reduction in energy consumption per scan thanks to the adoption of a dedicated coil etc.
- Efficient use of resources: A common platform enables the use of many standardized parts.
- Management of chemicals: Major reduction of non-recyclable items as a result of redesigned structure around the magnet.

#### Product performance

- High image quality: Improved sensitivity and resolution made possible by combining cutting edge technology and a dedicated coil.
- Simple diagnosis: A coil with a wide acquisition range for simple setting and diagnosis.
- Shorter examination time: Fast imaging made possible by combining a coil with a high-speed processing system.

## TOSHIBA MEDICAL SYSYTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan Tel +81-287-26-6280 Fax +81-287-26-6053

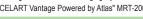
URL http://www.toshiba-medical.co.jp/tmd/english/index.html

URL http://www.toshiba-medical.co.jp/tmd/english/company/pdf/report09e.pdf

Magnetic Resonance Imaging System "EXCELART Vantage Powered by Atlas" MRT-2003

Available in: Worldwide

Eco-product // Machines and equipment



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#### **Machines and equipment**

medical equipment

X-ray CT system offering cutting-edge technology, superior image quality and low environmental impact

#### Environmental performance

 Mitigation of climate change: 75% reduction per examination in energy consumption thanks to the development of a new detector and increased processing speed. And Development of the first regeneration technology for electric power in a diagnostic CT system

#### Product performance

**EP-8-095** 

- Superior image quality: Development of 160mm-wide area detector enables scanning in a single rotation achieves high-definition images of the heart and cardiovascular organs.
- Patient friendly: More detailed examination in a shorter time greatly reduces the burden on the patient (less than 1/10 (average)).
- Reduction of exposure dose: Exposure reduced by about 75% with the adoption of denoising software.

#### TOSHIBA MEDICAL SYSYTEMS CORPORATION

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URL http://www.toshiba-medical.co.jp/tmd/english/index.html

URL http://www.toshiba-medical.co.jp/tmd/english/company/pdf/report09e.pdf





Area Detector CT AquilionONE TSX-301A

Available in: Worldwide

## EP-8-096

#### Machines and equipment

LC

Stage

medical equipment

Production

Ultrasound System offering superior diagnostic precision in a small, environmentally friendly unit

#### Environmental performance

- Efficient use of resources: An impressive 50% reduction in main body volume and extremely lightweight ( 35% reduction) .The consistent use of electronic documentation and option software licensing help save valuable resources
- Management of chemicals: 75% reduction in use PVC (polyvinyl chloride) provides environmentally friendly unit.

#### Product performance

- Excellent Image Quality: Simply stunning performance, improving both the contrast and the spatial resolution across all applications thanks to original Imaging technology.
- More portability and better patient access: Extremely lightweight, impressive reduction in main body volume, and adoption of operator comfortable hand grip enables easy to move.
- Superior diagnostic precision: Premium clinical performance and high-end features thanks to wide array of probes and Advanced imaging applications.

#### TOSHIBA MEDICAL SYSYTEMS CORPORATION

1385, Shimoishigami, Otawara-Shi, Tochigi, 324-8550, Japan Tel +81-287-26-6280 Fax +81-287-26-6053

URL http://www.toshiba-medical.co.jp/tmd/english/index.html

URL http://www.toshiba-medical.co.jp/tmd/english/company/pdf/report09e.pdf

Diagnostic I litrasound System Anlin MX

Material

End-of-life

Diagnostic Ultrasound System; Aplio MX; SSA-780A

Available in: Worldwide

#### **Environmental performance**

The longevity of parts such as HDD and the cooling fans is improved. Maintenance and the waste of the machine tool are reduced.

----< M : Material · Resource saving >>----

It is a saving resource design which is small and lighter. (Volume:13% reduction Mass: 29% reduction)

----< E : Energy · Energy saving >>-----

We have developed the high-efficiency and electric power saving graphic circuit, which reduces power consumption by approximately 66% compared to the previous model.

----< T: Toxicity · Chemical substances reduction >>----

Conforming to EU RoHS Directive, the occurrence of six regulated substances (Lead, Mercury, Cadmium, Hexavalent chromium, PBB, and PBDE) is controlled.

# Global Resource Energy High quality saving Material Design Production Transport End-of-life Use/repair



## Mitsubishi Electric Corporation

2-7-3, Marunouchi Chiyoda-ku, Tokyo, 100-8310, Japan Tel +81-3-3218-9024 Fax +81-3-3218-2465

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E-mail eqd.eco@pj.MitsubishiElectric.co.jp

URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Worldwide

M700VS Series

# EP-8-098

## Machines and equipment

power meters

# HMM 3702AC<sup>™</sup> power meter

#### Environmental performance

With proper power management, power from the grid, renewable energy sources, or any other power generation sources can be utilized effectively to optimize the electrical system performance.

#### Product performance

HMM 3702AC<sup>TM</sup> Power Meter measures a wide range of AC electrical parameters, such as power, voltage, and current. It is a low-cost, multifunction monitoring and control solution for domestic, commercial, industrial, and power generation applications. The menus, measurements, and control settings are displayed clearly on an LCD for ease of reading.



## Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com

Available in: Worldwide

HMM Power Meter

#### **Machines and equipment**

measuring instruments

## **Solar Panel EL Image Measurement Device**

#### Environmental performance

This product features high-resolution camera which requires no vacuum cooling.

Moreover, we realized downsizing of product and price-reduction.

#### Product performance

- · Restrain product price to one-third of previous model
- · Features high-definition camera offering twelve million pixels
- · Industry's first EL measurement device with autofocus function





# International Test & Engineering Services Co., Ltd.

1-1-14 Nishishibukawa, Kusatsu-city, Shiga, 525-0025, Japan

URL http://www.ites.co.jp/english/

URL http://www.ites.co.jp/english/pv/index.html

Available in: Japan, Worldwide

#### **EP-8-100**

## Machines and equipment

measuring instruments

#### FTIR Gas Analyzer for Semiconductor and FPD Processes

#### Environmental performance

- \* The products are miniaturized by 44% in area occupancy and by 20% in quantity compared with conventional models.
- \* Thanks to its energy saving design, power consumption is reduced by 44% (220 VA) compared with conventional models.

#### Product performance

The FTIR gas analyzers enable the detection and measurement of a wide variety of substances, such as greenhouse gases, whose reduction is required to prevent global warming, PFCs, semiconductor and flat panel display (FPD) process gases. The management of emissions through the quantitative measurement of emitted concentration encourages industries to act to reduce these substances with the appropriate operation of factories and development of productive processes for semiconductors.

- \* The compact products can be easily carried and installed in small spaces.
- \* Single and dual cell models available.

## HORIBA, Ltd.

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E-mail info@horiba.co.jp

URL http://www.horiba.com

URL http://www.horiba.com/uk/semiconductor/products/product-lines/gas-concentration-monitor/details/ftir-gas-analyzer-402/

URL http://www.horiba.com/us/en/social-responsibility/

Available in: Worldwide





FTIR Gas Analyzer for Semiconductor and FPD Processes

#### Machines and equipment

measuring instruments

#### **Ambient Air Pollution Gas Analyzer**

#### Environmental performance

A lead-free solder alloy is used for the print substrate.

Compared with conventional models, the product offers a reduction of nearly 13% in power consumption and roughly 21% in the mass of the analyzer (compared with the average value of the five models in this series).

#### Product performance

An analyzer to continuously measure critical components (NO<sub>x</sub>, SO<sub>2</sub>, CO, THC, O<sub>3</sub>) in the air as well as a monitor to continually supervise the condition of air pollution based on the Air Pollution Control Law for local or regional governments. The units are set at Ambient Air Pollution Monitoring Stations and Roadside Air Pollution Monitoring Stations to observe the conditions of air pollution.

## Global Purification Material Production LC Stage Transport End-of-life . Use/repair

# 2 Miyanohigashi, Kisshoin, Minami-ku, Kvoto, 601-8510, Japan

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HORIBA, Ltd.

URL http://www.horiba.com/process-environmental/products/ambient/

URL http://www.horiba.com/us/en/social-responsibility/

Available in: Worldwide



Ambient Air Pollution Monitor

#### EP-8-102

## Machines and equipment

measuring instruments

## **Continuous Emission Stack Gas Monitoring System**

#### Environmental performance

Lead-free solder alloy is used for the print substrate.

The product is reduced by 52% in volume, by 28% in mass and by 25% (200 VA) in power consumption compared with conventional models.

#### Product performance

This is a continuous stack gas emission monitoring system to measure up to five components (NOx, SO<sub>2</sub>, CO, CO<sub>2</sub>, O<sub>2</sub>) with one system. The facilities having combustion process for power generation and refuse incineration utilize the system not only for environmental pollution control but also to conduct adequate management to meet the total volume control standard by each local or regional government.

# Purification Production LC Stage Transport End-of-life

## HORIBA. Ltd.

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URL http://www.horiba.com, http://www.horiba.com/us/en/social-responsibility/ URL http://www.horiba.com/process-environmental/products/combustion/cems-

stack-gas-emission/details/enda-5000-stack-gas-analysis-system-336/

Available in: Worldwide



Continuous Emission Stack Gas Monitoring System

421

#### Machines and equipment

measuring instruments

#### Measures various values from high voltage/low voltage circuits of power distribution

#### Environmental performance

----< M : Material · Resource saving >>----Pursuing downsizing and weight saving.

This instrument can be installed as an add-on, so is easy to dismantle

----<< E : Energy Energy saving >>----

This measuring instrument measures load status, and displays various values taken from high voltage/low voltage circuits of power distribution systems. Also, a variety of output functions allow for remote monitoring. 25% less energy consumption than the previous model.

----< T : Toxicity · Chemical substances reduction >>----

RoHS-compliant







# Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/index.html

URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Asia, Europe

EP-8-104

#### ME96NSR-MB,ME96NSR

## Machines and equipment

measuring instruments

## High performance and crystal clear display supports measuring and monitoring systems

#### Environmental performance

----< Material Resource saving >>----

15% reduction in parts number.

40% less kinds of connection improves ease of dismantling.

----<< Energy Energy saving >>----

This instrument is installed onto power receiving and distributing equipment in factories, then measures Voltage, Current, Power and Watthour, displays them on itself and sends their data in order to be controled for total energy saving of the factory.

30% less energy is consumed from our previous model.

---<< Toxicity Chemical substances reduction >>---

RoHS-compliant

## Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Asia, Europe





ME110NSR (-4A2P,-4APH,-C,-MB)

#### **Machines and equipment**

measuring instruments

#### **Energy Measuring Unit "EcoMonitorPro"**

#### Environmental performance

Following is its environmental performance features compared to our previous model (per 1 circuit).

----< M : Material · Resource saving >>----

45% reduction of resource consumption and non-recycling resource

----< E : Energy · Energy saving >>-----

51% reduction of electricity consumption when used and 82% reduction of electricity consumption on standby

----<< T : Toxicity · Chemical substances reduction >>----

Compliant with EU RoHS Directive

#### Product performance

"EcoMonitorPro" can support your energy saving activity. It is capable of accurately measuring the electric consumption of each facility or assembling line. The line-up is for 1,3,5, and 7 circuits. It can be connected to our field-network, CC-Link.

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Worldwide EMU2 - RD7 - B





#### **EP-8-106**

## Machines and equipment

#### measuring instruments

# Breaker with Energy Measuring Function and Display

#### Environmental performance

Following is its features in environmental conscious design compared to the previous MDU breaker.

----< M : Material · Resource saving >>----

31% reduction of resource consumption (MDU part only)

----< E : Energy Energy saving >>-----

37% reduction of electricity consumption (MDU part only)

----<< T : Toxicity · Chemical substances reduction >>----

Compliant with RoHS

#### **Product performance**

MDU breaker (a breaker with measuring function and display) is capable of measuring, displaying and transmitting circuit information with having VT and CT inside of the body and Measuring Display Unit outside of the body. Wide-range line-up of MDU breakers and capability of connecting to our field network, CC-Link, can contribute to your saving energy activity.

## Mitsubishi Electric Corporation

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Worldwide





NF400-SEP with MDU

Eco-product // Machines and equipment

## EP-8-107 Machines and equipment

measuring instruments

## Energy saving data collecting server "EcoServer II"

#### Environmental performance

Features in environmental conscious desigh compared to the previous model.

----< M : Material · Resource saving >>----66% reduction of resource consumption ----< E : Energy · Energy saving >>-----

54% reduction of electricity consumption.

#### Product performance

EcoServer II collects energy data from MDU breaker (a breaker with energy measuring unit and display) and EcoMonitorPro (Energy measuring equipment) and transmit the data to the Internet/Intranet through Ethernet (10BASE-T). The transmitted data is graphed and can be seen on the Web.

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan MES-255BR-A





#### **EP-8-108**

#### **Machines and equipment**

measuring instruments

#### Combining Measuring Capability and Compactness "MT9090A Network Master Series"

#### Environmental performance

We adopted new parts in order to make the instrument compact and light enough for any worker to carry. In particular, we succeeded in making the optical module, the key to effective operation, a one-piece unit without sacrificing performance. We thus combined measuring accuracy, such as short dead zone performance (short length of the unmeasurable 'blind zone' area), with compactness. We have also reduced  $CO_2$  emissions during the instrument's operation by 35% compared with a conventional model.

#### Product performance

The Fiber To The Home (FTTH) service, provided by the laying of fiber optic cable to homes, has been spreading widely across the world. The MT9090A Network Master Series is a measuring instrument for detecting the location of a break point in optical fiber between the optical splitter and the home.

## **Anritsu Corporation**

5-1-1,Onna, Atsugi-shi, Kanagawa, 243-8555, Japan Tel +81-46-223-1111

URL http://www.anritsu.com/

URL http://www.anritsu.com/en-US/About-Anritsu/Environment/index.aspx/





MT9090A Network Master Series

#### **Machines and equipment**

measuring instruments

## Handy Measuring Instrument "ML8760A Handy Area Tester"

#### Environmental performance

Demand has been rising for a light, compact, battery-operated model that can be easily carried and used in a confined space that is inaccessible to vehicles, or in an underground mall. We selected parts and devised a method to install them onto printed circuit boards through trial and error, realizing a small size measuring instrument. It also cuts  $\text{CO}_2$  emissions during operation by as much as 85% compared with a conventional model.

#### Product performance

The ML8760A Handy Area Tester is an instrument for measuring radio wave strength of a mobile phone base station.



## **Anritsu Corporation**

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URL http://www.anritsu.com/

URL http://www.anritsu.com/en-US/About-Anritsu/Environment/index.aspx/



ML8760A Handy Area Tester

#### **EP-8-110**

## Machines and equipment

transformer

## "TOP RUNNER" molding transformer "ULTRA ECO series" and "TOP ECO series"

#### Environmental performance

[Effects of energy saving]

With use high efficiency low loss core, compared with conventional JIS product, "ULTRA ECO series" will be reduced about 50% of loss when running. As well as, "TOP ECO series" will be reduced about 35% of it.

\*1 Specification of transformer: 3 phase, 1,000kVA, 6kVA/210V, 50Hz load 50%

\*2 "TOP RUNNER" is Japanese standard as a countermeasure to ongoing residential / commercial sector and transportation sector energy consumption increases.

#### [Effects of global warming prevention]

Compared with conventional JIS products, "ULTRA ECO series" will be reduced about 50% (13.1 ton) of  $CO_2$  exhausted per year and "TOP ECO series" will be reduced 35% of it, respectively.

- $^{\star}1\,$  Specification of transformer: 3 phase, 1,000kVA, 6kVA/210V, 50Hz load 50%
- \*2 CO<sub>2</sub> exhaust factor: 0.555kg/kWh
- \*3 "TOP RUNNER" is Japanese standard as a countermeasure to ongoing residential / commercial sector and transportation sector energy consumption increases.

## **DAIHEN Corporation**

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URL http://www.daihen.co.jp/, http://www.daihendds.com/

URL http://www.daihen.co.jp/products/index.html

URL http://www.daihen.co.jp/company/company\_101.html





"TOP RUNNER" molding transformer

#### Machines and equipment

transformer

#### "TOP RUNNER" oil-immersed transformer"ULTRA ECO series" and "TOP ECO series"

#### Environmental performance

[Effects of energy saving]

With use high efficiency low loss core, compared with conventional JIS product, "ULTRA ECO series" will be reduced about 60% of loss when running. As well as, "TOP ECO series" will be reduced about 40% of it.

\*1 Specification of transformer: 3 phase, 1,000kVA, 6kVA/210V, 50Hz load 50%

\*2 "TOP RUNNER" is Japanese standard as a countermeasure to ongoing residential / commercial sector and transportation sector energy consumption increases.

#### [Effects of global warming prevention]

Compared with conventional JIS products, "ULTRA ECO series" will be reduced about 60% (15.5 ton) of  $CO_2$  exhausted per year and "TOP ECO series" will be reduced 40% of it, respectively.

- \*1 Specification of transformer: 3 phase, 1,000kVA, 6kVA/210V, 50Hz load 50%
- \*2 CO<sub>2</sub> exhaust factor: 0.555kg/kWh
- 3 "TOP RUNNER" is Japanese standard as a countermeasure to ongoing residential / commercial sector and transportation sector energy consumption increases.

#### **DAIHEN Corporation**

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URL http://www.daihen.co.jp/company/company\_101.html





"TOP RUNNER" oil-immersed transformer

#### **EP-8-112**

#### **Machines and equipment**

LC

Stage

High quality

Material

End-of-life

measuring system

Transport

Use/repair

## Non-contact Laser type On-line Thickness Measuring Sytem

#### Environmental performance

- (1) The laser type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our system. The comparison is more than 100 times with the measurement points \*
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource
- \* Comparison with JIS K 7130 3.3.5 b) c)

#### Product performance

- (1) Range: 3 mm (MAX)
- (2) Resolution: 0.1 μm
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 100 mm/s

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E-mail yamabun@mxa.mesh.ne.jp URL http://www.yamabun-ele.co.jp

Available in: Japan, Southeast Asia



Laser type On-line Thickness Measuring System

#### **Machines and equipment**

LC

Stage

High quality

Material

End-of-life

measuring system

Production

Transport

. Use/repair

## **Desk-top Off-line Sheet Thickness Measuring System**

#### Environmental performance

- (1) Our Desk-top Off-line Sheet Thickness Measuring System is the equipment which measures the thickness of the cut piece of plastic films and sheets from products for quality control purpose.
- (2) The conventional method of measuring by hands using micrometers needs much labor. However it improves the accuracy and speed of measuring in using our thickness measuring system. The comparison is more than 100 times with the measurement points \*
- \* Comparison with JIS K 7130 3.3.5 b) c)

#### Product performance

- (1) Measuring range: "TOF-5R" 0.02-0.2 mm, "TOF-4R" 0.03-3 mm
- (2) Measurement resolution: "TOF-5R" 0.1  $\mu$  m, "TOF-4R" 0.5  $\mu$  m, 1.0  $\mu$  m
- (3) Measuring pitch: 1 mm
- (4) Films and sheets feed speed: "TOF-5R" 36 mm/s, "TOF-4R" 58 mm/s (With films and sheets automatic feed device)

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Available in: Japan, Southeast Asia

Desk-top Off-line Contact type Thickness Measuring System (TOF-5R)

#### EP-8-114

#### Machines and equipment

measuring system

## Soft X-ray type On-line Thickness Measuring System

#### Environmental performance

- (1) The X-ray type is to measure the thickness of the plastic films and sheets (=web) in the manufacturing process
- (2) It equalize the thickness of the web in measuring the thickness and as a result, it is expected to decrease the consumption of the oil resources which are the materials for plastic
- (3) Safe operation is ensured by no active radiation source in the system
- (4) Our system is able to measure in the process which save the loss in manufacturing and it consequently contribute to save the resource

#### Product performance

- (1) Range: 1-1000  $\mu$  m
- (2) Resolution: 0.01  $\mu$  m
- (3) Measuring pitch: 1 mm
- (4) Sensor scanning speed: 10-350 mm/s

## YAMABUN ELECTRONICS CO., LTD.

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Available in: Japan, Southeast Asia





Soft X-ray type On-line Thickness Measuring System

#### Machines and equipment

**UHF-Band RFID Reader-Writer** 

#### **UHF-Band RFID Reader-Writer**

-<< M : Material · Resource saving >>-

Overall volume reduced to 72% of conventional models. In addition, recyclable aluminum is utilized in the chassis.

<< E : Energy · Energy saving >>--

Restricting usage to mid-range applications (1-2 meters) cuts the required minimum signal output to 100 mW, compared to 1 W for conventional models, realizing a 60% reduction in power consumption.

<< T : Toxicity · Chemical substances reduction >>----Compliant with European RoHS Directive.

Mitsubishi Electric's UHF-band RFID reader-writer can read ID data written on a batteryless tag from a distance of up to 7 meters. Formerly, long-distance ID card systems required battery power, but UHF-band RFID facilitates battery-less operation, enabling the building of systems that are more environmentally compatible.

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





UHF-Band RFID Reader-Writer Ver. 3.0 (RF-RW101)

#### EP-8-116

#### Machines and equipment

10Gbit/s by 80 wavelengths (800Gbit/s) Wavelength Division Multiplexer

## A Space-Saving Design ROADM (Reconfiguable Optical Add/Drop Multiplexer)

#### Environmental performance

----< M: Material·Resource saving >>---The MF-800GWR features reduced coating of metallic components through design labeling and enhanced degradability and recyclability.

<< E : Energy · Energy saving >>-

The large-scale integration of electrical circuits and in-house development of the major parts have resulted in a reduction in energy consumption of 4% compared to fiscal 2000 values (1 Gbit/s equivalent)

--<< T : Toxicity · Chemical substances reduction >>----Designed to comply with European RoHS Directive.

#### Product performance

Mitsubishi Electric's Reconfigurable Optical Add/Drop Multiplexer (ROADM) is a multiplewavelength transmission unit that features large-volume data transmission of 10Gbit/s by 80

It can provide optimal solutions for network reconstruction, such as through facilities relocation or traffic concentration

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URL http://global.mitsubishielectric.com/company/csr/environment/products/index.html

URL http://global.mitsubishielectric.com/company/csr/index.html

Available in: Japan





MF-800GWR

#### **Machines and equipment**

scale clean

#### Scale Clean

Innovative, environmentally-friendly equipment that prevents scale in pipes without using

(Meets ISO14000)

#### Application:

- To prevent scaling in circulating water pipes of cleaning towers.
- To prevent scaling in metal water-cooling pipes in hydraulic power plant.
- To prevent scaling in water-cooling pipes in cooling towers and heat exchangers
- To prevent clogging of wastewater transferring pipes
  To prevent red rust in iron pipes for underground water and reduce deposits in pits.
- To prevent scaling in flue gas treatment scrubbers.

#### Features:

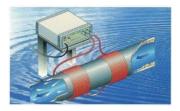
- Easy to install, no special work is required.
- The coil is wrapped around the outside of a pipe, thus operation can continue while equipment is being installed
- Operating cost is low. (Only the main body needs electricity so that the device consumes very



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Available in: Japan, Asia, Europe, North America

#### **EP-8-118**

## Machines and equipment

surveying instrument

#### **Nikon Total Station "Nivo Series"**

- (1) Compact and light body
- Reduces 33% of the weight and 35% of the volume compared to the previous series (2) Power consumption efficiency
- Improves 35% in angle measurement and 35% in precise distance measurement compared to the previous series (under the Nikon's same test condition)
- (3) Reduction of hazardous substances
  - Meets the Nikon Green Procurement Standards and the criteria of EU RoHS directive
  - · Eco-Glass (lead and arsenic-free optical glass) usage: 100%

#### Product performance

"Nivo series" designed for all surveying and construction measurement users. The Nivo series are supported with Nikon optics to see clear images in both bright and low light conditions. Operated by an easy to use interface all day long, with assistance from hot swappable batteries providing endless power in the field. The Nivo series are compact in size and light weight, making them convenient to carry over long distances.

#### NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://www.nikon-trimble.com/

URL http://www.nikon-trimble.com/nivo-c/index.htm URL http://nikon.com/about/csr/report/index.htm

Available in: Worldwide





Nikon Total Station "Nivo Series"

429

#### **Machines and equipment**

energy collection systems

## High concentration organic wastewater treatment system (Energy regeneration system)

#### Environmental performance

- Energy saving/Waste reduction:We utilize anaerobic micro-organism for treatment of organic matter,so can run the plant under conditions of less electric power and sludge.
- Energy recovery: We can get energy as electric power or steam from processing waste and wastewater by the technology of methane fermentation.

#### Product performance

The system effectively desolves and treats processing waste and high concentration organic wastewater, and gets bio-gas from them to convert into electric power or steam. The strong points are energy saving in process of treatment and reduchion of waste volume. The incidental equipment is constructed from necessity, such as pre-treatment, aerobic treatment and sludge treatment ones. We can moreover get high energy efficiency by using our original technology of double stage UASB or bio-desulphurizer.

#### **TOSHIBA CORPORATION Social Infrastructure Systems Company**

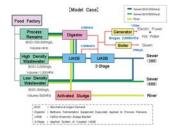
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URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

Global Waste Recyclable Energy saving

Material Design
Production
Transport
End-of-life Use/repair



High concentration organic effluent treatment system

Available in: Japan

#### EP-8-120

## **Machines and equipment**

ellipsometer

## Spectroscopic Ellipsometer

#### Environmental performance

We provide Ellipsometry Solutions for your thin films. Non-destructively characterize film thickness and optical constants for a wide range of coatings: amorphous and polycrystalline silicon, porous and nanostructured coatings, CIGS, CdTe/CdS, SiNx and other AR coatings, organic layers, transparent conductive oxides like ITO, AZO, and ZnO, and much more.

#### Product performance

M-2000: Revolutionary rotating compensator technology. Many spectral ranges available from 193 to 1700nm.

# Global Warming Material Design Resource Stage Transport End-of-life Use/repair



## J. A. Woollam Japan Corporation

Fuji Bldg. 2F, 5-22-9, Ogikubo, Suginami-ku, 167-0051, Japan

Available in: Japan, Worldwide

#### **Machines and equipment**

purifying systems

#### **Density current generator**

#### Environmental performance

Purpose: To improve the water quality in enclosed waters (enclosed bay and lake) Effects

- 1. Inhibition of overgrowth of phytoplankton (e.g. red tides and water blooms)
- 2. Agitation of water, which has long residence-time
- Reduction or reduce the area of low dissolved oxygen (prevention of oceanic anoxic event)
- 4. Activation of benthos
- 5. Weakening or elimination of thermoclines
- 6. Improvement of transparency in enclosed water

#### Product performance

Structure: A Density Current Generator sucks simultaneously waters from the surface and bottom in enclosed water through a pipe, which is located vertically in the water. The waters are sucked and discharged by using a pump located somewhere in the middle of the pipe. The discharged water diffuses horizontally over long distance without any energy since the principle of this diffusion is based on the density current theory.

## NAKASHIMA PROPELLER Co.,Ltd.

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Available in: Japan, Worldwide, Republic of Korea





#### **EP-8-122**

#### Machines and equipment

recycle systems

## Recycle System of Sewage Treatment Sludge by Pyrolysis

#### Environmental performance

 Mitigation of climate change: The CO<sub>2</sub> reduction effect is larger than that of the incineration system, because the feeding of extra fuel is unnecessary for the running of process, and because solid carbon is separated owing to the thermal decomposition of the charged organic materials.

#### Product performance

The system consists of the main facilities for pre-treatment, pyrolysis in a gasification furnace, gas-reforming and gas-cleaning, and the equipment of heat-source or gas-engine generation. The charged material is converted to gas usable as fuels by pyrolysis and gasification. In addition, it is possible to take out carbide (char) of high utility value from the charge, and thereby high recyclability is realized. Main features.

- The amount of sludge is decreased in volume and in weight when converted to solid carbon fuel, so the sewage-disposal plant can reduce costs.
- (2) As for solid fuel, long-term storage is possible because its main component is stable carbides. Moreover, problems due to bad smell seldom happen.
- (3) Neighborhood factories using steam can use carbon fuel as a bio-fuel that is neutral for CO<sub>2</sub> discharge.

## **TOSHIBA CORPORATION Social Infrastructure Systems Company**

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-4305

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm





Available in: Japan

Recycle system of sewage treatment sludge

## **Machines and equipment**

minute bubble scatter nature device

#### elastox diffuser

#### Environmental performance

we are introducing the high efficient elastox diffuser,as well as,the low energy operating.





elastox diffuser

## misuzu industry co.

858wadacho higashiku hamamatsu city shizuoka pref, 435-016, Japan Tel +81-53-461-7522 Fax +81-53-461-7989

E-mail haisui@misuzu-i.com
URL http://www.misuzu-i.com
URL http://www.misuzu-i.com

Available in: Japan, Asia

#### EP-8-124

## **Machines** and equipment

weedless mixer

#### weedless mixer

#### Environmental performance

Energy efficient.

Eco-product // Machines and equipment

Once fluid convection comes off, it will make even churn with minimal power. It can be operated with less than half power of existing products.

# Global Energy Saving Material Design Production Resource Stage Transport Use/repair



weedless mixer

# misuzu industry co.

858wadacho higashiku hamamatsu city shizuoka pref, 435-016, Japan Tel +81-53-461-7522 Fax +81-53-461-7989

E-mail haisui@misuzu-i.com URL http://www.misuzu-i.com URL http://www.misuzu-i.com

Available in: Japan, Asia

#### **Machines and equipment**

fluoride gas capture abatement systems

#### F (Fluoride) gas capture abatement system

#### Environmental performance

(Effect of reduce environmental load)

Degradation of PFC (perfluorocarbon) helps greenhouse gas reduction. FDS1set Calcium fluoride will be able to reused for cement, and to reduce waste of sludge.

#### Product performance

FDS series developed by EBARA decomposes over 99% of PFCs gas into calcium fluoride.

#### Global warming High quality Material Production LC Stage Transport End-of-life ( Use/repair



F (Fluoride) gas captured abatement system (FDS series)

#### **EBARA CORPORATION**

4-2-1 Honfujisawa, Fujisawa-shi, Kanagawa, 251-8502, Japan Tel +81-466-83-7320 Fax +81-466-82-0127 E-mail osato.masaaki@ebara.com

URL www.ebara.co.jp

Available in: Japan, Europe, Singapore, Republic of Korea, Taiwan (Rep. of China)

433

**Others** EP-9-001

elemental feeds

#### L-Lysine monohydrochloride, which reduces nitrogen excretion from livestock animals

#### Environmental performance

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen because of less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-lysine contributes to the reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. In addition, because the usage of L-lysine in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

#### Product performance

Supplementation of L-lysine, generally the first limiting amino acid in pigs and the second limiting in chickens, can improve gain and feed utilization efficiency of animals.

## Ajinomoto Co., Inc.

15-1 Kyobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan

Tel +81-3-5250-8140 Fax +81-3-5250-8270 E-mail izuru\_shinzato@ajinomoto.com

URL www.ajinomoto.com/aan

URL http://www.ajinomoto.com/csr/index.html



EP-9-002 **Others** 

elemental feeds

# L-threonine, which reduces nitrogen excretion from livestock animals

#### Environmental performance

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen due to less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Threonine contributes to reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. In addition, because the usage of L-Threonine in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

#### Product performance

Supplementation of L-Threonine, generally the second limiting amino acid in pigs and the third limiting in chickens, can improve gain and feed utilization efficiency of animals

## Ajinomoto Co., Inc.

15-1 Kvobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan Tel +81-3-5250-8140 Fax +81-3-5250-8270

E-mail izuru\_shinzato@ajinomoto.com

URL www.ajinomoto.com/aan

URL http://www.ajinomoto.com/csr/index.html





## L-Tryptophan, which reduces nitrogen excretion from livestock animals

#### Environmental performance

Vegetable ingredients commonly used in animal feeds do not necessarily have the optimal amino acid profile for animals. Insufficient supply of a certain amino acid leads to increased excretion of nitrogen due to less efficient utilization of amino acids for protein synthesis and the subsequent enhancement in their catabolism. Supplementing L-Tryptophan contributes to reduction of nitrogen excretion from animals to the environment by improving dietary amino acid balance and consequently by improving amino acid utilization efficiency. In addition, because the usage of L-Tryptophan in the feeds can sustain the ideal growth of animals with a less amount of feeds, it helps save the land area for feed crop production.

#### Product performance

Supplementing L-Tryptophan, which generally becomes limiting in pig and chicken feeds, can improve gain and feed utilization efficiency of animals.

## Ajinomoto Co., Inc.

15-1 Kyobashi 1-Chome, Chuo-ku, Tokyo, 104-8315, Japan

Tel +81-3-5250-8140 Fax +81-3-5250-8270 E-mail izuru\_shinzato@ajinomoto.com

URL www.ajinomoto.com/aan

URL http://www.ajinomoto.com/csr/index.html





EP-9-004 Others

additive

#### **Bio-BV**

#### Environmental performance

Alternative supplementary feed for antibiotics

- \* Promotes the growth of bowel secretion enzymes and increases the digestion rate
- \* Reduces the mortality rate by increasing the resistance to diseases
- \* Increases the amount of weight gain by improving the taste of the feed
- \* Improves the quality of meat by increasing the protein contents
- \* Restrains the growth and spread of harmful bacteria and reduces the risk of acquiring diarrhea

#### Product performance

- \* Synbiotics medicine
- \* Medicine for strengthening immunity and resistance to diseases
- \* Improves the amount of weight gain and the feed request rate
- \* Multifuctional medicine for improving the environment of stock rasing
- \* Medicine for producing environment-friendly stock farm products

#### CHUMDAN ENVIRONMENT

120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea





Available in: Worldwide

Eco-product // Others

EP-9-005 Others

soil conditioner

## IBUKI Grade LD\_Seed coating and soil improving agent

#### Environmental performance

Agricultural soil improvement requires large amounts of compost, time and effort. This product is a soil-improving material composed mainly of natural plant-based fibers. The IBUKI Grade LD is a capable of providing a sense of hope for traditional farming techniques by bringing about major changes and progress. Properties of use: when seeds are coated with a small application of 3kg per 10 ha, definite effects can be expected; can also be used efficiently on rhizospheres, and easily over large-scale areas. Example: to be used simultaneously with repellant coating. Substantial effects: both productivity and quality of products are greatly improved; harvest quantities, flavor and freshness improve simultaneously.

Other: no harmful effects from continuous use. Effective under conventional fertilization plans and management.



## HANYO SCIENCE CO.,LTD.

OFFICE 3-58-5 NOBATA AKUTAMI, GIFU-CITY, 501-3145, Japan

Tel +81-58-241-2401 Fax +81-58-241-2287

E-mail ibuki@hanyokagaku.com URL http://www.hanyokagaku.com/ URL http://www.hanyokagaku.com/ld.html

Available in: Japan, Worldwide



EP-9-006 Others

shellfish and seaweed collecting

## Nurturing Algae to Create Bountiful Seashores, the VIVARY SERIES

#### Environmental performance

The VIVARY SERIES supply to the sea "bivalent iron ions" required for the growth of marine plants.

#### Product performance

Humic-acid iron, which is usually produced in the forest soil by the chelation of "bivalent iron ions" and "humic acid," is formed artificially by utilizing basic-oxygen steelmaking slag and humous soil made by fermenting wood chips and other byproducts. When supplied to seashores, it aids the growth of algae fields.

The VIVARY SERIES are ecological products made using our byproducts alone. The name is derived from "vivarium," a spot in which plants are artificially kept and raised.



## Nippon Steel Corporation

2-6-3, Marunouchi, Chiyoda-ku, Tokyo, 100-8071, Japan Tel +81-3-6867-2566 Fax +81-3-6867-4999 E-mail kankyo@nsc.co.jp
URL http://www.nsc.co.jp/en/eco/index.html



Giant kelp flourished half year after Vivary Series had been buried

EP-9-007

## Mori-no-Mizu Dayori

#### Environmental performance

Mori-no-Mizu Dayori employs a 38g 2L PET bottle called "eco-ru bottle Raku-mochi" that uses less plastic resin per container, and it is designed to be easier to grip and pour when held by woman and child.

The Coca-Cola system will continue in its efforts to reduce environmental impact for nature that brings us great tasting natural water.

#### Product performance

Mori-no-Mizu Dayori is great tasting natural water that has been on sale since March 1999. An on-site water packing method is used for bottling water under strict quality control, enabling consumers to enjoy the fresh and soft taste of natural water.



## Coca-Cola Japan Company Limited 6-3, Shibuya 4Cho-me, Shibuya-ku, Tokyo, 150-0002, Japan Tel +81-3-5466-8120 Fax +81-3-3797-1481

URL http://www.cocacola.co.jp/



Available in: Japan

**EP-9-008** Others

beer

Production

Transport

## Can beer using "green energy"

#### Environmental performance

Asahi Breweries, Ltd. is making efforts to realize a "low-carbon society" through the promotion of natural energy and energy conservation.

This product is produced by using "green power," the electrical power produced by natural energy, including solar and wind power, as well as

The Green energy Mark is put on the packaging of products produced using green power.

Also this is the first such effort in the food industry to use green power during self-manufacturing.

The Green energy Mark indicates that the product is produced using green power. Under the system, companies pay to register their mark to support the generation of electricity by natural energy.

Asahi Breweries is committed to developing environmentally-friendly products.

LC Stage

End-of-life

## Asahi Breweries, Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan Tel +81-3-5608-5195 Fax +81-3-5608-5201 URL http://www.asahibeer.co.jp/english/



Asahi Super Dry 350ml

EP-9-009 Others

fertilizers

## **Environment-friendly fertilizer made from beer yeast**

#### Environmental performance

Our company Asahi Food & Healthcare Co., Ltd. sells the liquid fertilizer "Housakumonogatari (the good harvest story)" to agricultural producers. The fertilizer is made from the cell wall of brewer's yeast by enzymatic reaction. "Housakumonogatari" is based on the hydrolysate of the cell wall of brewer's yeast. It increases the plant's intrinsic immunity power by the activity of the  $\beta$ - glucan that exists in cell walls, and it promotes thereby the healthy growth of the plants. Since our raw material is natural yeast which is safe and secure to both humans, and the crops, we have received high evaluation from the users. Our company will continue development of the safe and secure goods by making use of the superior characteristics given by the hydrolysate made from the cell wall of brewer's yeast, such as "growth acceleration", "improvement of immunity", etc.



## Asahi Food & Healthcare Co., Ltd.

1-23-1 Azumabashi, Sumida-ku, Tokyo, 130-8602, Japan Tel +81-3-5608-2771 Fax +81-3-5608-2773



Good Harvest Story

EP-9-010 Others

fertilizers

#### **TetsuRiki**

#### Environmental performance

Plants need iron as well as human being. Because, Plants grow by photosynthesis, photosynthesis is performed in chlorophyll, and iron is indispensable element to elaborate chlorophyll. Therefore, efficient iron supply makes it possible to activate photosynthesis, encourage growing of plants, and produce more organic matter as photosynthetic products. Producing organic matter fix carbon dioxide in the atmosphere, carbon dioxide is considered as cause of global warming, in view of this, encouraging plants growth lead to prevention of global warming.



## Aichi Steel Corporation

1. Wano-Wari, Arao-Machi, Tokai-Shi, Aichi-Ken, Japan



TetsuRiki-Agri

#### **TetsuRiki**

#### Environmental performance

Plants need iron as well as human being. Because, Plants grow by photosynthesis, photosynthesis is performed in chlorophyll, and iron is indispensable element to elaborate chlorophyll. Therefore, efficient iron supply makes it possible to activate photosynthesis, encourage growing of plants, and produce more organic matter as photosynthetic products. Producing organic matter fix carbon dioxide in the atmosphere, carbon dioxide is considered as cause of global warming, in view of this, encouraging plants growth lead to prevention of global warming.



# **Aichi Steel Corporation**

1. Wano-Wari, Arao-Machi, Tokai-Shi, Aichi-Ken, Japan



TetsuRiki-Aqua

Available in: Japan

EP-9-012 Others

## fertilizers

## Vermi compost produced with the help of earth worms

#### Environmental performance

Vermi compost enriches the soil with low cost technology. Avoiding use of chemical fertilizers and also to avoid ruin the land. Its nitrogen and carbon ratio is high. Its preparation is easier; easy to adopt low cost technology

#### Product performance

Vermi compost enriches the soil with low cost technology with easy adaptability.



# Mother Theresa Development Research Institute

No.4/3B, Freeman Street, Kottapattu, Golden Rock Post, Ponmalaipatti, Trichy, 620004, Tamil Nadu, South India

Tel +91-431-2491671 E-mail mtdri2000@gmail.com URL http://www.freewebs.com/mtdri



Available in: Worldwide

Vermi compost produced with the help of earth worms

## Low-pollution, high-strength, environmentally friendly paper towels "LABO TOWEL"

#### Environmental performance

- \* An environmentally friendly low-halogen towel with low dioxin content in consideration of the environmental impact of its disposal and incineration
- \* Its embossed surface gives it excellent strength and durability as well as long life.

#### Product performance

- Wiping with this paper towel causes no residual contamination because of its low content of corrosion-causing materials such as chlorine, sulfur and fluorine. It is also suitable for wiping inspection/testing equipment and machines that need to remain free of contamination and corrosion and as a safe packaging material for precision components.
- Low risk of air contamination caused by fiber loss thanks to negligible fluff formation after use
- Excellent water/oil absorption rates and durability due to its embossed surface. Superior strength and durability due to the avoidance of fiber cutting in the embossing process

## Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan Tel +81-52-682-5619 Fax +81-52-682-5574

E-mail eigyobu@unichemy.co.jp

URL http://www.unichemy.co.jp

URL http://www.unichemy.co.jp/Products2/syouhin%20top/rabotaoru%20 new1.pdf





LABOTOWEL

Purification

LC

Stage

End-of-life

#### EP-9-014 **Others**

towels

Long-life

Production

Transport

. Use/repair

#### Low-pollution, high-strength, environmentally friendly paper wiper "Labo Wiper mini"

- An environmentally friendly low-halogen towel with low dioxin content in consideration of the environmental impact of its disposal and incineration
- Its crepe-finish surface gives it excellent strength and durability as well as long life.

#### Product performance

- Wiping with this paper wiper causes no residual contamination because of its low content of corrosion-causing materials such as chlorine, sulfur and fluorine. It is also suitable for wiping inspection/testing equipment and machines that need to remain free of contamination and corrosion and as a safe packaging material for precision components and polished products due to its moderate softness combined with strength.
- \* Low risk of air contamination caused by fiber loss thanks to negligible fluff formation after use
- Excellent durability due to the avoidance of pulp fiber cutting in the crepe-finish surface

## Unichemy Co.,Ltd.

1-11-1 Tenma-cho, Atsuta-ku Nagoya-shi, Aichi-ken, 456-0034, Japan Tel +81-52-682-5619 Fax +81-52-682-5574

E-mail eigyobu@unichemy.co.jp URL http://www.unichemy.co.jp



number cards

**Others** 

#### Eco Number Bib (for use in marathon events, manufactured using recycled PET materials)

#### Environmental performance

Over 40% recycled PET materials

#### Product performance

A number card manufactured by taking advantage of the characteristics of PET materials, i.e., lightness and resistance to water exposure. It has been used for track and field events throughout Japan, including the Tokyo Marathon and the Osaka IAAF World Championships in Athletics in 2007 (male events only). Recently, it has also been increasingly used for aerobics and cycling events.





Eco Number Bib

#### Active Life co.ltd.

5-8 Suehiro, Suwa-city, Nagano, 392-0025, Japan Tel +81-266-52-3490 Fax +81-266-58-0167

E-mail info@active-life.co.jp URL http://www.active-life.co.jp/

# EP-9-016 Others

## plastic products

## R3plas Ecolabel Recycled Plastics Products-Turn-Key Projects

#### Environmental performance

R3plas Recycled resin closed loop system, R3plas Oxo-Biodegradable Packaging,R3plas Spectacle box and R3plas Eyewear made from post closed loop recycling system from post industrial waste and consumer waste.

#### Product performance

International Design awards Green Label awards Meet ASTM standards Support ISO14000 and Green purchasing requirement



## WINRIGO (S) PTE LTD

No.21 Toh Guan Road East #04-09 Toh Guan Centre, 608609, Singapore Tel +65-98715058 Fax +65-65154557

E-mail winrigo@singnet.com.sg

URL www.winrigo.com.sg

URL http://www.nanyang.com.sg/products.html

Available in: Worldwide



EP-9-017

Others dust cleaners

#### **BTS-77 PCB Dust Cleaner**

#### Environmental performance

Prevents respiratory disease

BTS-77 is an eco-friendly product with no airborne dust.

#### Product performance

The printed circuit board (PCB) in electronic devices and facilities attracts dust by static electricity. This static electricity leads to the PCB, which short-circuits the degradation of performance, and shortens the service lifespan. BTS-77 is a newly invented material to keep electronic devices and facilities from those possible risks and dangers. BTS-77 blocks dust from coming into the PCBs, preventing unwanted losses and accidents.

#### \* Features of BTS-77

.BTS-77 can clean equipment without the concern of conducting electricity, even in high voltage up to 50,000V.

.BTS-77 consist of unique materials that leave no corrosion or damage to PCBs and all other electronic parts.

.BTS-77 can slip into any tiny, narrow gaps, completely removing dust.

.BTS-77 neutralizes the static electricity generated by air compressors.

#### BNF CO.,LTD.

7F, Neulpureun B/D, 979-2, Yeongtong-Dong, Yeongtong-Gu, Suwon-Si, Gyeongqi-Do, 443-812, Korea

Tel +82-31-273-3540 / +82-10-8787-1495 Fax +82-31-273-3543

E-mail bci21s@hananet.net URL www.bts77.com





# EP-9-018 Others

gasoline

#### **KIXX G1 5W30**

#### Environmental performance

Korea Eco-Labelling Program No. 2948 (EL503. Gasoline Engine Oil)

Minimizes oil waste & oil evaporation Reduces fuel consumption Prolongs engine life Lower maintenance costs

#### Product performance

ADVANCED TECHNOLOGY GASOLINE ENGINE OIL

High performance, multi-grade oil formulated from VHVI Synthetic base oil and the latest additive technology for use in passenger car and light truck gasoline/LPG engines requiring low viscosity, API SM, SL, SJ or ILSAC GF-4 performance lubricants under all operating conditions.

## **GS Caltex Corporation**

679, Yeoksam-dong, Gangnam-gu, Seoul, Republic of Korea Tel +82-2-2005-6844 Fax +82-2-565-7585

E-mail tbc3328@gscaltex.co.kr URL www.gscaltex.co.kr URL www.gslubeoil.com



#### **Environmental performance**

Korea Eco-Labelling Program No. 2949 (EL504. Diesel Engine Oil)

Minimizes oil consumption Extends engine life to overhaul Extends oil drain capability Maintains fuel economy Minimizes fleet maintenance costs

#### Product performance

TOP QUALITY DIESEL ENGINE OIL

Premium performance, multigrade, heavy-duty diesel engine oil specifically designed to lubricate a wide range of diesel and gasoline engines requiring API CI-4, SL, ACEA E5 performance lubricants operating under the most severe service conditions.

## **GS Caltex Corporation**

679, Yeoksam-dong, Gangnam-gu, Seoul, Republic of Korea

Tel +82-2-2005-6844 Fax +82-2-565-7585

E-mail tbc3328@gscaltex.co.kr URL www.gscaltex.co.kr URL www.gslubeoil.com



EP-9-020 **Others** paraffin

## Paraffinic Latent Heat Storage Material "ecojoule"

#### Environmental performance

Latent heat storage material "ecojoule®" is produced by processing TS paraffin, which holds high latent heat of melting, into PCM (Phase Change Materials) such as gel and micro capsules, and it has advanced to practical uses such as air-conditioning, vehicle-use applications and thermostatic clothing. As a typical example, the energy-storage air-conditioning system, which is operated by stacking film-packed and gelled "ecojoule®" in a building's water thermal energy storage tank, has roughly three-times more heat storage capability than water by cooling the gel with low-cost midnight electricity, helping reduce CO<sub>2</sub> emissions. Since the existing facilities are used for "ecojoule," a maximum effect can be expected with reasonable renovation costs and short construction periods.



# **Japan Energy Corporation**

10-1. Toranomon 2-chome Minato-ku, Tokyo, 105-8407, Japan Tel +81-3-5573-6972 Fax +81-3-5573-6986

E-mail ecojouleair@j-energy.co.jp URL http://www.j-energy.co.jp/

URL http://www.j-energy.co.jp/business/pc/ecojoule/

URL http://www.j-energy.co.jp/cp/csr/

Available in: Japan



ecojoule gelpack

EP-9-021 Others

#### mechanical rubber products

## eco-friendly Rubber Track "ECO<sup>2</sup>-TRACK"

#### Environmental performance

Bridgestone manufactures developped high durability rubber under hard emvironment. The durability rubber enabled to protect steal codes more, prolong use phase, and improve comfatability and strong grip. In addition, Bridgestone has more technologies: anti-rust steal code, prevention to flow off (high-stiff design) or crack (pro-edge). The eco-friendly rubber track "ECO²-TRACK" is made by these tecnology and got much durability. "ECO²-TRACK" will contribute to cost down and reduce waste by the durability.

#### Product performance

- · improvement silently
- · less vibration in driving.
- · lightweight
- · low damage the road surfac
- · shorter hours of maintenance

## **Bridgestone Corporation**

1-6-6, Yaesu, Chuo-ku, Tokyo, 103-0028, Japan Tel +81-3-5202-8203 Fax +81-3-5202-6719 URL http://www.bridgestone.co.jp/english/index.html





eco-friendly Rubber Track "ECO2-TRACK"

EP-9-022 Others

#### water purification systems

## Hitachi Ballast Water Purification Systems

#### Environmental performance

This ballast water purification equipment is used to protect ocean ecosystemes and prevent pandemic spread. It causes no secondary marine pollution and is an environment conscious system, as it does not use any disinfecting agents.

#### Product performance

An epoch-making ballast water purification system, which rapidly removes seawater organisms in ballast water on board using coagulant and magnetic separation method.



## Hitachi Plant Technologies, Ltd.

Rise Arena Bldg. 5-2, Higashi-Ikebukuro 4-Chome, Toshima-ku, Tokyo, 170-8466, Japan Tel +81-3-5928-8100 Fax +81-3-5928-8701

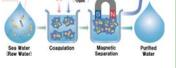
E-mail koho-senden@hitachi-pt.com

URL www.hitachi-pt.com

URL http://www.hitachi-pt.com/products/es/new/ballast.html

URL http://www.hitachi-pt.co.jp/corporate/csr/report/index.html

Available in: Japan



Process Outline

Production

Transport

. Use/repair

High quality

LC

Stage

(1) Hazardous substances-free product:

The optical grasses are made using eco-glass containing no lead, cadmium or arsenic.

100% lead-free solder used in manufacturing process. Including screws, no hexavalent chromium were used.

It is adapting the RoHS directive.

(2) Energy saving:

Compared with conventional products, it consumes about 46% less power consumption

(3) Resource saving:

Compared with conventional products, it consumes about 43% less product weight and 46% less product volume.

#### Product performance

Industrial scopes are used for inside inspection of airplane engines, plant facilities, facilities for water supply and drainage in buildings, electric power facilities, etc.

"IPLEX LX/LT" is the smallest and lightest industrial video scope for field maintenance that enhanced high mobility and durability those are popular in conventional IPLEX series.

## **Olympus Corporation**

Shinjuku Monolith, 2-3-1 Nishi-Shinjuku, Shinjuku-ku, Tokyo, 163-0914, Japan Tel +81-3-3340-2111 Fax +81-3-3340-2062

E-mail environ@ot.olympus.co.jp URL http://www.olympus.co.jp/en/

Available in: Worldwide

URL http://www.olympus-ims.com/en/rvi-products/iplex-lx/

URL http://www.olympus-global.com/en/corc/csr/

EP-9-024

daily disposable soft contact lenses

IPLEX LX/LT

**Others** 

Global

Material

End-of-life

## Daily disposable soft contact lens "Seed 1 Day Pure"

#### Environmental performance

"Seed 1 Day Pure", the first full- scale Japanese production daily disposable soft contact lens is devoted to environmental consideration and user-friendliness. It adopts a 9 % less plastic package from existing lines with 31 % less solution inside. The 17 % lighter individual package makes the 32-lens box 9 % lighter while with 2 extra lenses. Downsizing also realized a 16% volume reduction in the individual package. The smaller and lighter package and the domestic production enable a drastic reduction of CO<sub>2</sub> emissions from transportation compared with imported products.

The production site, SEED Konosu Lab., is the first all-electric factory in the industry clean with Zero CO<sub>2</sub> emissions from its facilities. It is also water-saving equipped with a recycling system to internally reuse the water discharged in the course of lens production.



## SEED CO..LTD.

2-40-2 Hongo Bunkvo-ku Tokvo, 113-8402, Japan Tel +81-3-3813-0193 Fax +81-3-3813-0052 URL http://www.seed.co.jp/



Available in: Japan

Seed 1 Day Pure



#### Environmental performance

The Metered Solar Charging Station (MSCS) brings affordable electricity to remote villages. It is the cheapest means of rural electrification for individual homes as actual ownership of the solar energy system is not necessary. Each household only owns a battery. Both new and old car batteries can be charged right in the village, saving time and money. MSCS can be owned and operated by the community, school, NGO, or a well-off individual in the village. The users are billed fairly according to power usage regardless of their battery's capacity.

#### Product performance

The MSC (Metered Solar Charger) is the heart of a Metered Solar Charger Station (MSCS). The MSC measures and displays the cost incurred for each charge. Based on the meter reading, users can pay the charging fee accordingly without any guesswork.

MSC accepts a DC power source such as a solar panel, and charge different types of 12V and 6V lead acid batteries. It requires minimum operation and maintenance.

#### Grenzone Pte Ltd.

Woodlands Spectrum 1, 2 Woodlands Sector 1, #05-14, 738068, Singapore Tel +65-6579-0560 Fax +65-6579-0561

E-mail info@grenzone.com URL www.grenzone.com





MS Charger

Global

End-of-life

Available in: Worldwide

EP-9-026 Others

energy saving solutions

Production

Transport

. Use/repair

## Office HVAC Solution for Comfort Keeping and Energy Saving

#### Environmental performance

- Mitigation of climate change: 10-20% reduction of energy consumption by the reduced consumption of cool water, hot water and fan power and the prevention of excessive cooling and heating.
- Efficient use of resources: Control is executed by software. Minimization of hardware means resource saving in the manufacturing phase.

#### Product performance

- Confortable environment: Air-conditioning control based on Predicted Mean Vote (PMV) maintains comfortable indoor environment.
- Product spec: Need BACnet/IP used as communication protocol with exiting BMS (Building Management System).

## TOSHIBA CORPORATION Social Infrastructure Systems Company

1-1, Shibaura 1-Chome, Minato-Ku, Tokyo, 105-8001, Japan Tel +81-3-3457-4368 Fax +81-3-5444-9280

URL http://www.toshiba.co.jp/index.htm

URL http://www.toshiba.co.jp/env/en/report/index.htm

and different and the constraint and the constraint

LC Stage

Neuro-PMV Control

Available in: Japan

**Others** 

#### Environmental performance

We have placed several IV solutions, which must be mixed prior to injection anyway, into a single bag, reducing the amount of waste, including vial containers and syringes used for packaging or injecting.



#### **TERUMO CORPORATION**

2-44-1, Hatagaya, Shibuya-ku, Tokyo, 151-0072, Japan

Tel +81-3-3374-8111

URL http://www.terumo.co.jp/English/index.html

URL http://www.terumo.co.jp/English/products/products 05.html

URL http://www.terumo.co.jp/English/company/social\_environmental\_report.

html

Available in: Japan



IV solution product in a bag

EP-9-028 Others

memory card camera recorders

LC

Stage

End-of-life

High quality

Production

Transport

# P2HD Memory Card Camera-Recorder, AG-HPX300

#### Environmental performance

The P2 Card media is totally free from abrasion and dropout.

There is no drive mechanism required, as there is for tape and disc-based recorders, so power consumption is low and size and weight are reduced. Malfunctions are less likely to occur, and there is no need to replace heads or transport components.

This translates into lower costs and easier maintenance, greater energy savings, and less waste when the unit is eventually disposed of.

#### Product performance

A newly designed 1/3-inch, 2.2megapixel image sensor.

AVC-Intra is the newest motion image compression codec.

Chromatic Aberration Compensation function compensates for registration error and minimizes lateral chromatic aberration in lenses.

The AG-HPX300 debuts with a totally redesigned body that's compact, lightweight and has a low center of gravity. Mobility is outstanding. Operation is easy.

# **Panasonic Corporation, AVC Networks Company**

1-15 Matsuo-cyo, Kadoma, Osaka, 571-8504, Japan Tel +81-6-6905-8356 Fax +81-6-6905-4755

URL http://panasonic.biz/sav/ URL http://panasonic.net/csr/



Available in: Japan, Worldwide

P2HD Memory Card Camera-Recorder: AG-HPX300

EP-9-029 Others

displays

# Electronic Paper "QR-LPD®"

#### **Environmental performance**

The QR-LPD® (Quick Response Liquid Powder Display) technology provides paper like appearance. Such as paper white, wide viewing angles and comfortable reading under all lighting conditions including bright sunlight. We supply ultra-low power display solutions for Electronic Paper markets (ESL, Information board and so on). The QR-LPD® technology aims to become a new standard display technology for electronic paper applications and is expected to contribute to the reduction of paper resources.

#### Product performance

- · Quick Response Liquid Power Display technology
- keep distlay in power-off
- · wide viewing angles and comfortable like a paper
- · varied fonts and color photoes
- speedy change of display
- · enable to use under low temparature such as a refrigerator
- · the biggest size, the thinest size, flexibility, low cost

## **Bridgestone Corporation**

3-1-1, Ogawahigashi-Cho, Kodaira-Shi, Tokyo, 187-8531, Japan Tel +81-42-342-6271 Fax +81-42-342-6714

URL http://www.bridgestone.co.jp/english/index.html

URL http://www2.bridgestone-dp.jp/global/adv-materials/QR-LPD/index.html





Electronic Paper "QR-LPD®"

EP-9-030 Others

toys

# PlanToys — educational wooden toys

#### Environmental performance

PlanToys are made with eco-friendly materials. Each toy is made from rubber trees that have become too old to produce latex. Prior to PlanToys, these trees were cut, burned, and discarded while emitting huge amounts of CO<sub>2</sub>. Through PlanToys these trees are recycled and treated to a chemical-free kiln drying process to create safe and innovative wooden toys. This also helps reduce air pollution and lower greenhouse gas emissions. Moreover, PlanToys are assembled using certified E-Zero glue and nontoxic water-based dyes that contain no lead or other heavy metals. All products and packaging are designed based on the eco-efficiency concept to minimize waste and hazardous materials as well as optimize the storage and increase the shipping efficiency. Every piece of PlanToys is certified with the Thai Green Label by Thai Environment Institute.

# Plan Creations Co., Ltd.

114/1 Sathorn 10, North Sathorn Rd., Bangrak, Bangkok, 10500, Thailand Tel +66-2237-9070 Fax +66-2237-5790

E-mail mktg@plantoys.com URL www.plantoys.com URL www.plantoys.com





Green Toy - Green Company

Available in: Asia, Europe, North America

Another clean-energy product from ELEKIT - PET SOLAR CAR!

The kit contains the solar battery panel with the stand and the motor and tire sets to which you can set a PET bottle, a milk carton, or whatever around you to make your original eco-car! A perfect kit for a handicraft for summer.

#### Product performance

[Specifications]

Power source: Solar battery, Max.1.4V-350mA

Driving method: Front-wheel drive

Circular driving: OK Gearshift: 2 shifts

Estimated assembly hour: Approx.1.5 hours

Target age: 10 and up
\* PET bottle is not supplied.

## EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan

Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jp URL http://www.elekit.co.jp

URL http://www.elekit.co.jp/material/english\_product\_html/JS-690.php

Available in: Japan, Worldwide





EP-9-032 Others educational toy

#### **SOLAR HYBRID CAR**

#### Environmental performance

SOLAR HYBRID CAR that can run on land and water with its paddle wheels

The well-designed body made of styrofoam, free from chlorine gas emission, is a remarkable feature of the model.

#### Product performance

[Specifications]

Power source: Solar Battery, Max.1.4V-350mA

Size: W166 x H79 x L240 (mm)

Weight: 140g

# EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jp URL http://www.elekit.co.jp

URL http://www.elekit.co.jp/material/english product html/JS-688.php

Available in: Japan, Worldwide





EP-9-033 Others

educational toy

#### **SUPER SOLAR CAR**

#### Environmental performance

SUPER SOLAR CAR, a pollution-free, low noise, "Sun-run vehicle" that carries the high performance motor and the gear structure is simple but sophisticated as a high-tech car.

#### Product performance

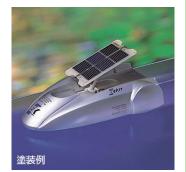
[Specifications]

Power source: Solar battery, Max.1.4V-350mA

Size: W145 x H45 x D225 (mm)

Weight: 140g





## EK JAPAN CO.,LTD.

2-19-30 Tofuro-minami Dazaifu City FUKUOKA, 818-0105, Japan Tel +81-92-923-8235 Fax +81-92-923-8237

E-mail info@elekit.co.jp

URL http://www.elekit.co.jp

URL http://www.elekit.co.jp/material/english\_product\_html/JS-685.php

Available in: Japan, Worldwide

EP-9-034 Others

pens

## Copic alcohol-based markers - winner of the Good Design Long Life Design Award

#### Environmental performance

Copic is a brand of alcohol-based color markers for drawing that features a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

#### Product performance

Winner of the Good Design Long Life Design Award. Boasting 214 colors (including a colorless blender), Copic markers are used by designers and artists globally in fields from the cutting edge of design to the world of academia.



# **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/



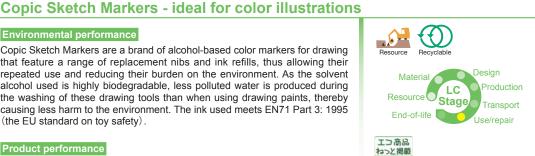
Available in: Japan, Worldwide

**Others** 

Copic Sketch Markers are a brand of alcohol-based color markers for drawing that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

#### Product performance

Winner of the Good Design Long Life Design Award. Boasting 334 colors (including a colorless blender), Copic Sketch Markers are widely used by amateurs on a hobby level as well as by cartoonists, illustrators, designers and artists around the world, and are also adopted as teaching materials at universities and technical colleges.



# **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/



Available in: Japan, Worldwide

EP-9-036 **Others** 

pens

# Copic Ciao Markers - an entry-level model for beginners

#### Environmental performance

Copic Ciao Markers are a brand of alcohol-based color markers for drawing that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. As the solvent alcohol used is highly biodegradable, less polluted water is produced during the washing of these drawing tools than when using drawing paints, thereby causing less harm to the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

#### Product performance

A low-priced entry-level model in the Copic Marker series. Boasting 144 colors (including a colorless blender), Copic Ciao Markers are widely used by amateurs on a hobby level as well as by cartoonists, illustrators, designers and artists around the world, and are also adopted as teaching materials at universities and technical colleges.

# **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/



Available in: Japan, Worldwide

EP-9-037 Others

pens

# Copic Multiliner SP - developed in response to demand in Europe

#### Environmental performance

Copic Multiliner SP is a brand of water-pigment milli pens that feature a range of replacement nibs and ink refills, thus allowing their repeated use and reducing their burden on the environment. The ink used meets EN71 Part 3: 1995 (the EU standard on toy safety).

#### Product performance

An eco-friendly European model designed for repeated use. With line sizes from 0.03 to 0.7, this product is widely used by amateurs on a hobby level in the USA as well as by designers, illustrators and artists around the world.



# **Too Corporation**

1-34-25 SAKURASHINMACHI, SETAGAYA-KU, TOKYO, 154-0015, Japan Tel +81-3-3440-6141

E-mail tmp-jpn@toomarker.co.jp URL http://www.too.com/



Available in: Japan, Worldwide

EP-9-038 Others

pencil

# Eco-Friendly Zebra Colored Paper Pencil

#### Environmental performance

- 1. Saves hundreds of thousands of trees every year
- 2.It use recycled paper and prevents environmental degradation
- 3. Does not contain chemical agents harmful to the humans

#### Product performance

Our patented eco-friendly Zebra Colored Paper Pencil is the first of its kind ever to be developed in the world!

The body of the pencil is made from two different colored papers creating a unique design pattern at the tip of the pencil called 'Zebra' that lasts until the very end, it has not only a beautiful body and color but advantages

- 1. Softer than wooden pencils and much easier to sharpen
- 2. Able to custom-printed a logo or message of your choice
- 3. Less slippage due to hand perspiration than with wooden pencils

### **Good Feel Korea**

#501 Gunpo Je-il Industrial Complex Gunpo, Gyeonggi-Do, 435-832, Republic of Korea

Tel +82-31-427-8114 Fax +82-31-427-8115

E-mail park1838@empal.com URL www.greenfeel.net URL www.goodfeelkorea.com

Available in: Worldwide





Eco-Friendly Zebra Colored Paper Pencil

1. Saves hundreds of thousands of trees every year

**Eco-Friendly Siamese Paper Pencil** 

- 2. It use recycled paper and prevents environmental degradation
- 3. Does not contain chemical agents harmful to the humans

#### Product performance

This Product combines a pencil and a solid highlighter into one! The Siamese pencil is our innovative double sided writing instrument. It eliminates the hassle of having to switch back and forth between a pencil and a highlighter, thus increasing functionality and efficiency. With convenience, functionality and design, this pencil, in a way, kills three birds with one stone!



#### **Good Feel Korea**

#501 Gunpo Je-il Industrial Complex Gunpo, Gyeonggi-Do, 435-832, Republic of Korea

Tel +82-31-427-8114 Fax +82-31-427-8115

E-mail park1838@empal.com URL www.greenfeel.net URL www.goodfeelkorea.com

Available in: Worldwide



Siamese Paper Pencil

EP-9-040 **Others** scrub pads

#### **COIR SCRUB PAD**

#### Environmental performance

We welcome you to the future of the environmentally responsible consumer. Safix scrub pad is your all-purpose scrub pad made from nature's, gift: Coir fibers. We have never realized the endless number of household scrubbers being dumped in our landfills, causing immense damage to our environment. "Safix" scrub pad has revolutionized cleaning.

#### Product performance

This product never rusts, splinters or degenerates on several uses. Easily removes baked on, burnt and stubborn greasy deposits from all types of utensils. Uses less detergent, extremely hygienic and lasts for months together.

This product is extremely economical compared to any scrub pads. Even after multiple uses, this scrub pad maintains its shape, texture and abrasive action unlike any other scrub pads available. After use, you can dump it into landfills without worrying about destroying the environment.

# **Inovex Enterprises Pvt. Ltd.**

30A Bommasandra Industrial Area, Hosur Road, Bangalore, 560099, India Tel +91-80-41658924 Fax +91-80-41658924

E-mail info@inovexenterprises.com

URL http://www.inovexenterprises.com URL http://www.inovexenterprises.com

URL http://www.inovexenterprises.com

Available in: Europe, North America, U.S.A





COIR SCRUB PAD

EP-9-041 Others

glasses

# **Eco-friendly eyewear Linkskin**

#### Environmental performance

Linkskin encompasses a unique combination of recycled plastic and stainless steel (inherently 80% recycled) components to create what is probably the world's first recycled eyewear. It is environmentally friendly and RoHS compliant with international environment protection standards through the adoption of eco-friendly processes in the production cycle.

#### Product performance

A buckle-lock (patented mechanism) secures the temples to both sides of the metal bar. The tip of the bar, shaped like a fork, is secured to the temple by sliding it through the groove of the temple metal front. This application means easy handling with no soldering or screws required for frame assembly, and the holding of the lens is more secure compared to a conventional frame with screws. Weighing less than 10 grams, the frame is extremely lightweight, durable, and versatile.

# Eye-biz Pte Ltd.

82 Genting Lane #06-05 Media Centre, 349567, Singapore Tel +65-6744-9151 Fax +65-6748-7435

E-mail info@eye-biz.com URL www.eye-biz.com URL www.linkskin.com





Linkskin Eyewear

Available in: Asia, North America, Europe

EP-9-042 Others

fastner

# **Recycled fastening Products NATULON**

#### Environmental performance

NATULON is one key to developing a new sustainable platform for recycling.

YKK's NATULON is a resource-saving product made from recycled PET bottles and discarded polyester fabrics. It's used in a wide variety of fastening products, including zippers, hook and loop fasteners, and buckles. Producing 100,000 recycled 60-cm zippers save enough energy to power an average Japanese household for a year and reduces CO<sub>2</sub> emissions equal to the amount absorbed by 82 cedar trees.



## YKK CORPORATION

Shinjuku Maynds Tower, 28Fl., 2-1-1 Yoyogi, Shibuya-ku, Tokyo, 151-0053, Japan

Tel +81-3-5352-1515 Fax +81-3-5352-1518 URL http://www.ykkfastening.com



Available in: Worldwide

NATULON

Developing products from organically grown materials.

Recognizing the importance of earth-friendly materials, YKK also develops products made from organic materials. For example, fastners made out of organically grown cotton help to reduce the use of synthetic chemicals in agriculture. Count on YKK to continue developing earth-friendly products that help to harmonize human lifestyles with the natural environment.



#### YKK CORPORATION

Shinjuku Maynds Tower, 28Fl., 2-1-1 Yoyogi, Shibuya-ku, Tokyo, 151-0053, Japan

Tel +81-3-5352-1515 Fax +81-3-5352-1518 URL http://www.ykkfastening.com



Available in: Worldwide

EP-9-044 Others

field microscopes

# Nikon fieldmicroscope "Fabre Photo EX"

#### Environmental performance

Nikon fieldmicroscope "Fabre Photo EX" has the following characteristics, considering the environment.

- Use of plant-based plastic: Five microscope body parts are made from plantbased plastic, so we can save petroleum resource
- $\hbox{(2)} \ \ \mbox{Reduction of hazardous substances} \ \ \mbox{(comply with the EU RoHS directive)}$ 
  - · Eliminate polyvinyl chloride (PVC) from body, case, strap, etc.
  - · Use of lead-free solder: achieve for the parts, such as electro circuit of illumination equipment
  - $\cdot$  Eco-Glass (lead and arsenic-free optical glass) usage: 100%

#### Product performance

"Fabre Photo EX" enables microscopic observation of insects, plants and minerals at 20x magnification and digital photography during observation by the dedicated photographic light path. Nikon digital SLR cameras and digital compact cameras can be attached by optional camera attachments.

#### **NIKON CORPORATION**

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://nikon.com/

URL http://nikon.com/about/csr/report/index.htm





Nikon fieldmicroscope "Fabre Photo EX"

Available in: Japan

# Nikon Laser rangefinder "Laser 350G"

#### Environmental performance

"Laser 350G" has the following characteristics, considering the environment.

- (1) Extended product life: achieve the long life by adopting waterproof mechanism, which filled body inside with nitrogen gas to prevent raindrops from soaking inside
- (2) Reduced mass: 14% mass reduction compared with Laser 500G
- (3) Reduction of hazardous substances (comply with the EU RoHS directive)
  - · Eliminates polyvinyl chloride (PVC) from body, case, strap, etc.
  - · Use of lead-free solder: achieve for the parts, such as electro circuit
  - Eco-Glass (lead and arsenic-free optical glass) usage: 100%

#### Product performance

Laser rangefinder measures a distance by projecting laser beams to a target and measuring the traveling time taken by the beams to be reflected off the target and returned to the instrument. This "Laser 350G" is compact and high-performance laser rangefinder specially designed for golf.

#### NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://nikon.com/

URL http://www.nikon.com/products/sportoptics/lineup/laser/350/index.htm

URL http://nikon.com/about/csr/report/index.htm

Purification Chemical substances Material Production LC Stage Transport End-of-life . Use/repair



Nikon portable rangefinder "Laser 350G"

Available in: Worldwide

EP-9-046 **Others** 

binocular

Pesign

Production

Transport

Use/repair

# Nikon Binocular "4x10D CF"

Nikon binocular "4x10D CF" has the following characteristics, considering the environment.

(1) Reduction of weight

Reduces 50% of the total weight by cutting 31% of the total number of parts compared to the previous model "6x15 CF". Contributes to waste reduction and resource saving. (2) Reduction of hazardous substances

- Meets the Nikon Green Procurement Standards and the criteria of EU RoHS
- Non-use of Pb, Cd, Hg, Cr6+, PBB, PBDE
- · Eco-Glass (lead and arsenic-free optical glass) usage: 100%

- The thinnest and lightest model in Nikon binoculars having been released so far Convenient to carry by virtue of the flat body without protuberances
- Easy to use, only needs to adjust eye width and focus
- Provides the high quality of view, namely bright and razor-sharp images, by multi-coated lenses and prisms

#### NIKON CORPORATION

Fuji Bldg., 2-3, Marunouchi 3-chome, Chiyoda-ku, Tokyo, 100-8331, Japan Tel +81-3-3214-5311

URL http://nikon.com/

URL http://nikon.com/about/csr/report/index.htm



LC

Stage

End-of-life

Available in: Japan mainly

Nikon Binocular "4x10D CF"

- (1) Adsorbs, filters and purifies oil spilling into rivers and the ocean as well as floating dust particles
- and mousse-like oil, which is formed by unitizing the oil and dusts (2) Adsorbs and filters saturated and dissolved HNS (hazardous and noxious substances), such as benzene, in rivers and the ocean.
- (3) Efficiency is greatly improved by allowing users to refill the activated charcoal, which is the heart of this device.

Product Name: Sumiley (Patent number: 3534553)

Sumiley is a floating activated charcoal made with the lees of ground coffee beans strained, and its adsorption strength surpasses that of other oil adsorbents by 500 - 1,000 times. Thanks to its light specific gravity of 0.11, it will adsorb oil only and not adsorb water. In addition, since it is carbide, no age deterioration is witnessed. Product Name: Copla (Patent number: 4261608)

Assembly and disassembly are simple. Sumiley is used with this adsorption-removal device for oil and floating dust.

Copla consists of inhalation and adsorption filtration systems. The inhalation system adsorbs only

floating oil and dust on the water's surface that is flowed to the buoyant basal plate and will not adsorb any excessive water whatsoever. Since the adsorption filtration system is equipped with Sumiley in bags and dust filtration bags, floating dust and oil are adsorbed separately.

## TANIGUCHI SHOKAI CO.,LTD

338-31 FUJITA MINAMI-KU OKAYAMA CITY, 701-0221, Japan

Tel +81-86-296-5906 Fax +81-86-296-6507

E-mail info@taniguti.co.jp URL http://www.taniguti.co.jp/





Sumiley and Copla

Available in: Japan, Asia

EP-9-048 **Others** 

#### wood pellet heating burners

# **Wood Pellet Heating System**

#### Environmental performance

(1) Attachable to agricultural heat exchangers

This wood pellet burner is attachable to the currently used heat exchangers.

(2) Simple and compact structure with efficient combustion

This product is designed to enable easy handling and maintenance. Also, the wood pellet heating system can produce heat efficiently.

(3) Environmentally friendly system

Because wood pellets are made of sustainable natural resource, the wood pellet heating system can produce environmental and human-friendly heat.

Heatable area app. 1000-2000 m<sup>2</sup> Type of fuel Wood pellets Energy consumption 17.4-28.5 kg/h Output 91-149 kW (78,000-128,000 kcal/h) Control system On-Off automatic control Dimensions 860 x 620 x 550 mm Weight app. 100 kg

#### Soai co.,ltd.

266-2 Shigekura, Kochi-shi, Kochi Pref., 780-0002, Japan Tel +81-88-846-6709 Fax +81-88-846-6713 E-mail head-office@soai-net.co.jp

URL http://www.soai-net.co.jp/service\_01/shinene.html





Available in: Japan

Eco-product // Others

# EP-9-049 Others

#### LPG regulators

#### QO-674

#### Environmental performance

Used to reduce pressure of LPG, preventing leakage gas.





#### **Gastech Industries**

Nisbat Road, Daska., 51010, Pakistan URL www.gastechpakistan.com

# EP-9-050 Others

#### DVD/CD discs

# Re-fill DVD/CD packaging

#### Environmental performance

The life of conventional spindle cases tends to last only until the discs they hold are used, and they are then discarded. Re-fill, a product by Imation Corp., is a resource-saving idea that involves the refilling of spindle cases with discs to reduce waste and the consumption of material resources.



# **Imation Corp. Japan**

Aoyama Oval Building, 52-2, Jingumae 5-chome, Shibuya-ku, Tokyo, 150-0001, Japan



Available in: Japan

#### Environmental performance

EcoFont is aimed at helping to protect the environment. A single line is inserted inside each character to reduce the printing area and consumption of toner/ink.

#### Product performance

The font can be used in Windows XP, Windows Vista, MacOS9 or Mac OSX environments, and is activated simply by selecting EcoFont when making a document - no new capital investment is needed. Printer toner/ink consumption is reduced by approx. 25% when using small-sized characters (compared with MS Gothic) and by around 40% when using large-sized characters. A total of seven font types are available: three square Gothic and three round Gothic fonts for Japanese, and one Roman font for English and other European languages (see Example).

# **NIS Corporation**

URL http://www.nisfont.co.jp

5-4-4 Koishikawa, Bumkyoku Tokyo, 112-0002, Japan Tel +81-3-3814-3201 Fax +81-3-3814-3206 E-mail ito@nisfont.co.jp



This is regular font: "Economy & Ecology"

This is EcoFont: "Economy & Ecology"

(Upper: RegularFont Lower: EcoFont)

EP-9-052 Others

deodorizer

#### **BVD**

#### Environmental performance

Bamboo Vinegar Deodorant

- \* Certified as an excellent patented and environment-friendly product by public procurement service
- \* nontoxic and nonstimulative
- \* made of environment-friendly and natural materials
- \* Excellent for removing compound odors
- \* Effectively removing odors (has a lasting effect)
- \* Effectively reduces the populations of flies, mosquitoes, and roaches
- \* Suppresses harmful microorganisms and fungi
- \* Addresss resident complaints regarding odors

#### Product performance

- \* Treatment facilities for excreta, stock raising, butchery, and leachate
- \* Food and marin-products processing and paper-manufacturing facilities \* Tire processing and manufacturing, fabrics-processing facilities
- waste landfill facility (processing of unsanitary landfills)
- \* Compost, food processing, and feed-manufacturing facilities
- \* Golf course lawns. Zoos. vivariums

#### CHUMDAN ENVIRONMENT

120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea



Available in: Worldwide

#### Ani-BV

#### Environmental performance

Livesock environment improver

- \* Nontoxic and nonsitimulative
- \* Excellent for removing compound odors (has a lasting effect)
- \* Mixed with drinking water for cattle as organic lactacid medicine
- \* Restrains harmful bacteria and Al
- \* Reduces the insect populations (flies, mosquitoes, etc.)

#### Product performance

- \* Cattle (pigs, chickens, duck, domestic cows, dogs, etc.)
- \* Odor removal and antibacterial action
- \* Improvement of the quality of meat and reduction of the odor of supplementary feeds
- \* Restraing the hatching of insects (files, mosquitoes, etc.)
- \* Animal-excreta fermentation and decomposition

#### CHUMDAN ENVIRONMENT

120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea





Available in: Worldwide

EP-9-054 Others

indoor air circulation system

#### **BV-Cleaner**

#### Environmental performance

Indoor air circulation system

- \* Removes by making the vaporized gas of bamboo vinegar react to the stinking gas
- \* Purifies stinking air with using bamboo vinegar efficiently for many hours
- \* Eco-friendly device using natural bamboo vinegar

#### Product performance

- \* Livestock
- \* Indoor workplace

# Ar/Water/Soil Purification Material Design Production Resource Stage Transport Use/repair



### **CHUMDAN ENVIRONMENT**

120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea

Available in: Worldwide

Bamboo vinegar pad system

- \* Removes by making the vaporized gas of bamboo vinegar react to the sinking gas
- \* Purifies stinking air with using bamboo vinegar efficiently for many hours
- \* Eco-friendly device using natural Bamboo vinegar

#### Product performance

- \* Closed spaces that are in need of the air circulation
- \* Small scale of treatment plants of sewage, wastewater and excreta
- \* Cattle shed (pig, chiken, duck, and so on)
- \* Villages treatment plants for sewage and wastewater
- \* Treatment plants for garbage



120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea





EP-9-056 Others

#### **BVDS-Bio**

#### Environmental performance

Bamboo vinegar deodorizaion equipment

- Certified as excellent patented and environment-friendly product by public procurement service
- Hybird deodorization system mixing bamboo vinegar and microorganism

#### Product performance

- \* Deodorization of sewage wastewater facility
- \* Deodorization of livestock excretion wastewate facility

# **CHUMDAN ENVIRONMENT**

120-1, Jupyeong-ri, Subuk-myeon, Damyang-gun, Jeollanam-do, Korea





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The Mannequin reusable rental service controls the amount of production, extending the life spans of products and decreasing the environmental burden while promoting "Reuse".

The company's nationwide network allows products to be delivered and returned by the shortest distance to customers, reducing the environmental burden in the phase of commodity distribution.

#### Product performance

Mannequins are produced after many processes using clay models. They are produced not only to sell but also to be rented for repeated use.

## **HEIWA MANNEQUIN CO.,LTD**

1-22-3 Kitaotuka Toshimaku Tokyoto, 117-0004, Japan

Available in: Japan



Eco-product // Othe

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