

Yaskawa Electric Group
Green Procurement Guidelines
Third Edition



YASKAWA ELECTRIC CORPORATION

Established: December 15, 2003
Revised: September 20, 2007

Introduction

Protecting and maintaining the Earth's environment is receiving growing international recognition in the form of coordinated initiatives in many fields of endeavor encompassing politics, economics, industry, and civic life. Toward the preservation of the global environment, it is imperative that we proceed resource saving, recycling, energy conservation, prevention of global warming, elimination of regulated chemicals, and engineering innovation as well as manufacturing considering environment.

Yaskawa Electric is promoting environmentally-friendly activities in every field from material procurement, manufacturing, transportation, application, disposal, recycling, development of environmentally-friendly products through its life cycle, to plant/business activities. This task, however, cannot be sufficiently handled by Yaskawa's environmental preservation efforts alone. Inevitably, procurement of materials that impose a minimal impact on the environment is of great necessity and importance. As the basis of smooth going these activities, we issued "Green Procurement Guidelines" in December, 2003. In order to correspond to the increasing request of environment by society and customers, we have revised the Green Procurement Guidelines this time. We will continue to promote business activities that focus on the environment and work with our suppliers to create environmentally-friendly products.

We thank you for understanding the importance of addressing global environmental preservation, and look forward to working with each and every one of our suppliers toward realizing our goals.

Tetsuma HATANAKA, Head of Procurement Department,

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Akitaka KOIDE, Head of Environmental Promotion Department,

YASKAWA ELECTRIC CORPORATION

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I Environmental Protection Policy of Yaskawa Electric Group

◆ Basic Philosophy of Environmental Protection

Yaskawa's management philosophy establishes that "Our Company's Mission is to contribute to the evolution of society and the welfare of mankind through the performance of its business." Yaskawa recognizes that the protection of Earth's environment is one of the most important issues common to mankind. In every aspect of business, we must consider and implement environmental protection. As a result, our management philosophy will be fulfilled and our duty to society accomplished.

◆ Basic Action Plan

1. Set goals for environmental protection and continually improve environmental protection activities within feasible technological and economic means, together with recognizing environmental issues as a top management priority and conducting business practices that consider environmental protection.
2. Assess the environmental impact of our business activities and product development, and strive to reduce the impact on the environment through each of the phases of the product's lifecycle, spanning manufacturing, distribution, use, and disposal.
3. Observe environmental laws and regulations and further, set our own standards and improve our own levels of control through auditing and other processes.
4. Foster environmental education to increase all employees' consciousness concerning environmental protection and plan to cooperate with regional companies through the creation of environmental protection programs.
5. Inform the public as well as all employees of our environmental policy.

II. Green Procurement Guidelines of Yaskawa Electric Group

1. Purpose of the guidelines

The guidelines help users understand how to operate Green Procurement Criteria which are set up by Yaskawa Electric and its group companies (hereinafter referred to as “Yaskawa Electric” or “Our Company”) In order to actualize our Environmental Protection Policy, that is, “in every aspect of business, we must consider the environment and implement environmental protection policy.” Yaskawa Electric procures materials which have minimal impact on the environment (Green Procurement) to contribute to the environmental protection.

2. Scope of application of the guidelines

These Guidelines shall be applied to all materials procured by all offices of Yaskawa Electric.

(1) Scope of application to parts and materials

These are applied to the following parts, materials, and others used to products designed, manufactured, and/or sold by us:

- 1) Parts/materials (Electronic parts, process parts, raw materials, wrapping materials, packing materials, etc.)
- 2) Assembly such as functional unit, module, printed circuit board, etc.
- 3) Component materials such as working materials (solder, adhesive, ink, grease, tape, etc.)
- 4) Instruction manuals (ink, adhesive, label, coating materials etc.)
- 5) Packaging/wrapping materials to support transportation of parts/materials delivered to our company (except collected by the supplier).

(2) Scope of application to products

- 1) Products incorporated to our company’s products and sold as our company’s final products
- 2) Products that our company outsources to the third party for designing and manufacturing and sells with our company’s brand.
- 3) Products for sales promotion (e.g. free samples).
- 4) Packing/wrapping materials for our company’s products, including ones to support transportation of parts/materials delivered to us.

3. Concept of Green Procurement Criteria, and how to proceed before starting business

(1) Concept of Green Procurement Criteria

It is Green Procurement Criteria that our company specified “Evaluation/Selection Criteria for Suppliers” and “Evaluation/Selection Criteria for procured materials.” to environment-conscious materials. Our company is wide open-door and equable for selection of the suppliers. Not only existing “Quality”, “Price”, and “Delivery” factors, but also environment-conscious factors in the business are taken into consideration in selecting suppliers. In addition, in selecting materials, materials meeting the requirements set in the Green Procurement Criteria shall only be considered.

Each element is evaluated from two points of view, those are “the system for the activities” and “the result of the activities.”

<Concept of Green Procurement Criteria>

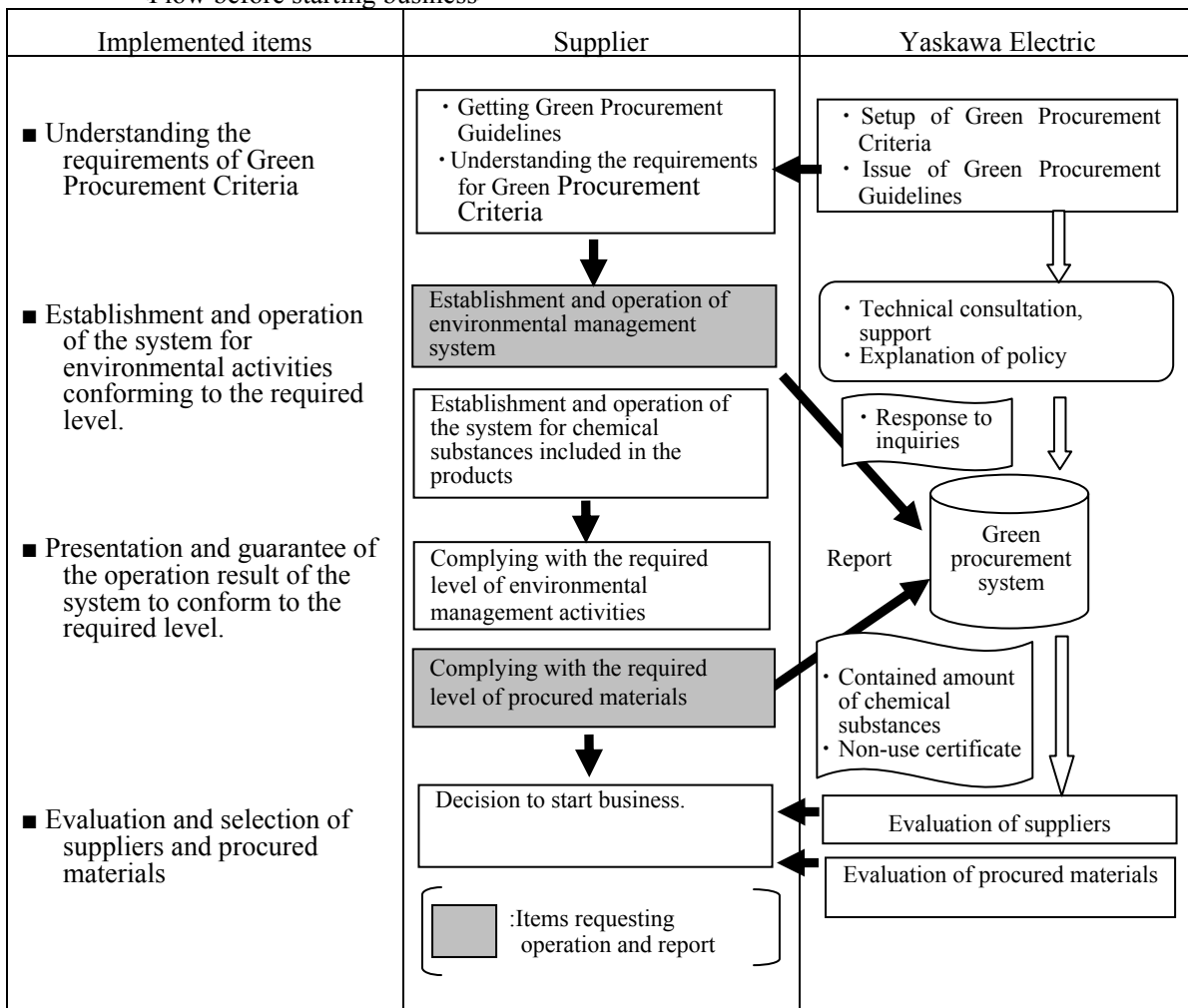
	System for the activities	Result of the activities
Evaluation/Selection Criteria for Suppliers	1) Establishment and operation of environmental management system	2) Compliance with environmental laws and regulations
Evaluation/Selection Criteria for procured materials	3) Establishment and operation of management system of chemical substances in products	4) i)No inclusion of prohibited substances ii)Report of contained amount of controlled substances iii)Certificate of non-inclusion of certain hazardous substances

※In the table above, hatching 1) and 4) are requested to report.

(2) How to proceed before starting business

“Evaluation/Selection Criteria for Suppliers” and “Evaluation/Selection Criteria for procured materials” are summarized in pages 7 through 9 of this document as Green Procurement Criteria. Based on the submitted information by a supplier, our company evaluates the supplier’s business activities and conformity of procured materials with Green Procurement Criteria. And based on this evaluation, procure the materials, which conform to our company’s Green Procurement Criteria, from the supplier who conforms to the Green Procurement Criteria.

<Flow before starting business>



4. Green Procurement Criteria

In order to procure the environment-conscious materials, our company sets up "Evaluation/Selection Criteria for Suppliers" and "Evaluation/Selection Criteria for procured materials" to procure only the materials complying with the criteria from the suppliers complying with the criteria. Out of listed items, the following (1)-1) and (2)-2) are requested to report the result of operation also.

(1) Evaluation/Selection Criteria for Suppliers

1) Establishment and operation of environmental management system (operation and report are requested)

The performance of a supplier relevant to establishment and operation of EMS is assessed in terms of the following factors ①~②, and then a supplier complying with all the relevant requirements is selected as an approved green supplier. If a supplier establishes environmental management system complying with international standards such as ISO14001, EMAS (Eco-Management Audit Scheme), or other equivalent environmental management system such as "KES", "Eco Stage", or "Eco Action 21", the supplier is regarded to satisfy the following requirements of ①~②.

The assessment would be applied to suppliers' all business institutions manufacture/supply procuring materials. The suppliers' business institutions that do not manufacture/supply the procuring materials are out of scope.

Even if a primary supplier is a trading company, our company evaluates the primary supplier's performance in principle. The evaluation and management of an actual manufacturer or outsourcing business institution (factory) shall be implemented by the primary supplier. Our company may directly check the performance the actual manufacturer if necessary.

① Establishment of environmental management system

Role/responsibility and procedure shall be specified and put them in writing to meet the following requirements;

i) Environmental policy

- Shall make policy for environmental management activities.
- Shall get the policy across the employees

ii) Plan

- Shall grasp current environmental impact caused by business activities (environmental aspects survey)
- Shall identify relevant environmental laws and regulations
- Shall establish target for reducing environmental impact, and environmental plan in reference to the environmental aspects survey and identified relevant regulations.

iii) System operations

- Shall assign administrator(s) for environmental management system
- Shall establish programs to attain the target
- Shall get the programs across the employees to attain the target

iv) Evaluation of operating results and improvements

Shall assess progress and achievements of the plan, and compliance with relevant

regulations. Assessment result shall be reported to the management.

v) Review by the management

Shall review the result by the management. Shall identify the problem, and establish solution and reflect it to next policy or plan when required.

② Operation of environmental management system

The operation shall be implemented according to the role/responsibility specified in “Establishment of environmental management system”. The results shall be recorded and stored.

③ Frequency of reports

A report shall be provided when starting new business, and every year periodically (at the beginning of fiscal year).

2) Compliance with environmental laws and regulations (Execution is requested)

As a result of establishment and operation on the environmental management system specified in the above 1), compliance with all relevant laws and regulations is requested. In order to do this, the suppliers' each business institution shall proceed with the following items. A periodical report is not required, however, in case a concerned problem happens (such as contravention), certain explanation may be requested in terms of social responsibility. In addition, such an explanation may be considered in evaluating suppliers.

① Identify, and understand the requirements of relevant environmental laws and regulations

During setting up the environmental management system, a supplier shall identify all requirements of environmental laws and regulations related to his business without omission, confirm the requirements, and reflect them to the execution plan (program) of environmental management system.

② Assess the compliance activities with environmental laws and regulations

Shall observe and assess performance of compliance activities with relevant laws and regulations.

(2) Evaluation/Selection Criteria for procured materials

1) Establishment and operation of management system of chemical substances in products (Operation is requested)

It is requested that the organized system is established and operated to control chemical substances contained in procuring materials. Any system is applicable if it is complying with “JGPSSI Guidelines for the Management of Chemical Substances in Products” issued by Japan Green Procurement Survey Standardization Initiative (JGPSSI) in September, 2005, even it is independent or is within currently effective ISO9001 or ISO14001 system. [JGPSSI Guidelines for the Management of Chemical Substances in Products issued by JGPSSI is referred to the following web address:

<http://210.254.215.73/jeita_eps/green/green8.htm>].

In the future, considering laws and regulations relating to Chemical Substances in Products and requests to our company on green procurement by our customers, system establishment and operation may be required in the same level as the one mentioned in (1)-1) “Environmental management system” .

2) Result of operation for management of chemical substances in products (implementation and report are requested)

As a result of system establishment and operation specified in the above 1) Establishment

and operation of management system of chemical substances in products, the following requirements of ①~③ shall be met.

- ① Substances specified and prohibited by our company shall not be contained in our company's procured materials.

Material control and process control shall be achieved in order phase-out the prohibited substances specified in the "List of Controlled Chemical Substances of Yaskawa Electric (Attached document 1) from our company's procured materials." "Phase-out of the prohibited substances" means that any addition, filling, interfusion, attachment, etc. of the substances shall not be made intentionally, or the amount of prohibited substances shall be less than the listed value (regulation value). In detail, refer to "List of Controlled Chemical Substances."

- ② Shall figure out and report when specified controlled substances are contained.

When our company's procured materials contain controlled substances specified in the "List of Controlled Chemical Substances of Yaskawa Electric (Attached document 1)" (including the case the amount of prohibited substances is less than regulation value), figure out the contained amount and report it to our company via Yaskawa Electric Ggreen Procurement System. Refer to the green procurement system operational manual to know how to access to and how to use the system.

- ③ Shall issue certificate that specified prohibited substances are not contained in our company's procured materials.

A supplier shall offer assurance that prohibited substances specified on the "List of Controlled Chemical Substances of Yaskawa Electric" are not contained in our company's procured materials in writing in the name of its representative. Fill out specified "Non-inclusion certificate" form and submit to our company to offer assurance.

For procured materials relevant to our company's products complying with European RoHS, submitting Certificate of Non-inclusion of Specified Substances for European RoHS 6 substances (lead, cadmium, mercury, hexavalent chromium, PBB, PBDE) is indispensable. Non-inclusion certificate for other prohibited substances may be requested as necessary.

Note 1) In case procured materials contain sub-materials selected by Yaskawa Electric

Even if procured materials from a supplier contain sub-materials selected by Yaskawa Electric, the supplier is responsible for survey and control substances contained in the procured materials including the sub-materials

Note 2) Material change application

A supplier shall not change the specification of procured materials without in-advance application to our company, even if the change eliminates specified controlled substances or reduces environmental load.. Proceed with a formal application for specification change and 4M change to replace with substituting material.

5. Operation of Green Procurement Guidelines

- (1) These guidelines shall be applied to the following Yaskawa group companies also.

Yaskawa Controls Co., Ltd.

Yaskawa Motor Corporation

Yaskawa Logistec Corporation

The application shall be expanded to the other Yaskawa group companies sequentially.

(2) These guidelines may be revised as needed according to changes of laws/regulations or social trend.

(3) Information given by suppliers shall be given extra care to treat.

6. Contact Details

Procurement and Planning Group, Yaskawa Electric Corporation

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FAX: 093-645-8898

Environmental Protection Department, Yaskawa Electric Corporation

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- attached document 1 -

YASKAWA ELECTRIC
Chemicals to be phased out / to be reported

Yaskawa Electric Controlled Chemical Substances

1. Purpose

This document aims to explain the survey target and conditions for chemical substances contained in components, products, and raw materials provided to Yaskawa Electric by his suppliers.

2. Definition of terms

① Contained substances in products

State of chemical substances used in products, parts, materials and packing materials. Addition, filling, interfusion, and attachment of chemical substances are also included.

② Intentional use

It is the use of chemical substances for products, parts, materials, and packing materials in order to actualize specific function, appearance, quality, etc.

③ Impurities

Substances contained in natural material and cannot be removed by the current technology level during the refinery operation of employed material, or by-product material or catalyst residue in certain process, etc., which cannot be removed with the current technology level. Intentionally used substances are not included in them.

④ Prohibited substances

It is chemical substances that must not be used in our company's products. These chemical substances are composed of materials and substances, that are prohibited, limited, or required to report for their use under the current law and regulations. This prohibited substance list complies with Level A material stipulated by Japan Green Procurement Survey Standardization Initiative (JGPSSI). These materials are prohibited to use intentionally for procured materials. When certain regulation value is specified for the prohibited substance, concentration rate of the substance in the procured materials including the impure substances must be less than the regulation value.

⑤ Controlled substances

The use and the quantity of controlled substances in our company's products shall be figured out from view points of environment, well-being, health and safety, and proper management of waste materials. This controlled substance list complies with Level B substances stipulated by Japan Green Procurement Survey Standardization Initiative (JGPSSI). Intentional use of these substances is not prohibited. However, concentration rate exceeding the threshold value, or intentional use with concentration rate under the threshold value also are requested to report the containment if possible to figure out.

⑥ Regulation value

As for concentration rate of prohibited substances, it is the value that is to be guaranteed even if some impurities of the substances are in procured materials.

⑦ Concentration rate

Concentration rate means the density with the denominator of homogeneous material mass in which the target substances are contained. Homogeneous material means a material unit that cannot be decomposed mechanically into different materials (chemical compound, polymer alloy, metallic alloy, etc., single layer of painting, printing, and plating, etc.).

⑧ Exempted item

Items which stipulate substances in specific uses and condition application exemption of our company's Green Procurement Criteria on prohibited and controlled substances

3. List of target chemical substances

Target chemical substances are composed of prohibited substance groups (15 substance groups) and controlled substances (9 substance groups). It must be noted that the target chemical substances were changed since 2nd edition of Green Procurement Guidelines.

Considering concerned regulations and social/other trends or requests of our company's customers, inclusion and/or inclusion report may be requested as necessary for chemical substances not listed as target chemical substances.

Prohibited substances (15 substance groups)	
1. Cadmium/Cadmium compounds	9. Ozone depleting substances
2. Hexavalent chromium/Hexavalent chromium compounds	10. Polychlorinated Biphenyls (PCBs)
3. Lead/Lead compounds	11. Polychlorinated Naphthalenes (more than 3 chlorine atoms)
4. Mercury/Mercury compounds	12. Radioactive substances
5. Polybrominated biphenyls (PBBs)	13. Certain Shortchain Chlorinated Paraffins
6. Polybrominated Diphenylethers (PBDEs)	14. Tributyl Tin (TBT) and Triphenyl Tin (TPT)
7. Asbestos	15. Tributyl Tin Oxide (TBTO)
8. Certain Azocolourants and Azodyes	

※Substances (group) of hatching are controlled by RoHS.

Controlled substances (9 substance groups)	
1. Antimony/Antimony Compounds	6. Nickel (External application only)
2. Arsenic/Arsenic Compounds	7. Certain Phthalates
3. Beryllium/Beryllium compounds	8. Selenium/Selenium compounds
4. Bismuth/Bismuth compounds	9. Polyvinyl chloride (PVC)
5. Brominated flame retardants (Other than PBB or PBDE)	

4. Terms on the target chemical substance list

■ Prohibited substance list (15 substance groups)

1) Typical example of applicable prohibited substance and its CAS No.

Typical substance names and their CAS Nos. (ID No. to identify chemical substance) of each substance group are on the list. It must be noted that there are substances belong to the prohibited substance group other than the listed.

2) Major application

For each substance/substance group, major industrial applications are listed. It must be noted that there may be applications other than the listed.

3) Applicable range

Applicable range presents conditions to clarify in which cases the prohibitions relevant to the use of substances for our company's procured materials (threshold value, etc.) go effective .

4) Exempted item

Exempted items explain conditions that allow exempting the application of relevant regulations on our company's procured materials for controlled substances.

5) Relevant law/regulation

As for prohibited use of controlled substances, relevant law/regulations to the prohibitions are listed. Other than listed, there may be another rule to be abide by in accordance with business contracts or industry initiatives.

■ Controlled substance list (9 substance groups)

1) Exemplification substances/CAS No. of controlled substances

Typical substance names and their CAS Nos. (ID No. to identify chemical substance) of each substance group are on the list. It must be noted that there are substances belong to the controlled substance group other than the listed.

2) Threshold value

The threshold value for contamination report of each substance or substance group is 1000 ppm (0.1wt%).

5. List of controlled chemical substances

1) List of prohibited substances (15 substance groups)

For the prohibited substances, when a threshold value is given, the concentration rate of the prohibited substances on the procured materials shall not exceed the threshold value. When a threshold is not given, any intentional use of relevant substances is not allowed. Even if the concentration rate does not exceed the threshold value but still some contamination is figured out, report it as much as possible.

1. Cadmium and its compounds (JGPSSI substance group No. A05)

Typical example of applicable substance		Chemical formula	CAS No.	Application
カドミウム	Cadmium	Cd	7440-43-9	batteries, plating
酸化カドミウム	Cadmium oxide	CdO	1306-19-0	contact points, optical materials
硫化カドミウム	Cadmium sulfide	CdS	1306-23-6	pigments, sensor
塩化カドミウム	Cadmium chloride	CdCl ₂	10108-64-2	
硫酸カドミウム	Cadmium sulfate	CdSO ₄	10124-36-4	
硝酸カドミウム	Cadmium nitrate	Cd(NO ₃) ₂ · 4H ₂ O	10325-94-7	pigments
炭酸カドミウム	Cadmium carbonate	CdCO ₃	513-78-0	stabilizer
ステアリン酸カドミウム	Cadmium stearate	Cd(C ₁₇ H ₃₅ COO) ₂	2223-93-0	stabilizer
ラウリン酸カドミウム	Cadmium laurate	C ₂₄ H ₄₆ CdO ₄	2605-44-9	stabilizer
その他のカドミウム化合物	Other cadmium compounds			
<p><Applicable range></p> <p>①. Intentional use</p> <p>②. Inclusion of more than 100 ppm (0.01wt%) as impurity. Or inclusion of more than 75 ppm as impurity when used for surface treatment, coloring agent, or plastic stabilizer in product not subject to the RoHS Directive.</p> <p>③. Use of cadmium, in which the total concentration by weight of cadmium, lead, mercury and hexavalent chromium is more than 100 ppm in the application as packaging materials</p>				
<p><Exempted items> * Check the latest information on this matter for confirmation</p> <ul style="list-style-type: none"> • Cadmium and its compounds in electrical contacts and cadmium plating except for applications banned under Directive 91/338/EEC amending Directive 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations. • Cadmium in optical and filter glass 				
<p><Relevant law/regulation></p> <p>EU Directives 76/769/EEC, 2002/95/EC (RoHS Directive), Danish Statutory Order No.1199 on the Prohibition of Sale, Import and Manufacture of Cadmium-Containing Products, 94/62/EEC (on Packaging Material), and amendments relevant to these laws/regulations.</p>				

2. Hexavalent chromium compounds (JGPSSI substance group No. A07)

Typical example of applicable substance		Chemical formula	CAS No.	Application
重クロム酸ナトリウム	Sodium dichromate	$\text{Na}_2\text{Cr}_2\text{O}_7$	10588-01-9	pigments, catalysts, oxidant, surface treatment for metal plates, dyestuffs
重クロム酸カリウム	Potassium dichromate	$\text{K}_2\text{Cr}_2\text{O}_7$	7778-50-9	pigments, dyestuffs, surface treatment for metal plates
三酸化クロム (無水クロム酸)	Chromium(VI) oxide	CrO_3	1333-82-0	green pigment, abrasive agent, metal chromium materials
クロム酸カリウム	Potassium chromate	K_2CrO_4	7789-00-6	Pigments, dyestuffs, surface treatment for metal plates
クロム酸鉛	Lead(II) chromate	PbCrO_4	7758-97-6	pigments
クロム酸カルシウム	Calcium chromate	CaCrO_4	13765-19-0	pigments
その他の六価クロム化合物	Other Hexavalent chromium compounds			
<p>< Applicable range ></p> <p>①. Intentional use</p> <p>②. Inclusion of more than 1000 ppm (0.1wt%) as impurity</p> <p>③. Use of cadmium, in which the total concentration by weight of cadmium, lead, mercury and hexavalent chromium is more than 100 ppm in the application as packaging materials</p>				
<p><Exempted items> * Check the latest information on this matter for confirmation</p> <p>Hexavalent chromium for rust prevention of the carbon steel cooling systems in absorption refrigerators</p>				
<p><Relevant law/regulation></p> <p>2002/95/EC (RoHS Directive), 94/62/EEC (on Packaging Material), and amendments relevant to these laws/regulations.</p>				

3. Lead and its compounds (JGPSSI substance group No. A09)

Typical example of applicable substance		Chemical formula	CAS No.	Application
鉛	Lead	Pb	7439-92-1	solders, batteries
酸化鉛(II)	Lead(II) oxide	PbO	1317-36-8	curing agent for rubber
酸化鉛(IV)	Lead(IV) oxide	PbO ₂	1309-60-0	curing agent for rubber
四酸化三鉛	Lead(II,IV) oxide	Pb ₃ O ₄	1314-41-6	lead glasses
硫化鉛(II)	Lead(II) sulfide	PbS	1314-87-0	pigments
炭酸鉛	Lead(II) carbonate	PbCO ₃	598-63-0	
塩基性炭酸鉛(II)	Lead(II) carbonate basic	2PbCO ₃ · Pb(OH) ₂	1319-46-6	pigments
硫酸鉛(II)	Lead(II) sulfate	PbSO ₄	7446-14-2	
リン酸鉛(II)	Lead(II) phosphate	Pb ₃ (PO ₄) ₂	7446-27-7	
三塩基性硫酸鉛	Lead sulphate,tribasic	PbSO ₄ ·H ₂ O	12202-17-4	
酢酸鉛	Lead Acetate	Pb(C ₂ H ₅ COO) ₂	301-04-2	pigments, paint
ステアリン酸鉛	Lead stearate	Pb(C ₁₇ H ₃₅ COO) ₂	1072-35-1	stabilizer in plastic
二塩基性ステアリン酸鉛	Lead stearate,dibasic	2PbO · Pb(C ₁₇ H ₃₅ COO) ₂	56189-09-4	stabilizer in plastic
クロム酸鉛	Lead(II) chromate	PbCrO ₄	7758-97-6	pigments
チタン酸鉛	Lead(II) titanate	PbTiO ₃	12060-00-3	Pigments, paint
その他の鉛化合物	Other leads compounds			
<p>< Applicable range ></p> <p>①. Intentional use</p> <p>②. Inclusion of more than 1000 ppm (0.1wt%) as impurity or inclusion of more than 300 ppm in the polyvinyl chloride resin coating of polyvinyl chloride wire</p> <p>③. Use of cadmium, in which the total concentration by weight of cadmium, lead, mercury and hexavalent chromium is more than 100 ppm in the application as packaging materials</p> <p>④. Lead in batteries or rechargeable batteries containing 0.4% or more lead by total weight.</p>				
<p><Exempted items> * Check the latest information on this matter for confirmation</p> <ul style="list-style-type: none"> • Lead contained in the glass of cathode ray tubes, electronic parts and fluorescent lamps • Up to 0.35 wt% of lead in steel materials, up to 0.4 wt% of lead in aluminum materials, and up to 4 wt% of lead in copper materials, respectively as an alloy component • Lead in high melting temperature type solders (i.e. lead based alloys containing 85 % or more lead) • Lead in electronic ceramic parts (ex., piezoelectronic devices) • Lead in lead-bronze bearing shells and bushes • Lead used in compliant pin connector systems • Lead as a coating material for the thermal conduction module c-ring • Lead in optical and filter glass <p style="text-align: right;">and many other exemptions</p>				
<p><Relevant law/regulation></p> <p>76/769/EC, 2002/95/EC (RoHS Directive), 94/62/EEC (on Packaging Material), and amendments relevant to these laws/regulations, Proposition65</p>				

4. Mercury and its compounds (JGPSSI substance group No. A10)

Typical example of applicable substance		Chemical formula	CAS No.	Application
水銀	Mercury	Hg	7439-97-6	dry batteries, fluorescent materials, thermometers
塩化第二水銀	Mercury(II) chloride	HgCl ₂	7487-94-7	
酸化水銀(II)	Mercury(II) oxide	HgO	21908-53-2	pigments, preservative agent
その他の水銀化合物	Other mercury compounds			
<p>< Applicable range ></p> <p>①. Intentional use</p> <p>②. Inclusion of more than 1000 ppm (0.1wt%) as impurity</p> <p>③. Use of cadmium, in which the total concentration by weight of cadmium, lead, mercury and hexavalent chromium is more than 100 ppm in the application as packaging materials</p> <p>④. Use of 5 ppm or less of mercury in batteries and use of 2% or less of mercury in button batteries</p>				
<p><Exempted items> * Check the latest information on this matter for confirmation</p> <ul style="list-style-type: none"> • Mercury contained in small fluorescent lamps, in which the amount of mercury is not more than 5 mg per lamp • Mercury contained in general purpose straight tube fluorescent lamps that contain the following compounds by no more than the following amounts <ul style="list-style-type: none"> - Halphosphate 10mg - Triphosphate with normal lifetime 5 mg - Triphosphate with long lifetime 8 mg • Mercury contained in the straight tube fluorescent lamps for special purpose • Mercury contained in the other lamps not particularly specified in the RoHS Annex 				
<p><Relevant law/regulation></p> <p>76/769/EC, 2002/95/EC (RoHS Directive), 94/62/EEC (on Packaging Material), and amendments relevant to these laws/regulations, Proposition65</p>				

5. Polybrominated biphenyls (PBBs) (JGPSSI substance group No. B02)				
Typical example of applicable substance		Chemical formula	CAS No.	Application
デカブロモビフェニル	Decabromobiphenyl	C ₁₂ Br ₁₀	13654-09-6	flame retardants
3,3',4,4-ブロモビフェニル	3,3',4,4-bromobiphenyl	C ₁₂ H ₆ Br ₄	77102-82-0	
2,2',4,5,5'-ペンタブロモビフェニル	2,2',4,5,5'-pentabromobiphenyl	C ₁₂ H ₅ Br ₅	67888-96-4	
< Applicable range >				
①. Intentional use				
②. Inclusion of more than 1000 ppm (0.1wt%) as impurity				
<Exempted items> * Check the latest information on this matter for confirmation				
NA				
<Relevant law/regulation>				
76/769/EC and relevant amendments, 2002/95/EC (RoHS Directive)				

6. Polybrominated diphenyl ethers (PBDEs) (JGPSSI substance group No. B03)				
Typical example of applicable substance		Chemical formula	CAS No.	Application
ペンタブロモジフェニルエーテル	Pentabromodiphenyl ether	C ₁₂ H ₅ Br ₅ O	32534-81-9	flame retardants
オクタブロモジフェニルエーテル	Octabromodiphenyl ether	C ₁₂ H ₂ Br ₈ O	32536-52-0	
デカブロモジフェニルエーテル	Decabromodiphenyl ether	C ₁₂ Br ₁₀ O	1163-19-5	
< Applicable range >				
①. Intentional use				
②. Inclusion of more than 1000 ppm (0.1wt%) as impurity				
<Exempted items> * Check the latest information on this matter for confirmation				
<Relevant law/regulation>				
76/769/EC and relevant amendments, 2002/95/EC (RoHS Directive)				

7. Asbestos (JGPSSI substance group No. C01)

Typical example of applicable substance		Chemical formula	CAS No.	Application
アスベスト類	Asbestos		1332-21-4	Brake lining pad,
クロシドライト	Crocidolite	$\text{Na}_2\text{Fe}_{32}+\text{Fe}_{23}+\text{Si}_8\text{O}_{22}(\text{OH})_2$	12001-28-4	insulator, filler, abrasive,
アモサイト	Amosite	$(\text{Mg,Fe})_7\text{Si}_8\text{O}_{22}(\text{OH})_2$	12172-73-5	insulator, filler, pigment,
アンソフィライト	Anthophyllite	$\text{Mg}_7\text{Si}_8\text{O}_{22}(\text{OH})_2$	77536-67-5	paint, talc, adiabatic
アクチノライト	Actinolite	$\text{Ca}_2(\text{Mg,Fe})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$	77536-66-4	material
トリモライト	Tremolite	$\text{Ca}_2\text{Mg}_5\text{Si}_8\text{O}_{22}(\text{OH})_2$	77536-68-6	
クリソタイル	Chrysotile	$\text{Mg}_3\text{Si}_2\text{O}_5(\text{OH})_4$	12001-29-5	
< Applicable range >				
Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation				
NA				
<Relevant law/regulation>				
Japanese Air Pollution Control Law, Japanese Industrial Safety and Health Law, 76/769/EC and relevant amendments				

8. Azo dye/pigment forming specified amine and specified azo dyes (JGPSSI substance group No. C02)

Typical example of applicable substance		Chemical formula	CAS No.	Application
赤色顔料 8 (ピグメントレッド 8)			6410-30-6	Pigment, dyes, colorants
赤色顔料 22 (ピグメントレッド 22)			6448-95-9	
赤色顔料 38 (ピグメントレッド 38)			6358-87-8	
4-アミノジフェニル	4-aminodiphenyl		92-67-1	
ベンジジン	Benzidine		92-87-5	
4-クロロ-O-トルイジン	4-chloro-o-toluidine		95-69-2	
2-ナフチルアミン	2-naphthylamine		91-59-8	
4-アミノ-2',3'-ジメチルアゾベンゼン	4-amino-2',3-dimethylazobenzen		97-56-3	
2-アミノ-4-ニトロトルエン	2-amino-4-nitrotoluene		99-55-8	
4-クロロアニリン	4-chloroaniline		106-47-8	
2, 4-ジアミノアニソール	2,4-diaminoanisoole		615-05-4	
4,4'-ジアミノジフェニルメタン	4,4'-diaminodiphenylmethane		101-77-9	
3,3'-ジクロロベンジジン	3,3'-dichlorobenzidine		91-94-1	
3,3'-ジメトキシベンジジン	3,3'-dimethoxybenzidine		119-90-4	
3,3'-ジメチルベンジジン	3,3'-dimethylbenzidine		119-93-7	
3,3'-ジメチル-4,4'-ジアミノジフェニルメタン	3,3'-dimethyl-4,4'-diaminodiphenylmethane		838-88-0	
4-クレシジン (別名 4-メチル-2-アミノアニソール)	4-cresidine		120-71-8	
4,4'-メチレンビス(2-クロロアニリン)	4,4'-methylene-bis-(2-chloroaniline)		101-14-4	
4,4'-オキシジアニリン	4,4'-oxydianiline		101-80-4	
4,4'-チオジアニリン	4,4'-thiodianiline		139-65-1	
2-アミノトルエン	2-aminotoluene		95-53-4	
2,4-ジアミノトルエン	2,4-diaminotoluene		95-80-7	
2,4,5-トリメチルアニリン	2,4,5-trimethylaniline		137-17-7	
2-メトキシアニリン	2-methoxyaniline		90-04-0	
4-アミノアゾベンゼン	4-aminoazobenzene		60-09-3	
< Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation				
Use irreverent to direct and / or long-time touch with human skin and mouth				
<Relevant law/regulation> 76/769/EC and relevant amendments				

9. Ozone-depleting substances (1/2) - Montreal protocol class I (JGPSSI substance group No. C04)

Typical example of applicable substance	Chemical formula	CAS No.	Application
トリクロロフルオロメタン (別名 CFC-11)	CCl_3F	75-69-4	refrigerant, foaming
ジクロロジフルオロメタン (別名 CFC-12)	CCl_2F_2	75-71-8	agent, extinguishant,
トリクロロトリフルオロエタン	$\text{C}_2\text{Cl}_3\text{F}_3$	354-58-5 76-131-1	solvent cleaner
ジクロロテトラフルオロエタン	$\text{C}_2\text{Cl}_2\text{F}_4$	76-14-2	
クロロペンタフルオロエタン (別名 CFC-115)	C_2ClF_5	76-15-3	
ブロモクロロジフルオロメタン (別名ハロン-1211)	CBrClF	353-59-3	
ブロモトリフルオロメタン (別名ハロン-1301)	CBrF_3	75-63-8	
ジブロモテトラフルオロエタン	$\text{C}_2\text{Br}_2\text{F}_4$	124-73-2	
1, 1-ジブロモテトラフルオロエタン	$\text{C}_2\text{Br}_2\text{F}_4$	27336-23-8	
1, 2-ジブロモテトラフルオロエタン	$\text{C}_2\text{Br}_2\text{F}_4$	124-73-2	
クロロトリフルオロメタン (別名 CFC-13)	CClF_3	75-72-9	
ペンタクロロフルオロエタン (別名 CFC-111)	$\text{C}_2\text{Cl}_5\text{F}$	354-56-3	
テトラクロロジフルオロエタン (別名 CFC-112)	$\text{C}_2\text{Cl}_4\text{F}_2$	28605-74-5	
ヘプタクロロフルオロプロパン (別名 CFC-211)	C_3FCl_7	422-78-6	
ヘキサクロロジフルオロプロパン (別名 CFC-212)	$\text{C}_3\text{F}_2\text{Cl}_6$	3182-26-1	
ペンタクロロトリフルオロプロパン (別名 CFC-213)	$\text{C}_3\text{F}_3\text{Cl}_5$	134237-31-3	
テトラクロロテトラフルオロプロパン (別名 CFC-214)	$\text{C}_3\text{F}_4\text{Cl}_4$	29255-31-0	
トリクロロペンタフルオロプロパン (別名 CFC-215)	$\text{C}_3\text{F}_5\text{Cl}_3$	1599-41-3	
ジクロロヘキサフルオロプロパン (別名 CFC-216)	$\text{C}_3\text{Cl}_2\text{F}_6$	661-97-2 42560-98-5	
クロロヘプタフルオロプロパン (別名 CFC-217)	$\text{C}_3\text{F}_7\text{Cl}$	76-18-6	
四塩化炭素 (テトラクロロメタン)	CCl_4	56-23-5	
1, 1, 1-トリクロロエタンおよび異性体	$\text{C}_2\text{H}_3\text{Cl}_3$	71-55-6	
ブロモクロロメタン	CH_2BrCl	74-97-5	
ブロモメタン (臭化メチル)	CH_3Br	74-83-9	
ブロモジフルオロメタンおよび異性体 (HBFC 類)		1511-62-2	
< Applicable range >			
Intentional use			
<Exempted items> * Check the latest information on this matter for confirmation			
Brominated methyl used for halogen lumps specified in the Annex E group 1			
<Relevant law/regulation>			
Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and others (Japanese law), Montreal Protocol,			

9. Ozone-depleting substances (2/2) - Montreal protocol class II (JGPSSI substance group No. C04)

Typical example of applicable substance	Chemical formula	CAS No.	Application
ジクロロトリフルオロエタン (別名 HCFC-21)		75-43-4	refrigerant, foaming agent,extinguishant, solvent cleaner
クロロテトラフルオロエタン (別名 HCFC-22)		75-45-6	
トリクロロフルオロエタン (別名 HCFC-31)		593-70-4	
ジクロロジフルオロエタン (別名 HCFC-121)		134237-32-4	
クロロトリフルオロエタン (別名 HCFC-122)		354-21-2	
ジクロロフルオロエタン (別名 HCFC-123)		34077-87-7	
1,1-ジクロロ-1-フルオロエタン (別名 HCFC-124)		63938-10-3	
クロロジフルオロエタン (別名 HCFC-131)		27154-33-2	
1-クロロ-1,1-ジフルオロエタン (別名 HCFC-132)		25915-78-0	
クロロフルオロエタン (別名 HCFC-133)		1330-45-6	
ヘキサクロロフルオロプロパン (別名 HCFC-141)		25167-88-8	
ペンタクロロジフルオロプロパン (別名 HCFC-141b)		1717-00-6	
テトラクロロトリフルオロプロパン (別名 HCFC-142)		25497-29-4	
トリクロロテトラフルオロプロパン (別名 HCFC-142b)		75-68-3	
1-クロロ-1-フルオロエタン (別名 HCFC-151)		1615-75-4	
ヘキサクロロフルオロプロパン (別名 HCFC-221)		134237-35-7	
ペンタクロロジフルオロプロパン (別名 HCFC-222)		134237-36-8	
テトラクロロトリフルオロプロパン (別名 HCFC-223)		134237-37-9	
トリクロロテトラフルオロプロタン (別名 HCFC-224)		134237-38-0	
ジクロロペンタフルオロプロパン (別名 HCFC-225)		127564-92-5	
3,3-ジクロロ-1,1,1,2,2-ペンタフルオロプロパン (別名 HCFC-225ca)		422-56-0	
1,3-ジクロロ-1,1,2,2,3-ペンタフルオロプロパン (別名 HCFC-225cb)		507-55-1	
クロロヘキサフルオロプロパン (別名 HCFC-226)		134308-72-8	
< Applicable range >			
Concentration rate exceeds 1000ppm			
<Exempted items> * Check the latest information on this matter for confirmation			
NA			
<Relevant law/regulation>			
Law Concerning the Protection of theOzone Layer through the Control of Specified Substances and others (Japanese law), Montreal Protocol,			

10. Polychlorinated biphenyls (PCBs) (JGPSSI substance group No. B05)				
Typical example of applicable substance		Chemical formula	CAS No.	Application
PCB (ポリ塩化ビフェニル)			1336-36-3	insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; Plasticizers, fire retardants,
ペンタクロロビフェニル			25429-29-2	
PCT (ポリ塩化ターフェニル)			61788-33-8	
アルクロール			12767-79-2	
クロロジフェニル			11096-82-5	
カネクロール 500			27323-18-8	
アルクロール 1254			11097-69-1	
テルフェニル類			26140-60-3	
その他多数の混合物あり				
< Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation NA				
<Relevant law/regulation> The Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 1 chemicals: Japanese law), 76/769/EEC and relevant amendments				

11. Polychlorinated naphthalene (chlorine atoms # is 3 or more) (JGPSSI substance group No. B06)				
Typical example of applicable substance		Chemical formula	CAS No.	Application
ポリ塩化ナフタレン (塩素原子数が 3 以上)			70776-03-3	lubricant, paint, stabilizer (electric characteristic, flame-resistant, water-resistant) insulator, flame retardant
ペンタクロロナフタレン	pentachloronaphthalene	C ₁₀ H ₃ Cl ₅	1321-64-8	
トリクロロナフタレン	trichloronaphthalene	C ₁₀ H ₅ Cl ₃	1321-65-9	
ヘキサクロロナフタレン	Hexachloronaphthalene	C ₁₀ H ₂ Cl ₆	1335-87-1	
テトラクロロナフタレン	tetrachloronaphthalene	C ₁₀ HCl ₇	1335-88-2	
オクタクロロナフタレン	Octachloronaphthalene	C ₁₀ HCl ₈	2234-13-1	
その他のクロロナフタレン		塩素の置換え位置で多数の異性体あり		
< Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation NA				
<Relevant law/regulation> he Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 1 chemical substances: Japanese law),				

12. Radioactive Materials (JGPSSI substance group No. C06)				
Typical example of applicable substance	Chemical formula	CAS No.	Application	
プロメチウム	Pm	7440-12-2	optical properties	
アメリシウム	Am	7440-35-9	(thorium), measuring	
トリウム	Th	7440-29-1	devices, gauges, detector	
<Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation NA				
<Relevant law/regulation> Title 10 CFR Part 20 (Annex C). Laws for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986 (Japanese law)				

13. Chlorinated Paraffin (# carbon atoms 10~13, chlorination rate 60%) (JGPSSI substance group No. B09)				
Typical example of applicable substance	Chemical formula	CAS No.	Application	
塩化パラフィン(平均炭素数 12、平均塩素化率 60%)		108171-26-2	plasticizer for PVC, flame	
炭素数 10-13 の塩素化アルカン		85535-84-8	retardant	
<Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation NA				
<Relevant law/regulation> 76/769/EEC and relevant amendments				

14. Tributyltins (TBTs), Triphenyltins (TPTs) (JGPSSI substance group No. A18)

Typical example of applicable substance		Chemical formula	CAS No.	Application	
トリブチルスズ=メタクリラート	Tributyltin methacrylate	(C ₄ H ₉) ₃ SnC ₄ H ₅ O ₂	2155-70-6	Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, anti-fungal agent,paint, pigment, antistaining	
ビス(トリブチルスズ)=フマラート	Bis(tributyltin) fumarate	C ₂ H ₂ (COO) ₂ ((C ₄ H ₉) ₃ Sn) ₂	6454-35-9		
トリブチルスズ=フルオリド	Tributyltin fluoride	(C ₄ H ₉) ₃ SnF	1983-10-4		
トリブチルスズ=ラウラート	Tributyltin laurate	(C ₄ H ₉) ₃ Sn C ₁₂ H ₂₃ O ₂	3090-36-6		
トリブチルスズ=クロライド	Tributyltin chloride	(C ₄ H ₉) ₃ SnCl	1461-22-9		
マレイン酸=ビス (トリブチルスズ)	Bis(tributyltin)maleate	C ₂₈ H ₅₆ O ₄ Sn ₂	24291-45-0		
トリブチルスズ=スルファマート	Tributyltin sulfamate	C ₁₂ H ₂₉ NO ₃ SSn	6517-25-5		
ビス (トリブチルスズ) =フタラート	Bis(tributyltin)phthalate	C ₃₂ H ₅₈ O ₄ Sn ₂	4782-29-0		
酢酸トリブチルスズ	Tributyltin acetate	(C ₄ H ₉) ₃ Sn CH ₃ COOH	56-36-0		
水酸化トリブチルスズ	Tributyltinhydroxide	C ₁₂ H ₂₈ OSn	1067-97-6		
その他のトリブチルスズ類					
トリフェニルスズ=クロロアセタート	Triphenyltinchloroacetate	C ₂₀ H ₁₇ ClO ₂ Sn	7094-94-2		
トリフェニルスズ脂肪酸(=9-11)塩	Triphenyltin fattyacid(9-11)SALT)				
N,N-ジメチルジチオカルバミン酸=トリフェニルスズ	Triphenyltin=N,N-Dimethyldithiocarbamate	C ₂₁ H ₂₁ NS ₂ Sn	1803-12-9		
トリフェニルスズ=フルオリド	Triphenyltinfluoride	C ₁₈ H ₁₅ FSn	379-52-2		
トリフェニルスズヒドロキシド	Triphenyltinhydroxide	C ₁₈ H ₁₆ OSn	76-87-9		
酢酸トリフェニルスズ	Triphenyltin acetate	C ₂₀ H ₁₈ O ₂ Sn	900-95-8		
トリフェニルスズ=クロライド	Triphenyltinchloride	C ₁₈ H ₁₅ ClSn	639-58-7		
トリフェニルスズ	Triphenyltin	C ₁₈ H ₁₆ Sn	892-20-6		
その他のトリフェニルスズ化合物					
< Applicable range > Intentional use					
<Exempted items> * Check the latest information on this matter for confirmation					
NA					
<Relevant law/regulation> The Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 2 chemical substances: Japanese law)					

15. Bis (tributyl tin) oxide (TBTO) (JGPSSI substance group No. A17)				
Typical example of applicable substance		Chemical formula	CAS No.	Application
ビス (トリブチルスズ) =オキシド	Bis(tri-n-butyltin) oxide	$O(Sn(C_4H_9)_3)_2$	56-35-9	Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, anti-fungal agent, paint, pigment, antistaining
< Applicable range > Intentional use				
<Exempted items> * Check the latest information on this matter for confirmation NA				
<Relevant law/regulation> The Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 2 chemical substances: Japanese law)				

2) Controlled substances (9 substance groups)

If listed substances include in a products/components exceed specified threshold level, it should be reported.

1. Antimony and its compounds (JGPSSI substance group No.A01)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
アンチモン (金属性)	7440-36-0	1000ppm	三塩化アンチモン	10025-91-9	1000ppm
三酸化アンチモン	1309-64-4		アンチモン酸ナトリウム	15432-85-6	
五酸化アンチモン	1314-60-9		その他アンチモン化合物		

2. Arsenic and its compounds (JGPSSI substance group No. A02)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
ヒ素	7440-38-2	1000ppm	三酸化ヒ素	1327-53-3	1000ppm
ガリウムヒ素	1303-00-0		亜ヒ酸カリウム	10124-50-2	
ヒ酸カルシウム	7778-44-1		ヒ酸カリウム	7784-41-0	
亜ヒ酸カルシウム	27152-57-4		ヒ酸鉛	3687-31-8	
五酸化ヒ素	1303-28-2		その他のヒ素化合物		

3. Beryllium and its compounds (JGPSSI substance group No. A03)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
ベリリウム	7440-41-7	1000ppm	リン酸ベリリウム	13598-15-7	1000ppm
ベリリウム-アルミニウム合金	12770-50-2		硫酸ベリリウム	13510-49-1	
塩化ベリリウム	7787-47-5		硫酸ベリリウム四水和物	7787-56-6	
フッ化ベリリウム	7787-49-7		ベリル鉱石	1302-52-9	
水酸化ベリリウム	13327-32-7		その他のベリリウム化合物		
酸化ベリリウム	1304-56-9				

4. Bismuth and its compounds (JGPSSI substance group No.A04)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
ビスマス	7440-69-9	1000ppm	硫酸ビスマス	10361-44-1	1000ppm
三酸化ビスマス	1304-76-3		その他のビスマス化合物		

5. Brominated Flame Retardants (other than PBBs or PBDEs) (JGPSSI substance group No.B08)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
ISO1043-4 コード番号 FR(14)[脂肪族／脂環式臭素化合物]の表記法に該当する臭素系難燃剤		1000ppm	ISO1043-4 コード番号 FR(15)[脂肪族／脂環式臭素化合物とアンチモン化合物の組み合わせ]に該当する臭素系難燃剤		1000ppm
ISO1043-4 コード番号 FR(16)[芳香族臭素化合物（臭素化ジフェニルエーテルおよびビフェニルを除く）]の表記法に該当する臭素系難燃剤			ISO1043-4 コード番号 FR(17)[芳香族臭素化合物（臭素化ジフェニルエーテルおよびビフェニルを除く）とアンチモン化合物の組み合わせ]の表記法に該当臭素系難燃剤		
ISO1043-4 コード番号 FR(22)[脂肪族／脂環式臭素化合物]の表記法に該当する臭素系難燃剤			ISO1043-4 コード番号 FR(42)[臭素化有機リン化合物]の表記法に該当する臭素系難燃剤		
ポリ(2,6-ジブロモフェニレンオキソド)	69882-11-7		TBBA(テトラブロモヒスフェノール A) -構造特定せず	30496-13-0	
テトラブロモ-p-ジフェニルケトン	58965-66-5		TBBA(エビクロロトリリンオリゴマー)	40039-93-8	
1,2-ビス(2,4,6-トリブロモフェニル)エタン	37853-59-1		TBBA(TBBA-ジグリシジルエーテルオリゴマー)	70682-74-5	
3,5,3',5'-テトラブロモヒスフェノール A	79-94-7	TBBA(炭酸オリゴマー)	28906-13-0		

5. Brominated Flame Retardants (other than PBBs or PBDEs) *continued

Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
BC-52 テトラブ ^ロ モビ ^ス フェノール A	94334-64-2	1000ppm	ボ ^リ トリブ ^ロ モスチレン	57137-10-7	1000ppm
BC-58 テトラブ ^ロ モビ ^ス フェノール A	71342-77-3		トリブ ^ロ モスチレン	61368-34-1	
TBBA-ビ ^ス フェノール A ホスゲン ^ホ リマー	32844-27-2		ジ ^ブ ロモ-スチレン、PP クラフタイト ^ド	171091-06-8	
臭素化エボ ^キ シレンシ ^ン 、トリブ ^ロ モフェノールエン ト ^ド キャップト	139638-58-7		ボ ^リ ジ ^ブ ロモスチレン	31780-26-4	
臭素化エボ ^キ シレンシ ^ン 、トリブ ^ロ モフェノールエン ト ^ド キャップト	135229-48-0		ブ ^ロ モ/クロモスチレン	68955-41-9	
TBBA-(2,3-ジ ^ブ ロモブ ^ロ ビ ^ル エーテル)	21850-44-2		ブ ^ロ モ/クロロアルファオレフィン	82600-56-4	
TBBA ビ ^ス (2-ヒト ^ロ キシエチルエーテル)	4162-45-2		ブ ^ロ モエチレン	593-60-2	
TBBA ビ ^ス (アリルエーテル)	25327-89-3		トリス(2,3-ジ ^ブ ロモブ ^ロ ビ ^ル)イソシアヌ酸	52434-90-9	
TBBA シ ^メ チルエーテル	37853-61-5		トリス(2,4-ジ ^ブ ロモフェニル)フォスフェート	49690-63-3	
テトラブ ^ロ モビ ^ス フェノール S	39635-79-5		トリス(トリブ ^ロ モネオヘ ^ン チル)フォスフェート	19186-97-1	
TBBS ビ ^ス (2,3-ジ ^ブ ロモブ ^ロ ビ ^ル エーテル)	42757-55-1		塩素化、臭素化リン酸エステル	125997-20-8	
2,4-ジ ^ブ ロモフェノール	615-58-7		ヘ ^ン タブ ^ロ モトルエン	87-83-2	
2,4,6-トリブ ^ロ モフェノール	118-79-6		ヘ ^ン タブ ^ロ モヘ ^ン ジ ^ル ブ ^ロ ミト	38521-51-6	
ヘ ^ン タブ ^ロ モフェノール	608-71-9		臭素化 1,3-ブ ^タ ジ ^ン エノホ ^ホ リマー	68441-46-3	
2,4,6-トリブ ^ロ モフェニルアリルエーテル	3278-89-5		ヘ ^ン タブ ^ロ モヘ ^ン ジ ^ル アクリレートモノマー	59447-55-1	
トリブ ^ロ モフェニルアリルエーテル (構造特定せず)	26762-91-4		ヘ ^ン タブ ^ロ モヘ ^ン ジ ^ル アクリレート ^ホ リマー	59447-57-3	
テトラブ ^ロ モフタル酸ジ ^メ チル	55481-60-2		デ ^カ ブ ^ロ モジ ^{フェ} ニルエタン	61262-53-1	
テトラブ ^ロ モフタル酸ビ ^ス (2-エチルヘキシル)	26040-51-7		トリブ ^ロ モビ ^ス フェニルマレインイミ ^ド	59789-51-4	
2-(2-ヒト ^ロ キシエトキシ)エチル-2-ヒト ^ロ キシブ ^ロ ビ ^ル テトラブ ^ロ モフタレート	20566-35-2		臭素化トリメチルフェニルンテン	59789-51-4	
TBPA, ク ^リ ーコール-アント ^ブ ロビ ^ル レン-オキシ ト ^ド エステル	75790-69-1		その他の臭素系難燃剤		
N,N-エチレン-ビ ^ス (テトラブ ^ロ モフタルイミ ^ド)	32588-76-4	1,2,5,6,9,10-ヘキサブ ^ロ モシクロト ^デ カン	3194-55-6		
エチレン-ビ ^ス (5,6-ジ ^ブ ロモノル ^ボ ルナン-2,3-ジ ^ブ カル ^ボ キシミ ^ド)	52907-07-0	テトラブ ^ロ モシクロオクタン	31454-48-5		
2,3-ジ ^ブ ロモ-2-ブ ^テ ン-1,4-ジ ^オ ール	3234-02-4	1,2-ジ ^ブ ロモ-4-(1,2-ジ ^ブ ロモメチル)シクロ ヘキサン	33-22-93-8		
ジ ^ブ ロモネオヘ ^ン チルク ^リ コール	3296-90-0	TBPA Na ソルト	25357-79-3		
2,3-ジ ^ブ ロモブ ^ロ パ ^ノ ール	96-13-9	テトラブ ^ロ モフタル酸無水物	632-79-1		
トリブ ^ロ モネオヘ ^ン チルアルコール	36483-57-5				

6. Nickel (external use) (JGPSSI substance group No. A11)					
Typical example of applicable substance	CAS No.	Threshold Level			
ニッケル	7440-02-0	1000ppm	※ニッケルが長時間皮膚に触れる可能性のある用途のみ報告		

7. Certain Phthalates (JGPSSI substance group No. C05)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
フタル酸ビス (2-エチルヘキシル) (DEHP)	117-81-7	1000ppm	フタル酸ビス (2-メトキシエチル) (DBP)	117-82-8	1000ppm
フタル酸ジプチル (DBP)	84-74-2				

8. Selenium/SeleniumCompounds (JGPSSI substance group No.A13)					
Typical example of applicable substance	CAS No.	Threshold Level	Typical example of applicable substance	CAS No.	Threshold Level
セレン	7782-49-2	1000ppm	セレン酸ナトリウム	10112-94-4	1000ppm
セレン化水素	7783-07-5		ジメチルセレン化合物	593-79-3	
セレン化ナトリウム	1313-85-5		二酸化セレン	12640-89-0	
酸化セレン	7446-08-4		その他のセレン化合物		

9. Polyvinyl Chloride (JGPSSI substance group No.B07)					
Typical example of applicable substance	CAS No.	Threshold Level			
ポリ塩化ビニル (PVC)	9002-86-2	1000ppm	※開示は閾値を超える量が「存在する」or「存在しない」		

- Attached document 2 -

Form for Certificate of Non-inclusion of
Substances in Products/Components Prohibited
by EU RoHS Directive

YASKAWA ELECTRIC CORPORATION

September 20, 2007

Document control No. _____

Date:

To: Yaskawa Electric Corporation

Company name :

Title :

Name of responsible person :

Signature

TEL :

Certificate of non-inclusion of substances in products/components prohibited by EU RoHS Directive

We certify that we (including our affiliate companies and related companies) do not contain RoHS Directive prohibited substances in the following products or components (including accessories and constitution of other products/components) supplied to Yaskawa Electric Corporation in accordance with “Green Procurement Guidelines of Yaskawa Electric Group, third edition.”

1. RoHS Directive prohibited substances (6 substance groups)

Lead, mercury, cadmium, hexavalent chromium

Polybrominated biphenyls (PBBs), Polybrominated diphenylethers (PBDEs)

※ ”No inclusion” means that concentration of the prohibited substances is less than threshold of RoHS Directive indication regardless intentionally or unintentionally. However, this is not applicable to the regulation exemption of RoHS Directive. For details such as definitions, refer to “Green Procurement Guidelines of Yaskawa Electric Group, third edition.”

2. Controlled products or components

	Yaskawa Code	Name of material	Model identifier	Delivery starting date
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

※ Separate lists are acceptable if necessary (separate lists shall have the Document control No. also).

※ In case of changes within the same model ,specify the delivery starting date.