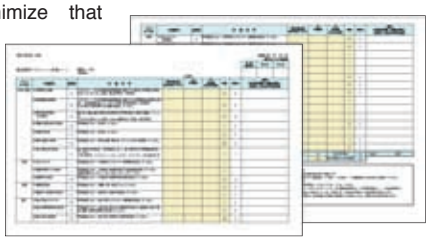
# Environmentally-Friendly Products

To offer environmentally-friendly products to our customers, the KUBOTA Group is promoting measures to reduce environmental impacts at the R&D stage.

## Development of environmentally-friendly products

### Conducting product environmental assessment for designing environmentally-friendly products

In our effort to design environmentally-friendly products, we make it a rule to conduct an environmental assessment on products at the R&D stage to measure the environmental impact through the lifecycle of the products and to minimize that impact.



Product environmental assessment form

### Primary areas covered by the product environmental assessment (in part)

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|---|---|
| **Materials** | Reduction of substances of environmental concern in materials and components; reduction in mass, volume, and the number of components; increase in the use of recycled materials; reduction in the use of rare materials |
| **Production** | Energy conservation; waste reduction |
| **Physical distribution** | Enhancement of ease of transportation; reduction of packing materials |
| **Construction** | Energy conservation at construction sites; resource conservation; reduction of environmental impact |
| **Operation of equipment** | Energy conservation; reduction of noise and vibration; improvements to durability |
| **Waste disposal, recovery, reuse** | Recycling; proper waste disposal |
| **Information disclosure** | Disclosure of materials and components; instructions for maintenance and disposal |

| Product group | Content and cases of involvement at the R&D stage |
|---|---|
| Tractors | Compliance with exhaust emission regulations; improvements in fuel-efficiency; reduction in the use of substances of environmental concern in painting and coating materials |
| Combine harvesters | Compliance with exhaust emission regulations; reduction of mass per horsepower |
| Rice transplanters | Reduction in the weight of new models; reduction in the use of in substances of environmental concern in painting and coating materials |
| Agriculture-related product | Development of products that require less fertilizer and agricultural chemicals; reduction in the use of substances of environmental concern in painting and coating materials |
| Agricultural facilities | Reduction in the weight of sowing machines (by 15% over KUBOTA's equivalent models); reduction in the use of substances of environmental concern in painting and coating materials |
| Construction machinery | Compliance with exhaust emission regulations; reduction of noise emitted by vehicles; improvements to fuel-efficiency by employment of an automatic idle elimination system |
| Engines | Compliance with exhaust emission regulations; reduction of fuel consumption, noise, and vibration; development of biodiesel-compatible engines |
| Ductile iron pipes | Reduction of VOC emissions by applying non-solvent coating to the inside of pipes in place of solvent coating |
| Valves | Enhancement of durability of sheets; reduction of weight to increase ease of installation; reduction in use of alloys containing lead |
| Drainage pipes | Reduction of materials used for installation of drainage system products; improvement of work environment during drainage pipe installation; reduction of drainage noise |
| Service water and sewerage-related | Improvement of energy efficiency of sewage treatment equipment; reduction of weight of machines that dewater sludge |
| Recycling-related | Reduction in energy consumption by enhancing performance of shredders |
| Pumps | Reduction in energy consumption at customers' sites by enhancing performance of volute pumps |
| Membrane business-related | Development of energy-saving membrane devices and energy-generating units; removal of lead from PVC parts for submerged membrane units/components |
| Septic tanks | Reduction in electricity consumption by septic tanks for home use (by 50% and 30% over KUBOTA's existing models for use by five and seven people respectively) |
| Plastic pipes | Development of more durable products (PE pipes and joints); development of biomass plastic products |
| Cast steel | Reduction in energy consumption and $CO_2$ emissions at customers' sites by adopting higher-performance reaction pipes |
| Rolls | Improvement of resource- and energy-saving efficiency at customers' sites by adopting longer-life rolls for sheet-rolling mills |
| New material | Reduction in fuel and water consumption at the production process; control of waste generation at the production process; prevention of water pollution |
| Steel pipes | Reduction of construction work time (to reduce $CO_2$ emissions and fuel consumption); reduction of waste soil during construction work |
| Electrical equipment | Enhancement of the energy-saving efficiency of platform scales; reduction of substances of environmental concern in painting and coating materials |
| Vending machines | Enhancement of energy-saving efficiency of canned beverage vending machines (reduction of electricity consumption by 40% over the 2005 level) |
| Air-conditioning equipment | Reduction of fan noise; reduction of substances of environmental concern; efficient use of waste heat |

### Ratio of models with reduced RoHS-designated substances

The ratio of KUBOTA models with reduced RoHS-designated substances* is 24.1% in FY2009 as against the target of 25%.

*The ratio of the value of shipped products that contain RoHS substances (lead, hexavalent chromium, mercury, cadmium, PBB and PBDE) equal to or less than the threshold limits (except the application falling under the exemptions in RoHS and ELV Directives) against the total value of shipped products (excluding plants, facilities, work and services) manufactured in Japan during FY2009.