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**JUKI**

# **The Juki Group Green Procurement Activity Guideline (7th Edition)**

Established: August 4, 2004  
Revised: July 10, 2010

**Juki Corporation**

**Foreword:**

The Juki Group continues to carry out activities with unremitting efforts following “ECO MIND Declaration”, enacted in 1998, to practice corporate activities that will conserve the global environment.

Juki Corporation is ISO 14001 certified of the environmental management system standard and carrying on activities to develop products that are environmental-friendly.

Following this “Juki Group Green Procurement Activity Guideline” (hereinafter referred to as “Guideline”) specifying the policy and standards of the Juki Group’s Green Procurement Activity to implement environmental conservation activities working with vendors and control hazardous substances properly, we will provide our customers with environment-friendly products and pursue global environment conservation in depth.

In order to move forward with this Green Procurement Activity, this Guideline was prepared to establish standards of hazardous substances to the environment and environmental management system at vendors as well as clarify the evaluation criteria that respond to the increase in environmental impact substances spreading to the world.

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## 1: Environmental Conservation Policy of the Juki Group

### “ECO MIND Declaration”

#### **Environmental Idea**

With the understanding that corporate activities have a great influence upon the global environment, JUKI declares that we:

1. Contribute to society and community through corporate activities considering the environment
2. Provide worldwide consumers with products that are safe to the environment
3. Play a role which relays better global environment to the next generation through continuous activities

#### **Guideline for Environmental Activities**

1. Prevent global warming by promoting energy-saving in all business activities and use resource efficiently by implementing the 3Rs (Reduce, Reuse, and Recycle).
2. Provide products with less environmental load by planning, researching, developing, procuring, and manufacturing with environmental influences in mind.
3. Contribute to countries and regions by modifying environmental conservation activities to suit local conditions wherever Juki does business as a global company.
4. Observe environmental laws and other agreed requirements, and prevent environmental pollution.
5. Actively disclose environmental information.
6. Raise "awareness of ecological problems" among employees through educational campaigns.

## **2: Purpose**

Provide customers with environment-friendly products by maintaining and improving product compatibility with the environment by working with vendors based on standards for procurement of parts and component materials used on products of the Juki domestic and overseas companies as well as its affiliated group companies (hereinafter referred to as “Juki Group”) and environment conservatory activities at vendors

## **3: Application**

- (1) The following goods used for the products manufactured by the Juki group including overseas production and marketed under the JUKI brand:
  - 1) Purchased parts and raw materials for production of machine
  - 2) Subassembly including mechanical units and modules
  - 3) Component materials and ingredients (oil, grease, paint, ink, glue and etc.)
  - 4) Printed materials and packing components for product
  - 5) Finished consignment goods (Those sold under the JUKI brand name)
  
- (2) The following goods are exempted from the Guideline
  - 1) Stationary, office supplies, OA equipment used in office and factory and related consumables
  - 1) Chemical reagent used for test and analysis
  - 2) Chemicals, instrument, and parts used to operate factory facility and equipment
  - 3) Packing components for transportation and storage of purchased parts, blank and raw materials  
(Note, however, that packing components for parts shipped from the Juki Group are intended for the Guideline.)
  - 4) Supplemental materials and components used during manufacturing but not remained on machine/parts
  - 5) For exemptions of the use of Prohibited Substances, refer to the Annex 1: A-3 Exemptions of the use of Prohibited Substances. (Note, however, that there is no exemption in the China RoHS.)

## **4: Definition of Terms**

- (1) Product  
Machine devices, packing materials, and all printed materials including instruction manual.
- (2) Packing material  
Goods used to transport and protect finished products, parts, and raw materials. Specifically, carton box, tape, band, bags, sheet, stick, reel, tray, wood crate, cushioning material, label, ink, paint, and substances related to packing used for fungicide etc.
- (3) Inclusion  
Ingredients intentionally introduced or added. Or foreign substances are included.

## 5: Green Procurement Activity Policy

- (1) In parts and raw material purchasing activity, the Juki Group evaluates “Establishment, operation, and result of environmental management system” and “Hazardous substances contained in parts and raw materials” in two aspects: venders’ business activity and performance as a result of its operation.
- (2) It is requested to follow environment conservatory activities required by the Juki Group referring to “Establishment, operation, and result of environmental management system” and to self-evaluate the result of activities and make continuous improvements accordingly
- (3) Each part and material will be subject to evaluation referring to “Hazardous substances contained in parts and raw materials”.
- (4) Venders are requested to submit information of “Establishment, operation, and result of environmental management system” and “Hazardous substances contained in parts and raw materials” to the Juki Group.
- (5) The Juki Group evaluates “Establishment, operation, and result of environmental management system” and “Hazardous substances contained in parts and raw materials” submitted by venders and makes a decision whether or not to continue doing business with the vender.
- (6) The Juki Group may stop doing business with those venders who do not meet the requirement. In addition, the Juki Group does not purchase parts and materials that do not meet the requirement.

### Evaluation Viewpoint of JUKI Group Green Activity

#### Business Activity at Vender

Establishment, operation, and result of environmental management system

#### Performance

Hazardous substances contained in parts and raw materials

**6: Standards for Green Procurement Activity**

6.1: Establishment, operation, and result of environmental management system of vendors

Please answer the following statements in “Appraisal in Environmental Management “ (Annex 2 - Form 1) and submit.

(1) Environmental management system

- 1) Whether or not an environmental management system (EMS) certified by the third party such as ISO14001 is established
- 2) If not certified, all of the following requirements should be met
  - (a) Have corporate philosophy, policy, self-standards, target and a plan to achieve the target
  - (b) Organize a group or committee for environment conservatory and implement its own plan to reduce burden to the environment
  - (c) Comply with environment conservatory regulations
  - (d) Organize internal audit procedures for environment conservatory activities and implement them
  - (e) As environment conservatory activities, procedures for the following subjects are set up for evaluation
    - a. Energy management
    - b. Waste management
    - c. Chemical substance management
    - d. Environmental risk management
    - e. Product assessment
    - f. Education program for environment conservatory
    - g. Emergency response related to environment conservatory

(2) Environmental conservatory efforts in product assessment

- 1) Saving natural resources including water, forest, metal and so on
- 2) Reducing material resources invested
- 3) Reducing industrial waste and minimizing waste disposal
- 4) Minimizing energy consumption for manufacturing
- 5) Minimizing energy consumption for transportation
- 6) Reducing packing material consumption for saving resources and efficient transportation
- 7) Reducing power consumption and standby power
- 8) Considering reusability (Easiness of reuse, longer life)
- 9) Considering recycling (Identify material, use recycled material, recycle parts)
- 10) Considering resolvability (separation) and parting

## 6.2: Hazardous substances contained in parts and raw materials

Check whether parts and materials are containing hazardous substances to the environment listed in “Controlled Substance List” (Annex 1). If contained, check the inclusion amount and take action to eliminate, reduce, or control the amount. Moreover, please submit the inclusion information to us with the JAMP communication sheet (Note 1).

## (1) Standards for Hazardous Substance to the Environment

Level	Category	Standards	Submission of the inclusion information (○: Required, ×: Not required)	Submission of the Certificate of Environmental Limit in Products (○: Required, ×: Not required)
A	Prohibited substances (23)	Prohibit the use of those substances for parts and materials and require guarantee for nonuse. However, those substances that cannot be substituted will be exempted from this standard.	○	○
B	<u>Declarable substances</u> (18)	With the understanding of the inclusion amount and application of the substance, <u>declare the inclusion information.</u>	○	×

Please report the substances corresponding to the JAMP controlling substances other than level A or B to us if you know their inclusion (the substances were intentionally added or you received the inclusion information from the material makers etc.).

Note 1: JAMP (Joint Article Management Promotion-consortium)

<http://www.jamp-info.com/> (JAMP home page)

<http://www.jamp-info.com/list> (JAMP controlling substances download page)

<http://www.jamp-info.com/ais> (JAMP AIS download page)

<http://www.jamp-info.com/msds> (JAMP MSDS plus download page)

For “What is JAMP?” and “JAMP controlling substances,” please refer to the above-mentioned home pages. Moreover, please download the communication sheet (AIS and MSDS plus) and their instruction manuals/operation manuals from the above-mentioned home pages to use them.

## 7: Request for responses to vendors

### (1) Documents to be submitted

- 1) Appraisal in Environmental Management (Annex 2 - Form 1)
- 2) Certificate of Environmental Limit in Products (Annex 2 - Form 2)
- 3) Inclusion Information Data File prepared with JAMP Communication Sheet (XML data format)
- 4) Green Procurement Improvement /Confirmation Form, and Nonconformity and Measure Report (Annex 2 - Form 3)

If revision is necessary after submission, please resubmit the revised documents.

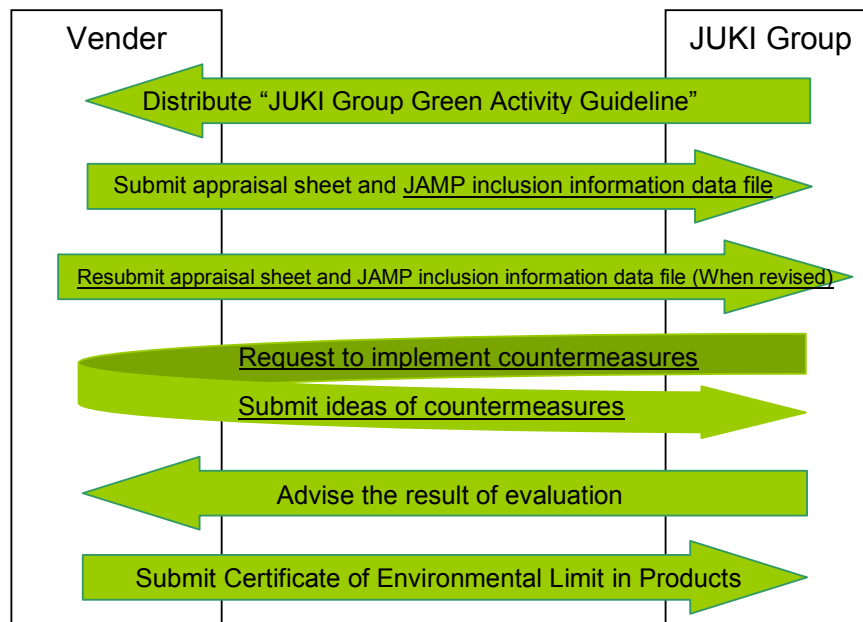
### (2) Response

Please enter the inclusion information on parts, raw material, etc. into the communication sheet downloaded from the JAMP home page and submit their data file to us. Moreover, please enter the other data into the electronic file that the Juki Group provides with you and send it back to a proper contact of the Juki Group.

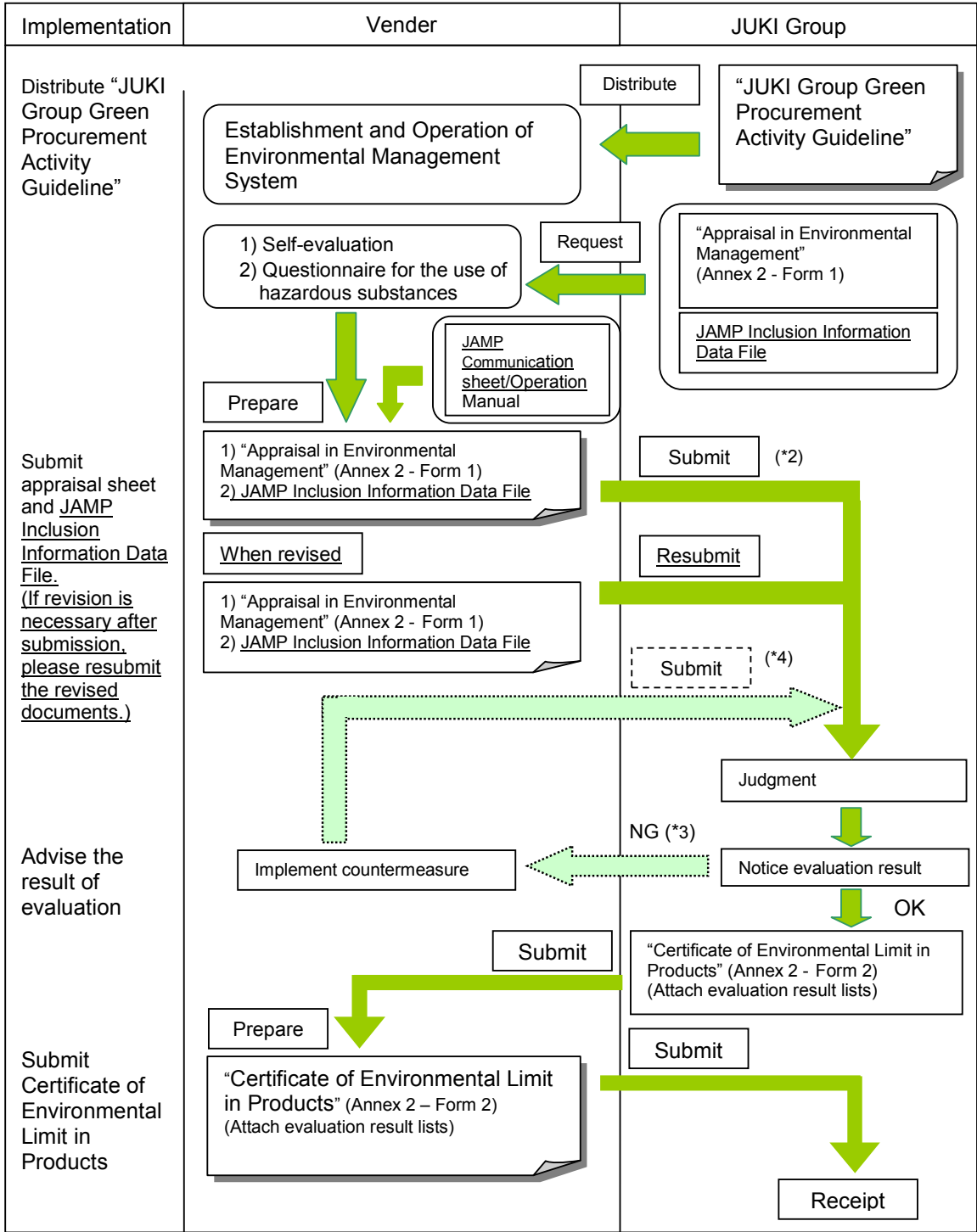
If need arises, we may request to implement countermeasures to satisfy the requirement and the Juki Group will issue the “Green Procurement Improvement /Confirmation Form (Annex 2 - Form3), and please complete and submit the “Nonconformity and Measure Report” in the low part (Annex 2 - Form3) to us. As for non inclusion of Prohibited Substances, please submit the “Certificate of Environmental Limit in Products” (Annex 2 - Form 2) to us after passing the evaluation by the Juki Group.

## 8: Operation

### (1) Diagram of Operation



2. Flow of detail



\*2: Please submit the document within 1 month from the date the request was made.  
 \*3: If need arises, we may request to implement countermeasures to satisfy the requirement and JUKI group issues the "Green Procurement Improvement /Confirmation Form" (Annex 2 - Form 3).  
 \*4: Please complete and submit the "Nonconformity and Measure Report" (Annex 2 - Form 3) to us in response to the "Green Procurement Improvement /Confirmation Form" (Annex2 - Form 3).

# Annex 1 Controlled Substance List

## A-1 Prohibited Substances

Revised on July 10, 2010

No.	JGPSSI Classification No.	Substance/ Category	Key Legal and Regulatory or Industry Standard/Agreement Citation	Reportable Application(s)	Threshold Level (Reporting level)	Examples of Use
1	A05	Cadmium/cadmium compounds	ANNEX XVII of REACH Regulation (EC) No 1907/2006; 2002/95/EC and 2005/618/EC China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	<u>All, except as noted below</u>	0.01% by weight (100 ppm) of homogeneous materials	Pigment, anticorrosion surface treatment, electric and electronic materials, optical material, stabilizer, plating, pigment for resin, fluorescent, electrode, solder, electric contact, contact point, zinc plating, <u>stabilizer for PVC</u>
			<u>Swiss Ordinance on Reduction of Risk from Chemical Products;</u> <u>EU Directive 2006/66/EC</u>	Batteries (Note 2)	<u>0.0005% by weight (5 ppm) of battery</u>	<u>Batteries</u>
			94/62/ECC (EU Packaging Directive)	Packing material	Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) <100ppm	Packing material
2	A07	Chromium VI compounds	ANNEX XVII of REACH Regulation (EC) No 1907/2006; 2002/95/EC and 2005/618/EC China MII Methods; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	<u>All, except packing material</u>	0.1% by weight (1 000 ppm) of homogeneous materials	Pigment, paint, ink, catalyst, plating, anticorrosion surface treatment, dye, paint dryer, paints adhesion enhancement
			94/62/ECC (EU Packaging Directive)	Packing material	Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) <100ppm	Packing material
3	A09	Lead/lead compounds	<u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u> <u>2002/95/EC and 2005/618/EC China MII Methods;</u> <u>Korea RoHS;</u> <u>Japan J-MOSS;</u> <u>US/CA SB-20/50</u>	<u>All, except as noted below</u>	0.1% by weight (1 000 ppm) of homogeneous materials	Rubber hardener, pigment, paint, lubricant, plastic stabilizer, materials for battery, freemachining alloy, freecutting steels, optical materials, X-ray shielding in CRT glass, electrical solder material, mechanical solder materials, curing agent, vulcanizing agent, ferroelectrics, resin stabilizer, plating, metal alloy, resin additive
			US/CA Proposition 65 Case law	<u>Cables/cords with thermoset or thermoplastic coatings</u>	0.03% by weight (300 ppm) of surface coating	Cables/cords
			<u>EU Directive 2006/66/EC</u>	Batteries (Note 2)	<u>0.004% by weight (40 ppm) of battery</u>	<u>Batteries</u>
			94/62/ECC (EU Packaging Directive)	Packing material	Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) <100ppm	Packing material
4	A10	Mercury/mercury compounds	<u>Vermont act relating to comprehensive management of exposure to mercury;</u> <u>Rhode Island General Laws 23-24.9 and amendment of 2007;</u> <u>Louisiana Mercury Risk Reduction Act;</u> <u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u> <u>EU Directives 2002/95/EC and 2005/618/EC;</u> <u>China MII Methods;</u> <u>Korea RoHS;</u> <u>Japan J-MOSS;</u> <u>US/CA SB-20/50</u>	<u>All, except as noted below</u>	Intentionally added or 0.1% (1 000 ppm) of <u>homogeneous material (Note 5)</u> , or Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) <100ppm	<u>Fluorescent bulb, contact point material, pigment, anticorrosion, switches, antibacterial treatment</u>
			<u>New York : Battery reduction and elimination N.Y. Envtl. Conserv. § 27-0719;</u> <u>Taiwan Restrictions on the Manufacture, Import, and Sale of Dry Cell Batteries;</u> <u>China QZHG 1997 No. 4: Regulation on mercury content limitation for batteries;</u> <u>Korea: Law on quality management and control of safety of industrial products Battery regulation;</u> <u>EU Directive 2006/66/EC</u>	Batteries (Note 2)	<u>0.0001% by weight (1 ppm) of battery</u>	<u>Batteries</u>
			94/62/ECC (EU Packaging Directive)	Packing material	Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) <100ppm	Packing material
5	A17	Tributyl Tin Oxide (TBTO)	Japan Law concerning the evaluation of chemical substances, <u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	Intentionally added or 0.1% by weight (1 000 ppm) of <u>the product (Note 5)</u>	Antiseptic, antifungal agent, paint, pigment, antistaining, refrigerant, foaming agent, extinguishant, solvent cleaner

No.	JGPSSI Classification No.	Substance/ Category	Key Legal and Regulatory or Industry Standard/Agreement Citation	Reportable Application(s)	Threshold Level (Reporting level)	Examples of Use
6	A18	<u>Tri-substituted organostannic compounds</u>	<u>Commission Decision 2009/425/EC;</u> Japan Law concerning the evaluation of chemical substances	<u>All</u>	<u>0.1% by weight (1 000 ppm) of tin in a material (Note 3)</u>	Stabilizer, antioxidant, antibacterial and antifungal agents, antifoulant, antiseptic, anti-fungal agent, paint, pigment, antistaining
7	B02	Polybrominated Biphenyls (PBBs)	EU Directive 2002/95/EC and 2005/618/EC; China MII Methods; <u>Korea RoHS;</u> Japan J-MOSS	<u>All</u>	0.1% by weight (1 000 ppm) in homogeneous material	Flame retardant
8	B03	Polybrominated Diphenylethers (PBDEs)	EU Directive 2002/95/EC and 2005/618/EC; China MII Methods; <u>Korea RoHS;</u> Japan J-MOSS	<u>All</u>	0.1% by weight (1 000 ppm) in homogeneous material	Flame retardant
9	B05	Polychlorinated Biphenyls (PCBs) and specific substitutes	Japan Law concerning the evaluation of chemical substances; <u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u> <u>US TSCA.</u>	<u>All</u>	Intentionally added	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, fire retardants, coatings for electrical wire and cable, dielectric sealants
10	B15	Polychlorinated terphenyls (PCTs)	Japan Law concerning the evaluation of chemical substances; <u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u> <u>US TSCA.</u>	<u>All</u>	Intentionally added	Insulation oil, lubricant oil, electrical insulation medium, solvent, electrolytic solution; plasticizers, fire retardants, coatings for electrical wire and cable, dielectric sealants
11	B06	Polychlorinated Naphthalenes (more than 3 chlorine atoms)	Japan Law concerning the evaluation of chemical substances	<u>All</u>	Intentionally added	Lubricant, paint, stabilizer (electric characteristic, flameresistant, waterresistant) insulator, flame retardant
12	B09	Shortchain Chlorinated Paraffins (C10 - C13)	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008);</u> <u>Norway Product Regulations FOR-2004-06-01-922;</u> <u>Swiss Ordinance on Reduction of Risk from Chemical Products</u>	<u>All</u>	0.1% by weight (1 000 ppm) of the product	Plasticizer for PVC, flame retardant
13	B13	Perfluorooctane sulfonate (PFOS)	<u>ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EC) No 552/2009;</u> <u>Canadian Environmental Protection Act SOR/SOR/2008-178</u>	<u>All</u>	Intentionally added	Antistatic agent for films and plastics
14	C01	Asbestos	<u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u> <u>US TSCA; Swiss Ordinance on Reduction of Risk from Chemical Products</u>	<u>All</u>	Intentionally added	Brake lining pad, insulator, filler, abrasive, pigment, paint, talc, adiabatic material
15	C02	Azocolourants and azodyes which form certain aromatic amines (Note 1)	<u>ANNEX XVII of REACH Regulation (EC) No 1907/2006;</u>	<u>Textile/leather</u>	0.003% by weight (30 ppm) of the finished textile/leather product	Pigment, dyes, colorants
16	C04	Ozone Depleting Substances	Montreal Protocol EU EC No. 2037/2000 <u>EC 1005/2009</u> US Clean Air Act	<u>All</u>	Intentionally added	Refrigerant, foaming agent, extinguishant, solvent cleaner
17	C06	Radioactive substances	<u>EU-D 96/29/Euratom;</u> <u>Japan Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors, 1986;</u> <u>US NRC</u>	<u>All (Note 4)</u>	Intentionally added	Optical properties (thorium), measuring devices, gauges, detector
18	C07	<u>Formaldehyde</u>	<u>US/CA CARB Rule</u>	<u>HWPW-VC (Veneer Core)</u>	<u>Intentionally added or 0.05 ppm (Note 4)</u>	<u>Industrial sewing tables procured by Juki. Stereo cabinets, kiosk enclosures</u>
				<u>MDF (Medium density fibers)</u>	<u>Intentionally added or 0.21 ppm (until December 31, 2010), 0.11 ppm (from January 1, 2011) (Note 4)</u>	<u>Industrial sewing tables procured by Juki. Stereo cabinets, kiosk enclosures</u>
				<u>Austria - BGB I 1990/194: Formaldehydverordnung, §2, 12/2/1990;</u> <u>Lithuanian Hygiene Norm HN 96:2000 (Hygiene standards and regulations)</u>	<u>Textiles</u>	<u>0.0075% by weight (75 ppm) of textile product</u>

No.	JGPSSI Classification No.	Substance/ Category	Key Legal and Regulatory or Industry Standard/Agreement Citation	Reportable Application(s)	Threshold Level (Reporting level)	Examples of Use
19		Cobalt chloride	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	All	0.1% by weight (1 000 ppm) of the product	<u>pneumatic panels to indicate water contamination</u>
			67/548/EEC	Indicator in desiccant	Intentionally added or 100 ppm of the product	Silica Gel
20		<u>Dimethyl fumarate (DMF)</u>	<u>COMMISSION DECISION 2009/251/EC</u>	<u>Products intended for consumer or that may be used by consumer</u>	<u>0.00001% by weight (0.1 ppm) in a material (Note 3)</u>	<u>Biocide, mold treatment of electronic leather seats, including recliners, massage chairs</u>
21		<u>Dibutyltin (DBT) compounds</u>	<u>COMMISSION DECISION 2009/425/EC</u>	All	<u>0.1% by weight (1 000 ppm) of tin in a material (Note 3)</u>	<u>Stabilizer for PVC, curing catalyst for silicone resin and urethane resin</u>
22		<u>Diocetyl tin (DOT) compounds</u>	<u>COMMISSION DECISION 2009/425/EC</u>	<u>(a) textile and leather articles intended to come into contact with the skin, (b) childcare articles (c) twocomponent room temperature vulcanisation moulding kits (RTV-2 moulding kits)</u>	<u>0.1% by weight (1 000 ppm) of tin in a material (Note 3)</u>	<u>Stabilizer for PVC, curing catalyst for silicone resin and urethane resin</u>
23		<u>Phenol,2-(2H-benzotriazol-2-yl)-,4,6-bis(1,1-dimethylethyl)</u>	<u>Japan Law concerning the evaluation of chemical substances</u>	All	Intentionally added	<u>Adhesives, paints, printing inks, plastics, inked ribbons, putty, caulking or sealing fillers</u>

© The above-mentioned Substance/Category is extracted from the Annex A (Normative) JIG Declarable Substance List of JIG (Joint Industry Guideline).

Source: JIG-101 Ed 3.0 Japanese translation version: Material Composition Declaration for Electrotechnical Products - April 1, 2010

Issue: Japan Green Procurement Survey Standardization Initiative (JGPSSI)

Intentionally added: Deliberate use in the formulation of a product where its continued presence is desired to provide a specific characteristic, appearance or quality.

Notes: These are based on the ones in Annex A (Normative) JIG Declarable Substance List of JIG (Joint Industry Guidance).

1. The European Community's ban applies to azo colorants and azo dyes that by reductive cleavage of azo groups may release one of the aromatic amines listed in the "Annex 1 Controlled Substance List (A-2 Prohibited Substances)." The threshold level given applies to these amines, not to the azo colorants and azo dyes.

2. The battery reporting threshold level is based on the strictest known legal requirement. However, for simplification, the same reporting threshold level is set for all kind of batteries, even if the underlying legal requirement is only applicable for only one specific battery type.

3. Commission Decision 2009/425/EC defines a concentration limit of 0.1% by weight of tin in the article or part thereof. Likewise Commission Decision 2009/251/EC defines a concentration limit of 0.00001% by weight of DMF in the product or part of the product. Because no legal definition of part is provided in these legislations, the most potentially restrictive concentration limit is not adequately specified. Therefore, the concentration limit is applied at the level of a material vs. a part to ensure disclosure of the regulated substances for the most

4. Regulatory thresholds for substances in these applications are based on emission or exposure limits rather than on the concentration in the product. The regulatory limit is: Radioactive substances \_\_\_\_\_ a dose rate exceeding 1µSv h-1 at a distance of 0.1 m.

Because emission and exposure levels cannot be derived from actual concentrations, a threshold level of "intentionally added" is indicated for reporting. Suppliers may choose to report a default concentration of 0.1% by weight in the product for these substances, in lieu of determining the exact concentrations in their products, to indicate that the substance is known to be present in their product, as the actual concentration in the product is not informative for regulatory compliance assessment.

5. If dual thresholds are set for the same substance category with the same reportable application, it is judged as "Do report" when the respective substance is intentionally added, or it is judged with another threshold when the respective substance is not intentionally added.

# Annex 1 Controlled Substance list

## A-2 Detailed List of Prohibited Substances

Revised on July 10, 2010

JGPSSI Classification No.	Substance/Category	JGPSSI Substance No.	Substance name	Metal Conversion No.	CAS. No.
A05	Cadmium/cadmium compounds	A05001	Cadmium	1.000	7440-43-9
		A05002	Cadmium oxide	0.875	1306-19-0
		A05003	Cadmium sulfide	0.778	1306-23-6
		A05004	Cadmium chloride	0.613	10108-64-2
		A05005	Cadmium sulfate	0.539	10124-36-4
		A05990 to 9	Other cadmium compounds	-	-
A07	Chromium VI compounds	A07002	Chromium (VI) oxide	0.520	1333-82-0
		A07007	Barium chromate	0.205	10294-40-3
		A07003	Calcium chromate	0.333	13765-19-0
		A07002	Chromium trioxide	0.520	1333-82-0
		A07004	Lead (II) chromate	0.161	7758-97-6/EC No.231-846-0
		-	Lead chromate molybdate sulphate red	-	12656-85-8/EC No. 235-759-9
		-	Lead sulphochromate yellow	0.161	1344-37-2/EC No. 215-693-7
		A07008	Sodium chromate	0.321	7775-11-3
		A07001	Sodium dichromate	0.397	10588-01-9
		A07009	Strontium chromate	0.255	7789-06-2
		A07005	Potassium dichromate	0.353	7778-50-9
		A07006	Potassium chromate	0.268	7789-00-6
		A07010	Zinc chromate	0.287	13530-65-9
		A07990 to 9	Other hexavalent chromium compounds	-	-
A09	Lead/Lead Compounds	A09001	Lead	1.000	7439-92-1
		A09009	Lead(II) sulfate	0.683	7446-14-2
		A09002	Lead(II) carbonate	0.775	598-63-0
		-	Lead chromate molybdate sulphate red	-	12656-85-8/EC No. 235-759-9
		A09008	Lead hydroxide carbonate	0.801	1319-46-6
		A09017	Lead acetate	0.637	301-04-2
		A09018	Lead(II) acetate, trihydrate	0.546	6080-56-4
		A09010	Lead phosphate	0.766	7446-27-7
		A09019	Lead selenide	0.724	12069-00-0
		A09003	Lead(IV) oxide	0.866	1309-60-0
		A09004	Lead(II,IV) oxide	0.907	1314-41-6
		A09005	Lead(II) sulfide	0.866	1314-87-0
		A09006	Lead(II) oxide	0.928	1317-36-8
		A09007	Lead(II) carbonate basic	0.801	1319-46-6
		A09008	Lead hydroxide carbonate	0.801	1344-36-1
		A09010	Lead(II) phosphate	0.766	7446-27-7
		-	Lead sulphochromate yellow	-	1344-37-2/EC No. 215-693-
		A09011	Lead(II) chromate	0.641	7758-97-6
		A09012	Lead(II) titanate	0.686	12060-00-3
		A09013	Lead sulfate, sulphuric acid, lead salt	1.000	15739-80-7
		A09014	Lead sulphate, tribasic	0.850	12202-17-4
A09015	Lead stearate	0.268	1072-35-1		
A09990 to 9	Other lead compounds	-	-		
A10	Mercury/Mercury Compounds	A10001	Mercury	1.000	7439-97-6
		A10004	Mercuric chloride	-	33631-63-9
		A10002	Mercury(II) chloride	0.739	7487-94-7
		A10005	Mercuric sulfate	0.676	7783-35-9
		A10006	Mercuric nitrate	0.618	10045-94-0
		A10003	Mercuric(II) oxide	0.926	21908-53-2
		A10007	Mercuric sulfide	0.862	1344-48-5
		A10990 to 9	Other mercury compounds	-	-
		A17	Tributyl Tin Oxide(TBTO)	A17001	Bis(tri-n-butyltin) oxide
A18	Certain Tributyl Tin (TBT) and Triphenyl Tin (TPT) compounds	A18001	Triphenyltin N,N'-dimethyldithiocarbamate	-	1803-12-9
		A18002	Triphenyltin fluoride	-	379-52-2
		A18003	Triphenyltin acetate	-	900-95-8
		A18004	Triphenyltin chloride	-	639-58-7
		A18005	Triphenyltin hydroxide	-	76-87-9
		A18006	Triphenyltin fatty acid((9-11)salt)	-	18380-71-7 18380-72-8 47672-31-1 94850-90-5
		A18007	Triphenyltin chloroacetate	-	7094-94-2
		A18008	Tributyltin methacrylate	-	2155-70-6
		A18009	Bis(tributyltin) fumarate	-	6454-35-9
		A18010	Tributyltin fluoride	-	1983-10-4
		A18011	Bis(tributyltin) 2,3-dibromosuccinate	-	31732-71-5
		A18012	Tributyltin acetate	-	56-36-0
		A18013	Tributyltin laurate	-	3090-36-6
		A18014	Bis(tributyltin) phthalate	-	4782-29-0
		A18015	Copolymer of alkyl(C=8) acrylate, methyl methacrylate and tributyltin methacrylate	-	67772-01-4

JGPSSI Classification No.	Substance/Category	JGPSSI Substance No.	Substance name	Metal Conversion No.	CAS. No.
		A18016	Tributyltinsulfamate	-	6517-25-5
		A18017	Bis(tributyltin) maleate	-	14275-57-1
		A18018	Tributyltinchloride	-	1461-22-9
		A18019	Tributyltin cyclopentane carbonate=mixture	-	5490-17-2
		A18020	Tributyltin 1,2,3,4,4a,4b,5,6,10,10a-decahydro-7-isopropyl-1,4a-dimethyl-1-phenanthrenecarboxylatemix	-	26239-64-5
			Other tri-substituted organostannic compounds	-	-
B02	Polybrominated Biphenyls (PBBs) * Following a definition of EU Directives 2002/95/EC	B02001	Polybrominated Biphenyls	-	59536-65-1
		B02002	Dibromobiphenyl	-	92-86-4
		B02003	2-Bromobiphenyl	-	2052-07-5
		B02004	3-Bromobiphenyl	-	2113-57-7
		B02005	4-Bromobiphenyl	-	92-66-0
		B02006	Tribromobiphenyl	-	59080-34-1
		B02007	Tetrabromobiphenyl	-	40088-45-7
		B02008	Pentabromobiphenyl	-	56307-79-0
		B02009	Hexabromobiphenyl	-	59080-40-9
		B02010	hexabromo-1,1-biphenyl	-	36355-01-8
		B02011	Firemaster FF-1	-	67774-32-7
		B02012	Heptabromobiphenyl	-	35194-78-6
		B02013	Octabromobiphenyl	-	61288-13-9
		B02014	Nonabromobiphenyl	-	27753-52-2
		B02015	Decabromobiphenyl	-	13654-09-6
B03	Polybrominated Diphenylethers (PBDEs) * Following a definition of EU Directives 2002/95/EC	B03001	Bromodiphenyl ether	-	101-55-3
		B03002	Dibromodiphenyl ether	-	2050-47-7
		B03003	Tribromodiphenyl ether	-	49690-94-0
		B03004	Tetrabromodiphenyl ether	-	40088-47-9
		B03005	Pentabromodiphenyl ether(note:Commercially available PeBDPO is a complex reaction mixture containing a variety of brominated diphenyloxides.	-	32534-81-9 (CAS No. used for PeBDPO as commercial brand)
		B03006	Hexabromodiphenyl ether	-	36483-60-0
		B03007	Heptabromodiphenyl ether	-	68928-80-3
		B03008	Octabromodiphenyl ether	-	32536-52-0
		B03009	Nonabromodiphenyl ether	-	63936-56-1
		B03010	Decabromodiphenyl ether	-	1163-19-5
B05	Polychlorinated Biphenyls and Terphenyls (PCBs, PCTs)	B05001	Polychlorinated biphenyls (all isomers and congeners)	-	1336-36-3
		B05008	Monomethyl-tetrachloro-diphenyl methane (Ugilec 141)	-	76253-60-6
		B05009	Monomethyl-dichloro-diphenyl methane (Ugilec 121,Ugilec 21)	-	81161-70-8
		B05010	Monomethyl-dibromo-diphenyl methane (DBBT)	-	99688-47-8
B15	Polychlorinated terphenyls (PCTs)	B05002	Polychlorinated Terphenyls (all isomers and congeners)	-	61788-33-8
B06	Polychlorinated Naphthalenes (Cl=>3)	B06001	Polychlorinated Naphthalenes	-	70776-03-3
		B06997 to 9	Other polychlorinated Naphthalenes	-	-
B09	Certain Shortchain Chlorinated Paraffins (C10-C13)	B09001	Alkanes, C10-13, chloro 287-476-5	-	85535-84-8/EC No. 287-476-5
			Alkanes, C10-12, chloro 108171-26-2	-	108171-26-2
			Alkanes, C12-13, chloro 71011-12-6	-	71011-12-6
			Alkanes, chloro 61788-76-9	-	61788-76-9
			Chlorinated polyethylene 64754-90-1	-	64754-90-1
			Other Short Chain - Paraffins	-	-
B13	PFOS Compounds	-	Refer to the "Attached List A-2-1.Draft List of Compounds Potentially Degrading to PFOS in the Environment"	-	Refer to the "Annex A-2-1"
C01	Asbestos	C01007	Asbestos	-	1332-21-4
		C01001	Actinolite	-	77536-66-4
		C01002	Amosite(Grunerite)	-	12172-73-5
		C01003	Anthophyllite	-	77536-67-5
		C01004	Chrysotile	-	12001-29-5
		C01005	Crocidolite	-	12001-28-4
		C01006	Tremolite	-	77536-68-6
C02	Certain azocolourants and azodyes	-	biphenyl-4-ylamine	-	92-67-1
		-	Benzidine	-	92-87-5
		-	4-chloro-o-toluidine	-	95-69-2

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	(which form certain aromatic amines) in textile and leather applications only Note: The European Community's ban applies to azocolorants and azodyes that by reductive cleavage of azo groups may release one of the 22 aromatic amines described in the right column.	-	2-naphthylamine	-	91-59-8
		-	o-aminoazotoluene	-	97-56-3
		-	5-nitro-o-toluidine	-	99-55-8
		-	4-chloroaniline	-	106-47-8
		-	4-methoxy-m-phenylenediamine	-	615-05-4
		-	4,4'-methylenedianiline	-	101-77-9
		-	3,3'-dichlorobenzidine	-	91-94-1
		-	3,3'-dimethoxybenzidine	-	119-90-4
		-	3,3'-dimethylbenzidine	-	119-93-7
		-	4,4'-methylenedi-o-toluidine	-	838-88-0
		-	6-methoxy-m-toluidine	-	120-71-8
		-	4,4'-methylene-bis(2-chloroaniline)	-	101-14-4
		-	4,4'-oxydianiline	-	101-80-4
		-	4,4'-thiodianiline	-	139-65-1
		-	o-toluidine	-	95-53-4
		-	4-methyl-m-phenylenediamine	-	95-80-7
		-	2,4,5-trimethylaniline	-	137-17-7
-	o-anisidine	-	90-04-0		
-	4-amino azobenzene	-	60-09-3		
C04	Ozone Depleting  Note: These substances may contain further isomers that are not listed here. Isomers with CAS numbers have been included when available.	C04097	Trichlorofluoromethane (CFC-11)	-	75-69-4
			Dichlorodifluoromethane (CFC-12)	-	75-71-8
		C04099	Chlorotrifluoromethane (CFC-13)	-	75-72-9
			Pentachlorofluoroethane (CFC-111)	-	354-56-3
			Tetrachlorodifluoroethane (CFC-112)	-	76-12-0
			1,1,2,2-Tetrachloro-1,2-difluoroethane (CFC-112)	-	76-12-0
		C04097	1,1,1,2-Tetrachloro-2,2-difluoroethane (CFC-112a)	-	76-11-9
			Trichlorotrifluoroethane (CFC-113)	-	76-13-1
		C04099	1,1,2-Trichloro-1,2,2 trifluoroethane (CFC-113)	-	76-13-1
			1,1,1-Trichloro-2,2,2 trifluoroethane (CFC-113a)	-	354-58-5
		C04099	Dichlorotetrafluoroethane (CFC-114)	-	76-14-2
			Monochloropentafluoroethane (CFC-115)	-	76-15-3
			Heptachlorofluoropropane (CFC-211)	-	422-78-6
			1,1,1,2,2,3,3-Heptachloro-3-fluoropropane (CFC-211aa)	-	135401-87-5
			1,1,1,2,3,3,3-Heptachloro-2-fluoropropane (CFC-211ba)	-	422-78-6
			Hexachlorodifluoropropane (CFC-212)	-	422-81-1
			Pentachlorotrifluoropropane (CFC-213)	-	3182-26-1
			Tetrachlorotetrafluoropropane (CFC-214)	-	2354-06-5
			1,2,2,3-Tetrachloro-1,1,3,3-tetrafluoropropane (CFC-214aa)	-	134237-31-3
			1,1,1,3-Tetrachloro-2,2,3,3-tetrafluoropropane (CFC-214cb)	-	29255-31-0
			Trichloropentafluoropropane (CFC-215)	-	2268-46-4
			1,2,2-Trichloropentafluoropropane (CFC-215aa)	-	1599-41-3
			1,2,3-Trichloropentafluoropropane (CFC-215ba)	-	1599-41-3
			1,1,2-Trichloropentafluoropropane (CFC-215bb)	-	76-17-5
		1,1,3-Trichloropentafluoropropane (CFC-215ca)	-	-	
		1,1,1-Trichloropentafluoropropane (CFC-215cb)	-	-	
		Dichlorohexafluoropropane (CFC-216)	-	4259-43-2	
		Chloroheptafluoropropane (CFC-217)	-	661-97-2	
		Bromochloromethane (Halon-1011)	-	422-86-6	
		Dibromodifluoromethane (Halon-1202)	-	74-97-5	
		C04098	Bromochlorodifluoromethane (Halon-1211)	-	75-61-6
			Bromotrifluoromethane (Halon-1301)	-	353-59-3
			Dibromotetrafluoroethane (Halon-2402)	-	75-63-8
C04100	Tetrachloromethane (carbon tetrachloride)	-	124-73-2		
C04101	1,1,1,-Trichloroethane(methylchloroform)	-	56-23-5		
C04103	Bromomethane (methyl bromide)	-	71-55-6		
-	Bromoethane (ethyl bromide)	-	74-83-9		
-	1-Bromopropane (n-propyl bromide)	-	74-96-4		
-	Trifluoroiodomethane (trifluoromethyl iodide)	-	106-94-5		
-		-	2314-97-8		

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		-	Chloromethane (methyl chloride)	-	74-87-5
		C04104	Dibromofluoromethane (HBFC-21 B2)	-	1868-53-7
			Bromodifluoromethane (HBFC-22 B1)	-	1511-62-2
			Bromofluoromethane (HBFC-31 B1)	-	373-52-4
			Tetrabromofluoroethane (HBFC-121 B4)	-	306-80-9
			Tribromodifluoroethane (HBFC-122 B3)	-	-
			Dibromotrifluoroethane (HBFC-123 B2)	-	354-04-1
			Bromotetrafluoroethane (HBFC-124 B1)	-	124-72-1
			Tribromofluoroethane (HBFC-131 B3)	-	-
			Dibromodifluoroethane (HBFC-132 B2)	-	75-82-1
			Bromotrifluoroethane (HBFC-133 B1)	-	421-06-7
			Dibromofluoroethane (HBFC-141 B2)	-	358-97-4
			Bromodifluoroethane (HBFC-142 B1)	-	420-47-3
			Bromofluoroethane (HBFC-151 B1)	-	762-49-2
			Hexabromofluoropropane (HBFC-221 B6)	-	-
			Pentabromodifluoropropane (HBFC-222 B5)	-	-
			Tetrabromotrifluoropropane (HBFC-223 B4)	-	-
			Tribromotetrafluoropropane (HBFC-224 B3)	-	-
			Dibromopentafluoropropane (HBFC-225 B2)	-	431-78-7
			Bromohexafluoropropane (HBFC-226 B1)	-	2252-78-0
			Pentabromofluoropropane (HBFC-231 B5)	-	-
			Tetrabromodifluoropropane (HBFC-232 B4)	-	-
			Tribromotrifluoropropane (HBFC-233 B3)	-	-
			Dibromotetrafluoropropane (HBFC-234 B2)	-	-
			Bromopentafluoropropane (HBFC-235 B1)	-	460-88-8
			Tetrabromofluoropropane (HBFC-241 B4)	-	-
			Tribromodifluoropropane (HBFC-242 B3)	-	70192-80-2
			Dibromotrifluoropropane (HBFC-243 B2)	-	431-21-0
			Bromotetrafluoropropane (HBFC-244 B1)	-	679-84-5
			Tribromofluoropropane (HBFC-251 B3)	-	75372-14-4
			Dibromodifluoropropane (HBFC-252 B2)	-	460-25-3
			Bromotrifluoropropane (HBFC-253 B1)	-	421-46-5
			Dibromofluoropropane (HBFC-261 B2)	-	51584-26-0
			Bromodifluoropropane (HBFC-262 B1)	-	-
			Bromofluoropropane (HBFC-271 B1)	-	1871-72-3
C04	Ozone Depleting Substances - Hydro-chlorofluorocarbons/ Isomers <u>Note: These substances may contain further isomers that are not listed here. Isomers with CAS numbers have been included when available.</u>	C04105	Dichlorofluoromethane (HCFC-21)	-	75-43-4
			Chlorodifluoromethane (HCFC-22)	-	75-45-6
			Chlorofluoromethane (HCFC-31)	-	593-70-4
			Tetrachlorofluoroethane(HCFC121)	-	134237-32-4
			1,1,1,2-tetrachloro-2-fluoroethane(HCFC121a)	-	354-11-0
			1,1,2,2-Tetrachloro-1-fluoroethane (HCFC-121)	-	354-14-3
			Trichlorodifluoroethane (HCFC-122)	-	41834-16-6
			1,2,2-Trichloro-1,1-difluoroethane (HCFC-122)	-	354-21-2
			1,1,2-Trichloro-1,2-difluoroethane (HCFC-122a)	-	354-15-4
			1,1,1-Trichloro-2,2-difluoroethane (HCFC-122b)	-	354-12-1
			Dichlorotrifluoroethane(HCFC-123)	-	34077-87-7
			1,1-Dichloro-2,2,2-trifluoroethane (HCFC-123)	-	306-83-2
			1,2-Dichloro-1,1,2-trifluoroethane (HCFC-123a)	-	354-23-4
			1,1-Dichloro-1,2,2-trifluoroethane (HCFC-123b)	-	90454-18-5
				-	812-04-4
			Chlorotetrafluoroethane(HCFC124)	-	63938-10-3
			2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124)	-	2837-89-0
			1-chloro-1,1,2,2-tetrafluoroethane (HCFC-124a)	-	354-25-6
			Trichlorofluoroethane (HCFC-131)	-	27154-33-2;
			1,1,2-Trichloro-2-fluoroethane (HCFC-131)	-	(134237-34-6)
			1,1,2-Trichloro-1-fluoroethane (HCFC131a)	-	359-28-4
			1,1,1-Trichloro-2-fluoroethane (HCFC-131b)	-	811-95-0
				-	2366-36-1
			Dichlorodifluoroethane (HCFC-132)	-	25915-78-0
			1,2-Dichloro-1,2-difluoroethane (HCFC-132)	-	431-06-1
			1,1-Dichloro-2,2-difluoroethane (HCFC-132a)	-	471-43-2
			1,2-Dichloro-1,1-difluoroethane (HCFC-132b)	-	1649-08-7
			1,1-Dichloro-1,2-difluoroethane (HFCF-132c)	-	1842-05-3
			Chlorotrifluoroethane (HCFC-133)	-	1330-45-6
			1-Chloro-1,2,2-trifluoroethane (HCFC-133)	-	431-07-2
			2-Chloro-1,1,1-trifluoroethane (HCFC-133a)	-	1330-45-6
			1-Chloro-1,1,2-trifluoroethane (HCFC-133b)	-	75-88-7
				-	421-04-5

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			Dichlorofluoroethane(HCFC-141) 1,2-Dichloro-1-fluoroethane (HCFC-141) <u>1,1-Dichloro-2-fluoroethane (HCFC-141a)</u> 1,1-Dichloro-1-fluoroethane (HCFC-141b)	- - - -	1717-00-6; (25167-88-8) 430-57-9 <u>430-53-5</u> 1717-00-6
			Chlorodifluoroethane (HCFC-142) <u>2-Chloro-1,1-Difluoroethane (HCFC-142)</u> 1-Chloro-1,1-difluoroethane (HCFC-142b) 1-Chloro-1,2-difluoroethane (HCFC-142a)	- - - -	25497-29-4 <u>338-65-8</u> 75-68-3
			<u>Chlorofluoroethane (HCFC-151)</u> 1-Chloro-2-fluoroethane (HCFC-151) 1-Chloro-1-fluoroethane (HCFC-151a)	- - -	<u>110587-14-9</u> <u>762-50-5</u> 1615-75-4
			Hexachlorofluoropropane (HCFC-221) <u>1,1,1,2,2,3-Hexachloro-3-fluoropropane (HCFC-221ab)</u>	- -	134237-35-7 <u>29470-94-8</u> <u>422-26-4</u>
			Pentachlorodifluoropropane (HCFC-222) <u>1,1,1,3,3-pentachloro-2,2-difluoropropane (HCFC-222ca)</u> <u>1,2,2,3,3-pentachloro-1,1-difluoropropane (HCFC-222aa)</u>	- - -	134237-36-8 <u>422-49-1</u> <u>422-30-1</u>
			Tetrachlorotrifluoropropane (HCFC-223) <u>1,1,3,3-Tetrachloro-1,2,2-trifluoropropane (HCFC-223ca)</u> <u>1,1,1,3-Tetrachloro-2,2,3-trifluoropropane (HCFC-223cb)</u>	- - -	134237-37-9 <u>422-52-6</u> <u>422-50-4</u>
			Trichlorotetrafluoropropane (HCFC-224) <u>1,3,3-Trichloro-1,1,2,2-tetrafluoropropane (HCFC-224ca)</u> <u>1,1,3-Trichloro-1,2,2,3-tetrafluoropropane (HCFC-224cb)</u> <u>1,1,1-Trichloro-2,2,3,3-tetrafluoropropane (HCFC-224cc)</u>	- - - -	134237-38-0 <u>422-54-8</u> <u>422-53-7</u> <u>422-51-7</u>
			Dichloropentafluoropropane (HCFC-225) 2,2-Dichloro-1,1,1,3,3-pentafluoropropane(HCFC-225aa) 2,3-Dichloro-1,1,1,2,3-pentafluoropropane (HCFC-225ba) 1,2-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225bb) 3,3-Dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca) 1,3-Dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	- - - - - -	127564-92-5 128903-21-9 422-48-0 422-44-6 422-56-0 507-55-1
			1,1-Dichloro-1,2,2,3,3-pentafluoropropane(HCFC-225cc) 1,2-Dichloro-1,1,3,3,3-pentafluoropropane (HCFC-225da) 1,3-Dichloro-1,1,2,3,3-pentafluoropropane (HCFC-225ea) 1,1-Dichloro-1,2,3,3,3-pentafluoropropane(HCFC-225eb)	- - - -	13474-88-9 431-86-7 136013-79-1 111512-56-2
			Chlorohexafluoropropane (HCFC-226) <u>2-Chloro-1,1,1,3,3,3-hexafluoro-propane (HCFC-226da)</u>	- -	134308-72-8 <u>431-87-8</u>
			Pentachlorofluoropropane (HCFC-231) <u>1,1,1,2,3-pentachloro-2-fluoro-propane (HCFC-231bb)</u>	- -	134190-48-0 <u>421-94-3</u>
			Tetrachlorodifluoropropane (HCFC-232) <u>1,1,1,3-Tetrachloro-3,3-difluoropropane (HCFC-232fc)</u>	- -	134237-39-1 <u>460-89-9</u>
			Trichlorotrifluoropropane (HCFC-233) 1,1,1-Trichloro-3,3,3-trifluoropropane (HCFC-233fb)	- -	134237-40-4 7125-83-9
			Dichlorotetrafluoropropane (HCFC-234) <u>1,2-Dichloro-1,2,3,3-tetrafluoropropane (HCFC-234db)</u>	- -	127564-83-4 <u>425-94-5</u>
			Chloropentafluoropropane (HCFC-235) 1-Chloro-1,1,3,3,3-pentafluoropropane (HCFC-235fa)	- -	134237-41-5 460-92-4

JGPSSI Classification No.	Substance/Category	JGPSSI Substance No.	Substance name	Metal Conversion No.	CAS. No.
			Tetrachlorofluoropropane (HCFC-241) <u>1,1,2,3-Tetrachloro-1-fluoropropane (HCFC-241db)</u>	- -	134190-49-1 <u>666-27-3</u>
			Trichlorodifluoropropane (HCFC-242) <u>1,3,3-Trichloro-1,1-difluoropropane (HCFC-242fa)</u>	- -	134237-42-6 460-63-9
			Dichlorotrifluoropropane (HCFC-243) 1,1-Dichloro-1,2,2-trifluoropropane (HCFC-243cc) 2,3-Dichloro-1,1,1-trifluoropropane (HCFC-243db) 3,3-Dichloro-1,1,1-trifluoropropane (HCFC-243fa)	- - - -	134237-43-7 7125-99-7  338-75-0 460-69-5
			Chlorotetrafluoropropane (HCFC-244) 3-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244ca) <u>1-Chloro-1,1,2,2-tetrafluoropropane (HCFC-244cc)</u>	- - -	134190-50-4 679-85-6 <u>421-75-0</u>
			Trichlorofluoropropane (HCFC-251) 1,1,3-Trichloro-1-fluoropropane (HCFC-251fb) <u>1,1,2-Trichloro-1-fluoropropane (HCFC-251dc)</u>	- - -	134190-51-5 818-99-5 <u>421-41-0</u>
			Dichlorodifluoropropane (HCFC-252) <u>1,3-Dichloro-1,1-difluoropropane (HCFC-252fb)</u>	- -	134190-52-6 <u>819-00-1</u>
			Chlorotrifluoropropane (HCFC-253) 3-Chloro-1,1,1-trifluoropropane (HCFC-253fb)	- -	134237-44-8 460-35-5
			Dichlorofluoropropane (HCFC-261) 1,1-Dichloro-1-fluoropropane (HCFC-261fc) <u>1,2-Dichloro-2-fluoro-propane (HCFC-261ba)</u>	- - -	134237-45-9 7799-56-6 <u>420-97-3</u>
			Chlorodifluoropropane (HCFC-262) <u>1-Chloro-2,2-difluoropropane (HCFC-262ca)</u> 2-Chloro-1,3-difluoropropane (HCFC-262da) <u>1-Chloro-1,1-difluoropropane (HCFC-262fc)</u>	- - - -	134190-53-7 <u>420-99-5</u> 102738-79-4 <u>421-02-03</u>
			Chlorofluoropropane (HCFC-271) 2-Chloro-2-fluoropropane (HCFC-271ba) <u>1-Chloro-1-fluoropropane (HCFC-271fb)</u>	- - -	134190-54-8 420-44-0 <u>430-55-7</u>
C06	Radioactive Substances Note: Excluding Substances of nature origin	C06001	Uranium-238	-	7440-61-1
		C06003	Radon	-	10043-92-2
		C06004	Americium-241	-	14596-10-2
		C06005	Thorium-232	-	7440-29-1
		C06006	Cesium137	-	
		C06007	Strontium90	-	10098-97-2
		C06997 to 9	Other radioactive substances	-	-
C07	Formaldehyde	C07001	Formaldehyde	-	50-00-0
-	Cobalt dichloride (CoCl2)	-	Cobalt dichloride	-	7646-79-9
-	<u>Dimethyl fumarate</u>	-	dimethyl fumarate (DMF)	-	624-49-7
-	<u>Dibutyltin (DBT) compounds</u>	-	Dibutyltin oxide	-	818-08-6
		-	<u>Dibutyltin diacetate</u>	-	1067-33-0
		-	<u>Dibutyltin dilaurate</u>	-	77-58-7
		-	<u>Dibutyltin maleate</u>	-	78-4-6
		-	Other dibutyltin compounds	-	-
-	<u>Diocetyl tin (DOT) compounds</u>	-	Diocetyl Tin Oxide	-	870-08-6
		-	<u>Diocetyl tin dilaurate</u>	-	3648-18-8
		-	Other Diocetyl tin compounds	-	-
-	<u>Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)</u>	-	<u>Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)</u>	-	<u>3846-71-7</u>

© The above-mentioned Substance/Category is extracted from the Annex B (Informative) Detailed Substance Lists with CAS Numbers and/or EC Numbers of JIG (Joint Industry Guideline).

Source: JIG-101 Ed 3.0 Japanese translation version: Material Composition Declaration for Electrotechnical Products - April 1, 2010

Issue: Japan Green Procurement Survey Standardization Initiative (JGPSSI)

# Annex 1 Controlled Substance List

## A-3 Exemptions of the use of Prohibited Substances

Revised on July 10, 2010

\* There is no exemption of application for Chinese RoHS Directive.

RoHS Directive additional exemptions (Including decisions by the EU Commissioner as of February 25, 2010)

Substance	# in Annex	Source of directive	Applications of exempted substances	Use classification code
Mercury	1	①	Mercury in compact fluorescent lamps not exceeding 5mg per lamp.	Hg-R-1
	2	①	Mercury in straight fluorescent lamps for general purposes not exceeding: - halophosphate 10mg - triphosphate with normal lifetime 5mg	Hg-R-2
	3	①	Mercury in straight fluorescent lamps for special purposes.	Hg-R-3
	4	①	Mercury in other lamps not specifically mentioned in this Annex.	Hg-R-4
	36	⑨	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display until 1 July 2010. (2009/443/EC)	Hg-R-5
Lead	5	①	Lead in glass of cathode ray tubes, electronic components and fluorescent tubes.	Pb-RE-1
	6	①	Lead as an alloying element in steel containing up to 0.35% lead by weight	Pb-RE-3
			Lead as an alloying element in aluminium containing up to 0.4% lead by weight	Pb-RE-4
			Lead as an alloying element in copper containing up to 4% lead by weight.	Pb-R1
	7	③	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85% by weight or more lead)	Pb-R-2
			lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission as well as network management for telecommunications	PB-R-3
			lead in electronic ceramic parts (e.g. piezoelectric devices)	Pb-RE-2
	9b	③	Lead in lead-bronze bearing shells and bushes.	Pb-R-9
	11	③	Lead used in compliant pin connector systems.	Pb-R-4
	12	③	Lead as a coating material for the thermal conduction module c-ring.	Pb-R-5
	13*	③	Lead in optical and filter glass.	Pb-R-6
	14	③	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80% and less than 85% by weight.	Pb-R-7
	15	③	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip	Pb-R-8
	16	④	Lead in linear incandescent lamps with silicate coated tubes.	Pb-R-10
17	④	Lead halide as radiant agent in High Intensity Discharge (HID) lamps used for professional reprography applications.	Pb-R-11	
18	④	Lead as activator in the fluorescent powder (1% lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi <sub>2</sub> O <sub>5</sub> :Pb) as well as when used as speciality lamps for diazo-printing reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba) <sub>2</sub> MgSi <sub>2</sub> O <sub>7</sub> :Pb).	Pb-R-12	
19	④	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact Energy Saving Lamps (ESL).	Pb-R-13	
Lead	20	④	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCD).	Pb-R-14
	21	⑤	Lead in printing inks for the application of enamels on borosilicate glass.	Pb-R-15
	22	⑧	Lead as impurity in RIG (rear earth iron garnet) Faraday rotators used for fibre optic communications systems until December 31, 2009	Pb-R-16

Substance	# in Annex	Source of directive	Applications of exempted substances	Use classification code
	23 (Note 1)	⑤	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm or less with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm or less with copper lead frames.	--
	24 (Note 1)	⑤	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.	--
	25	⑤	Lead oxide in plasma display panels (PDP) and surface conduction electron emitter displays (SED) used in structural elements; notably in the front and rear glass dielectric layer, the bus electrode, the black stripe, the address electrode, the barrier ribs, the seal frit and frit ring as well as in print pastes.	Pb-R-19
	26	⑤	Lead oxide in the glass envelope of Black Light Blue (BLB) lamps.	Pb-R-20
	27	⑤	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125dB SPL and above) loudspeakers.	Pb-R-21
	29	⑥	Lead bound in crystal glass as defined in Annex I (Categories 1,2,3 and 4) of Council Directive 69/493/EEC(*). (* )OJL 326, 29.12.1969,p.36. Directive as last amended by 2003 Act of Accession.	Pb-R-22
	31	⑦	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting). (2009/443/EC)	Pb-R-23
	32	⑦	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes. (2009/443/EC)	Pb-R-24
	33	⑨	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers. (2009/443/EC)	Pb-R-25
	34	⑨	Lead in cermet-based trimmer potentiometer elements. (2009/443/EC)a Notea) "Cermet" is a composite in which powder of a hard compound such as metal carbide or nitride is sintered as a metal bonding material. (Coined term from "Ceramic + Metal")	Pb-R-26
	37	⑨	Lead in a plated layer of high-voltage diode on the base of zinc borat glass body (2009/443/EC)	Pb-R-27
Cadmium	8	③	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. (* ) OJL 186, 12.7.1991, p. 59. (**) OJL 262, 27.9.1976, p. 201.	Cd-R-1
	13*	③	Cadmium in optical and filter glass.	Cd-R-2
	21	⑤	Cadmium in printing inks for the application of enamels on borosilicate glass.	Cd-R-3
	30	⑦	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coilin transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more. (2008/385/EC)	Cd-R-4
	35	⑨	Cadmium in photo resistor for an optical coupler applied to audio equipment for professionals until December 31, 2009 (2009/443/EC)	Cd-R-5
	38	⑨	Cadmium and cadmium oxide in thick film pastes used on aluminum bonded beryllium oxide. (2009/443/EC)	Cd-R-6
	39	⑩	Cadmium in colour-converting II-VI LEDs (< 10 µg Cd per mm 2 of light-emitting area) for use in solid state illumination or display systems until 1 July 2014.	

Substance	# in Annex	Source of directive	Applications of exempted substances	Use classification code
Hexavalent chromium	9	①	Hexavalent chromium as an anti-corrosion of the carbon steel cooling system in absorption refrigerators.	Cr-R-1

(Notes) \*13 applied to both lead and cadmium

(Source) ① European Parliament and Council of the EU Directive 2002/95/EC, ② Commission Decision 2005/717/EC as of October 13, 2005, ③ Commission Decision 2005/747/EC as of October 21, 2005, ④ Commission Decision 2006/310/EC as of April 21, 2006, ⑤ Commission Decision 2006/691/EC as of October 12, 2006, ⑥ Commission Decision 2006/690/EC as of October 12, 2006, ⑦ Commission Decision 2008/385/EC as of January 24, 2008, ⑧ Commission Decision 2009/428/EC as of June 4, 2009, ⑨ Commission Decision 2009/443/EC as of June 10, 2009, ⑩ Commission Decision 2010/122/EU as of February 25, 2010  
-The code issued by the Japan Green Procurement Survey Standardization Institute (JGPSSI) is used as the use classification code.

**(Note 1)** While the following two items have been determined as exempt under the RoHS directive, they will not be exempted in JUKI procurement activities.

Substance	# in Annex	Source of directive	Applications of exempted substances	The reason for nonexempt by JUKI.
Lead	23 (Note 1)	⑤	Lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm or less with NiFe lead frames and lead in finishes of fine pitch components other than connectors with a pitch of 0.65mm or less with copper lead frames.	Because there is a possibility to cause fillet separation in lead free solder mounting.
	24 (Note 1)	⑤	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors.	

\* Please enter the use classification code in the remarks column of AIS when applying.

## Annex 1 Controlled Substance List

B-1 Declarable Substances

Revised on July 10, 2010

No.	JGPSSI Classification No.	Substance/Category	Key Legal and Regulatory Information	Reportable Application (s)	Reporting level	Examples of Use
1	<u>A19</u>	<u>Beryllium oxide (BeO)</u>	<u>DIGITALEUROPE 3/CECED/ AeA 4/ EERA guidance</u>	<u>Ceramics</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Ceramics</u>
2	<u>A20</u>	<u>Diarsenic pentoxide</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Glass</u>
3	<u>A21</u>	<u>Diarsenic trioxide</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Glass</u>
4	<u>B07</u>	<u>Polyvinyl chloride (PVC)</u>	<u>IEEE1680 (EPEAT: Electronic Product Environmental Assessment Tool)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Insulator, chemical resistance, transparency, sheath material</u>
5	<u>B08</u>	<u>Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)</u>	<u>DIGITALEUROPE (Note 1)/CECED/ AeA (Note 2)/ EERA guidance</u>	<u>Plastic parts &gt;25 grams other than in printed wiring board assemblies</u>	<u>0.1% by weight (1 000 ppm) of plastic material</u>	<u>flame retardant for housing, connectors, package molding sealing</u>
			<u>IPC-4101 and IEC 61249-2-21</u>	<u>Printed wiring board laminate 5 (Note 3)</u>	<u>0.09% total bromine content by weight (900 ppm) in the laminate</u>	<u>Printed wiring board laminate</u>
6	<u>B10</u>	<u>Fluorinated greenhouse gases (PFC, SF6, HFC)</u>	<u>EU Reg. No. 842/2006</u>	<u>All</u>	<u>Intentionally added</u>	<u>Refrigerants, blowing agents, extinguishing agents, cleaning agents, insulating media, caustic gas</u>
7	<u>B11</u>	<u>Hexabromocyclododecane (HBCDD) and all major diastereoisomers</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Flame retardant mainly used for expanded polystyrene and some types of fiber</u>
8	<u>B12</u>	<u>Perchlorates</u>	<u>US/CA DTSC Rulemaking</u>	<u>All</u>	<u>0.000006% by weight (0.006 ppm) of the product</u>	<u>Coin cell batteries</u>
9	<u>B16</u>	<u>Tris (2-chloroethyl) phosphate (TCEP)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Flame retardant</u>
10	<u>C09</u>	<u>Di(2-ethylhexyl) phthalate (DEHP)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Plasticizer, dye, pigment, paint, ink, adhesive, lubricant</u>
11	<u>C09</u>	<u>Dibutyl phthalate (DBP)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Plasticizer, dye, pigment, paint, ink, adhesive, lubricant</u>
12	<u>C09</u>	<u>Butylbenzyl phthalate (BBP)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Plasticizer, dye, pigment, paint, ink, adhesive, lubricant</u>
13		<u>Lead chromate</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Colorant in plastics; Colorant in paint</u>

14	<u>Lead chromate molybdate sulphate red (C.I. Pigment Red 104)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Colorant in plastics: Colorant in red paint</u>
15	<u>Lead sulfochromate yellow (C.I. Pigment Yellow 34)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Colorant in plastics: Colorant in yellow paint</u>
16	<u>Diisobutyl phthalate (DIBP)</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>plasticizer, dye, pigment, paint, ink, adhesive, lubricant</u>
17	<u>Refractory Ceramic Fibres, Aluminosilicate</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Insulation in high-temp test equipment</u>
18	<u>Refractory Ceramic Fibres, Zirconia Aluminosilicate</u>	<u>Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>	<u>Insulation in high-temp test equipment</u>

© The above-mentioned Substance/Category is extracted from the Annex A (Normative) JIG Declarable Substance List of JIG (Joint Industry Guideline).  
Source: JIG-101 Ed 3.0 Japanese translation version: Material Composition Declaration for Electrotechnical Products - April 1, 2010  
Issue: Japan Green Procurement Survey Standardization Initiative (JGPSSI)

Intentionally added: Deliberate use in the formulation of a product where its continued presence is desired to provide a specific characteristic, appearance o

Notes: These are based on the ones in Annex A (Normative) JIG Declarable Substance List of JIG (Joint Industry Guidance)

1. Formerly known as EICTA

2. Now part of TechAmerica

3. A printed wiring board laminate refers to the layered board materials excluding surface finishes and components whereas a printed wiring board assembly refers to an assembly that uses a printed wiring board laminate for component mounting and interconnecting purposes

# Annex 1 Controlled Substance List

## B-2 Detailed List of Declarable Substances

Revised on July 10, 2010

JGPSSI Classification No.	JIG Substance Group	JGPSSI Substance No.	JIG Substance Name	Metal Conversion Factor	CAS. No.
A19	Beryllium oxide (BeO)	A03002	Beryllium oxide	-	1304-56-9
A20	Diarsenic pentoxide	A02003	Arsenic pentoxide	-	1303-28-2/EC No. 215-116-9
A21	Diarsenic trioxide	A02004	Arsenic trioxide	-	1327-53-3/EC No. 215-481-4
B07	Polyvinyl chloride (PVC)	B07001	Polyvinyl chloride (PVC)	-	9002-86-2
			<u>Other Polyvinyl chlorides</u>	-	
B08	<u>Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)</u>	B08001	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(14) [Aliphatic/alicyclic brominated compounds]	-	-
		B08002	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(15) [Aliphatic/alicyclic brominated compounds in combination with antimony compounds]	-	-
		B08003	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(16) [Aromatic brominated compounds (excluding brominated diphenyl ether and biphenyls)]	-	-
		B08004	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(17) [Aromatic brominated compounds (excluding brominated diphenyl ether and biphenyls) in combination with antimony compounds]	-	-
		B08005	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(22) [Aliphatic/alicyclic chlorinated and brominated compounds]	-	-
		B08006	Brominated flame retardant which comes under notation of ISO 1043-4 code number FR(42) [Brominated organic phosphorus compounds]	-	-
		B08007	Poly(2,6-dibromo-phenylene oxide)	-	69882-11-7
		B08008	Tetra-decabromo-diphenoxy-benzene	-	58965-66-5
		B08009	1,2-Bis(2,4,6-tribromo-phenoxy) ethane	-	37853-59-1
		B08010	3,5,3',5'-Tetrabromo-bisphenol A(TBBA)	-	79-94-7
		B08011	TBBA, unspecified	-	30496-13-0
		B08012	TBBA-epichlorohydrin oligomer	-	40039-93-8
		B08013	TBBA-TBBA-diglycidyl-ether oligomer	-	70682-74-5
		B08014	TBBA carbonate oligomer	-	28906-13-0
		B08015	TBBA carbonate oligomer, phenoxy end-capped	-	94344-64-2
		B08016	TBBA carbonate oligomer, 2,4,6-tribromophenol terminated	-	71342-77-3
		B08017	TBBA-bisphenol A-phosgene polymer	-	32844-27-2
		B08018	Brominated epoxy resin end-capped with tribromophenol	-	139638-58-7
		B08019	Brominated epoxy resin end-capped with tribromophenol	-	135229-48-0
		B08020	TBBA-(2,3-dibromo-propyl-ether)	-	21850-44-2
		B08021	TBBA bis-(2-hydroxy-ethyl-ether)	-	4162-45-2
		B08022	TBBA-bis-(allyl-ether)	-	25327-89-3
		B08023	TBBA-dimethyl-ether	-	37853-61-5

JGPSSI Classification No.	JIG Substance Group	JGPSSI Substance No.	JIG Substance Name	Metal Conversion Factor	CAS. No.
		B08024	Tetrabromo-bisphenol S	-	39635-79-5
		B08025	TBBS-bis-(2,3-dibromo-propyl-ether)	-	42757-55-1
		B08026	2,4-Dibromo-phenol	-	615-58-7
		B08027	2,4,6-tribromo-phenol	-	118-79-6
		B08028	Pentabromo-phenol	-	608-71-9
		B08029	2,4,6-Tribromo-phenyl-allyl-ether	-	3278-89-5
		B08030	Tribromo-phenyl-allyl-ether,unspecified	-	26762-91-4
		B08036	Bis(methyl)tetrabromo-phtalate	-	55481-60-2
		B08037	Bis(2-ethylhexyl)tetrabromo-phtalate	-	26040-51-7
		B08038	2-Hydroxy-propyl-2-(2-hydroxy-ethoxy)-ethyl-TBP	-	20566-35-2
		B08039	TBPA, glycol-and propylene-oxide esters	-	75790-69-1
		B08040	N,N'-Ethylene-bis-(tetrabromo-phthalimide)	-	32588-76-4
		B08041	Ethylene-bis5,6-dibromo-norbornane-2,3-dicarboximide)	-	52907-07-0
		B08042	2,3-Dibromo-2-butene-1,4-diol	-	3234-02-4
		B08043	Dibromo-neopentyl-glycol	-	3296-90-0
		B08044	Dibromo-propanol	-	96-13-9
		B08045	Tribromo-neopentyl-alcohol	-	36483-57-5
		B08046	Poly tribromo-styrene	-	57137-10-7
		B08047	Tribromo-styrene	-	61368-34-1
		B08048	Dibromo-styrene grafted PP	-	171091-06-8
		B08049	Poly-dibromo-styrene	-	31780-26-4
		B08050	Bromo-/Chloro-paraffins	-	68955-41-9
		B08051	Bromo-/Chloro-alpha-olefin	-	82600-56-4
		B08052	Vinylbromide	-	593-60-2
		B08053	Tris-(2,3-dibromo-propyl)-isocyanurate	-	52434-90-9
		B08054	Tris(2,4-Dibromo-phenyl) phosphate	-	49690-63-3
		B08055	Tris(tribromo-neopentyl) phosphate	-	19186-97-1
		B08056	Chlorinated and brominated phosphate ester	-	125997-20-8
		B08057	Pentabromo-toluene	-	87-83-2
		B08058	Pentabromo-benzyl bromide	-	38521-51-6
		B08059	1,3-Butadiene homopolymer,brominated	-	68441-46-3
		B08060	Pentabromo-benzyl-acrylate,monomer	-	59447-55-1
		B08061	Pentabromo-benzyl-acrylate,polymer	-	59447-57-3
		B08062	Decabromo-diphenyl-ethane	-	84852-53-9
		B08063	Tribromo-bisphenyl-maleinimide	-	59789-51-4
		B08064	Brominated trimethylphenyl-lindane	-	59789-51-4
		B08032	Tetrabromo-cyclo-octane	-	31454-48-5
		B08033	1,2-Dibromo-4-(1,2 dibromo-methyl)-cyclohexane	-	3322-93-8
		B08034	TBPA Na salt	-	25357-79-3
		B08035	Tetrabromo phthalic-anhydride	-	632-79-1
			Octabromo-1,1,3-trimethyl-1-phenylindane (FR-1808)	-	155613-93-7
		B08997~9	Other Brominated Flame Retardants	-	-
B10	Fluorinated greenhouse gases (PFC, SF6, HFC)	B10001	Tetrafluoromethane (Carbon tetrafluoride, PFC-14)	=	75-73-0
		B10002	Hexafluoroethane (PFC-116)	=	76-16-4
		B10003	Octafluoropropane (PFC-218)	=	76-19-7
		B10004	Decafluorobutane (PFC-31-10)	=	355-25-9
		B10005	Dodecafluoropentane (PFC-41-12)	=	678-26-2
		B10006	Tetradecafluorohexane (PFC-51-14)	=	355-42-0
		B10007	Octafluorocyclobutane (PFC-c318)	=	115-25-3
		B10008	Sulfur Hexafluoride (SF6)	=	2551-62-4
		B10009	Trifluoromethane (HFC-23)	=	75-46-7

JGPSSI Classification No.	JIG Substance Group	JGPSSI Substance No.	JIG Substance Name	Metal Conversion Factor	CAS. No.
		B10010	<u>Difluoromethane (HFC-32)</u>	=	<u>75-10-5</u>
		B10011	<u>Methyl fluoride (HFC-41)</u>	=	<u>593-53-3</u>
		B10012	<u>2H,3H-Decafluoropentane (HFC-43-10mee)</u>	=	<u>138495-42-8</u>
		B10013	<u>Pentafluoroethane (HFC-125)</u>	=	<u>354-33-6</u>
		B10014	<u>1,1,2,2-Tetrafluoroethane (HFC-134)</u>	=	<u>359-35-3</u>
		B10015	<u>1,1,1,2-Tetrafluoroethane (HFC-134a)</u>	=	<u>811-97-2</u>
		B10016	<u>1,1-Difluoroethane (HFC-152a)</u>	=	<u>75-37-6</u>
		B10017	<u>1,1,2-Trifluoroethane (HFC-143)</u>	=	<u>430-66-0</u>
		B10018	<u>1,1,1-Trifluoroethane (HFC-143a)</u>	=	<u>420-46-2</u>
		B10019	<u>2H-Heptafluoropropane (HFC-227ea)</u>	=	<u>431-89-0</u>
		B10020	<u>1,1,1,2,2,3-Hexafluoro-propane (HFC-236cb)</u>	=	<u>677-56-5</u>
		B10021	<u>1,1,1,2,3,3-Hexafluoropropane (HFC-236ea)</u>	=	<u>431-63-0</u>
		B10022	<u>1,1,1,3,3,3-Hexafluoropropane (HFC-236fa)</u>	=	<u>690-39-1</u>
		B10023	<u>1,1,2,2,3-Pentafluoropropane (HFC-245ca)</u>	=	<u>679-86-7</u>
		B10024	<u>1,1,1,3,3-Pentafluoropropane (HFC-245fa)</u>	=	<u>460-73-1</u>
		B10025	<u>1,1,1,3,3-Pentafluorobutane (HFC-365mfc)</u>	=	<u>406-58-6</u>
B11	<u>Hexabromocyclododecane (HBCDD) and all major diastereoisomers</u>	B08031	<u>Hexabromocyclododecane (HBCDD)</u>	=	<u>25637-99-4 and 3194-55-6</u> <u>EC No. 247-148-4 and 221-695-9</u>
		B11001	<u>alpha-hexabromocyclododecane</u>	=	<u>134237-50-6</u>
		B11002	<u>beta-hexabromocyclododecane</u>	=	<u>134237-51-7</u>
		B11003	<u>gamma-hexabromocyclododecane</u>	=	<u>134237-52-8</u>
B12	<u>Perchlorates</u>	B12001	<u>Lithium perchlorate</u>	=	<u>7791-03-9</u>
		B12997~9	<u>Other perchlorate compounds</u>	=	-
B16	<u>Tris (2-chloroethyl) phosphate (TCEP)</u>	B15001	<u>Tris (2-chloroethyl)phosphate (TCEP)</u>	=	<u>115-96-8</u> <u>EC No. 204-118-5</u>
C09	<u>Di (2-ethylhexyl) phthalate (DEHP)</u>	C05002	<u>Bis (2-ethylhexyl) phthalate (DEHP)</u>	=	<u>117-81-7</u> <u>EC No. 204-211-0</u>
C09	<u>Dibutyl phthalate (DBP)</u>	C05001	<u>Dibutylphthalate (DBP)</u>	=	<u>84-74-2</u> <u>EC No. 201-557-4</u>
C09	<u>Butylbenzyl phthalate (BBP) 1</u>	C05009	<u>Butyl benzyl phthalate(BBP)</u>	=	<u>85-68-7</u> <u>EC No. 201-622-7</u>
	<u>Lead chromate</u>		<u>Lead (II) chromate</u>	=	<u>7758-97-6</u> <u>EC No.31-846-0</u>
	<u>Lead chromate molybdate sulphate red (C.I. Pigment Red 104)</u>		<u>Lead chromate molybdate sulphate red</u>	=	<u>12656-85-8</u> <u>EC No. 235-759-9</u>
	<u>Lead sulfochromate yellow (C.I. Pigment Yellow 34)</u>		<u>Lead sulfochromate yellow</u>	=	<u>1344-37-2</u> <u>EC No. 215-693-7</u>
	<u>Diisobutyl phthalate (DIBP)</u>		<u>Diisobutyl phthalate (DIBP)</u>	=	<u>84-69-5</u> <u>EC No. 01-553-2</u>
	<u>Refractory Ceramic Fibres, Aluminosilicate</u>		<u>Refractory Ceramic Fibres, Aluminosilicate are fibres covered by number index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfill the two following conditions:</u> <u>a) Al<sub>2</sub>O<sub>3</sub> and SiO<sub>2</sub> are present within the following concentration ranges:</u> <u>• Al<sub>2</sub>O<sub>3</sub>: 43.5 – 47 % w/w, and SiO<sub>2</sub>: 49.5–53.5% w/w, or</u> <u>• Al<sub>2</sub>O<sub>3</sub>: 45.5 – 50.5 % w/w, and SiO<sub>2</sub>: 48.5 –54% w/w,</u>	=	<u>Index No.: 650-017-00-8</u>

JGPSSI Classification No.	JIG Substance Group	JGPSSI Substance No.	JIG Substance Name	Metal Conversion Factor	CAS. No.
			<u>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)</u>		
	<u>Refractory Ceramic Fibres, Zirconia Aluminosilicate</u>		<u>Refractory Ceramic Fibers, Aluminiumsilicate are fibres covered by number index number 650-017-00-8 in Annex VI, part 3, table 3.2 of Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, and fulfill the two following conditions:</u> <u>a) Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub> and ZrO<sub>2</sub> are present within the following concentration ranges:</u> <ul style="list-style-type: none"> <li>• Al<sub>2</sub>O<sub>3</sub>: 35 – 36% w/w, and</li> <li>• SiO<sub>2</sub>: 47.5 – 50% w/w, and</li> <li>• ZrO<sub>2</sub>: 15 - 17% w/w.</li> </ul> <u>b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (µm)</u>	=	<u>Index No.: 650-017-00-8</u>

© The above-mentioned Substance Group is extracted from the Annex B (Informative) Detailed Substance Lists with CAS Numbers and/or EC Numbers of JIG (Joint Industry Guideline).

Source: JIG-101 Ed 3.0 Japanese translation version: Material Composition Declaration for Electrotechnical Products - April 1, 2010

Issue: Japan Green Procurement Survey Standardization Initiative (JGPSSI)

DATE:

## Appraisal in Environmental Management (by self evaluation)

NAME OF COMPANY: \_\_\_\_\_

LOCATION: \_\_\_\_\_

CEO OR HEAD OF THE PROJECT: (with authentic signature) \_\_\_\_\_

BUSINESS CONTACT FOR JUKI: \_\_\_\_\_

1.SECTION: \_\_\_\_\_

2.NAME OF PERSON \_\_\_\_\_

3.PHONE NO/EMAIL ADDRESS: \_\_\_\_\_

## (1) STATUS OF ENVIRONMENTAL MANAGEMENT

(Check Yes or No ✓)

		YES	NO
①	Certified under ISO14001	<input type="checkbox"/>	<input type="checkbox"/>
	In action to apply for ISO14001	<input type="checkbox"/>	<input type="checkbox"/>
	Certified under other standard than ISO	<input type="checkbox"/>	<input type="checkbox"/>
	In action to apply for certificate other than ISO	<input type="checkbox"/>	<input type="checkbox"/>

No answer to ② below is required in case you have been certified as indicated at above column ①  
Neither is the case if you are in application for a certificate for which authorizing date and organization are fixed.

(Check Yes or No ✓)

		YES	NO
②	(a) You have set-ups of corporate principle, guideline, criteria, target, and action plan on which you conduct environmental preservation management.	<input type="checkbox"/>	<input type="checkbox"/>
	(b) You are under implementation of reducing adverse environmental impacts based on an action plan appointing chief administrator, in-house committee or section.	<input type="checkbox"/>	<input type="checkbox"/>
	(c) You are in compliance with lawful regulations on environmental preservation.	<input type="checkbox"/>	<input type="checkbox"/>
	(d) You conduct intercompany auditing in addressing the issue of environmental preservation.	<input type="checkbox"/>	<input type="checkbox"/>
	(e) You have operation procedures for environmental preservation and do environmental assessment on management of energy, wastes, chemical substances, environmental risk, quality of products, in-house training, contingency planning for the purpose.	<input type="checkbox"/>	<input type="checkbox"/>

## (2) ENVIRONMENTAL CONSCIOUSNESS IN PRODUCTI

(Check Yes or No ✓)

		YES	NO
①	You are saving natural resources including water, forestry and metals.	<input type="checkbox"/>	<input type="checkbox"/>
②	You are reducing resources in production.	<input type="checkbox"/>	<input type="checkbox"/>
③	You are reducing emission in production and minimizing wastes.	<input type="checkbox"/>	<input type="checkbox"/>
④	You are minimizing energy consumption in production.	<input type="checkbox"/>	<input type="checkbox"/>
⑤	You are minimizing energy consumption in transportation.	<input type="checkbox"/>	<input type="checkbox"/>
⑥	You are using fewer packaging to improve transporting efficiency and to reduce resources.	<input type="checkbox"/>	<input type="checkbox"/>
⑦	You are designing products requiring for minimized power supply including stand-by power.	<input type="checkbox"/>	<input type="checkbox"/>
⑧	You are in consideration for easier recycling and longer life cycle.	<input type="checkbox"/>	<input type="checkbox"/>
⑨	You are in consideration for recycling as in choosing, re-use of resources and re-use of the components.	<input type="checkbox"/>	<input type="checkbox"/>
⑩	You are in consideration for segregation of wastes and separability of components.	<input type="checkbox"/>	<input type="checkbox"/>

FORMULATED: Oct 1, 2004

Annex 2—Form 2

DATE:

**Certificate of Environmental Limit in Products**

NAME OF COMPANY

●BUSINESS CONTACT FOR JUKI:

1.SECTION:

LOCATION

2.NAME OF PERSON

CEO OR HEAD OF THE PROJECT: (with authentic signature)

3.PHONE NO/EMAIL ADDRESS:

We hereby assure that prohibited substances exceeding the threshold level(environmental limits) regulated by JUKI group are NOT included in materials, parts, and products (including accessories, packages, and any goods supplied with the products) that we supply to JUKI and its group companies, with the exception of substances which are exempted from the application of prohibited substances shown below.

List of Prohibited Substances (No. 1 to 23)

No.	JGPSSI Classification No.	Substance/ Category	Reportable Application(s)	Threshold Level (Reporting level)
1	A05	Cadmium/ cadmium compounds	<u>All, except as noted below</u>	<u>0.01% by weight (100 ppm) of homogeneous materials</u>
			<u>Batteries</u>	<u>0.0005% by weight (5 ppm) of battery</u>
			<u>Packing material</u>	<u>Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) &lt; 100ppm</u>
2	A07	Chromium VI compounds	<u>All, except packing material</u>	<u>0.1% by weight (1 000 ppm) of homogeneous materials</u>
			<u>Packing material</u>	<u>Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) &lt; 100ppm</u>
3	A09	Lead/lead compounds	<u>All, except as noted below</u>	<u>0.1% by weight (1 000 ppm) of homogeneous materials</u>
			<u>Cables/cords with thermoset or thermoplastic coatings</u>	<u>0.03% by weight (300 ppm) of surface coating</u>
			<u>Batteries</u>	<u>0.004% by weight (40 ppm) of battery</u>
			<u>Packing material</u>	<u>Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) &lt; 100ppm</u>
4	A10	Mercury/mercury compounds	<u>All, except as noted below</u>	<u>Intentionally added or 0.1% (1 000 ppm) at homogeneous material</u>
			<u>Batteries</u>	<u>0.0001% by weight (1 ppm) of battery</u>
			<u>Packing material</u>	<u>Ttl. in Packing material: Cd, Pb, Hg, Cr(VI) &lt; 100ppm</u>
5	A17	Tributyl Tin Oxide (TBTO)	<u>All</u>	<u>Intentionally added or 0.1% by weight (1 000 ppm) of the product</u>
6	A18	Tri-substituted organostannic compounds	<u>All</u>	<u>0.1% by weight (1 000 ppm) of tin in a material</u>
7	B02	Polybrominated Biphenyls (PBBs)	<u>All</u>	<u>0.1% by weight (1 000 ppm) in homogeneous material</u>
8	B03	Polybrominated Diphenylethers (PBDEs)	<u>All</u>	<u>0.1% by weight (1 000 ppm) in homogeneous material</u>
9	B05	Polychlorinated Biphenyls (PCBs) and specific substitutes	<u>All</u>	<u>Intentionally added</u>
10	B15	Polychlorinated terphenyls (PCTs)	<u>All</u>	<u>Intentionally added</u>

No.	JGPSSI Classification No.	Substance/ Category	Reportable Application(s)	Threshold Level (Reporting level)
11	B06	Polychlorinated Naphthalenes (more than 3 chlorine atoms)	<u>All</u>	<u>Intentionally added</u>
12	B09	Shortchain Chlorinated Paraffins (C10 - C13)	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>
13	B13	Perfluorooctane sulfonate (PFOS)	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>
14	C01	Asbestos	<u>All</u>	<u>Intentionally added</u>
15	C02	Azocolourants and azodyes which form certain aromatic amines	<u>Textile/leather</u>	<u>0.003% by weight (30 ppm) of the finished textile/leather product</u>
16	C04	Ozone Depleting Substances	<u>All</u>	<u>Intentionally added</u>
17	C06	Radioactive substances	<u>All</u>	<u>Intentionally added</u>
18	C07	<u>Formaldehyde</u>	<u>HWPW-VC (Veneer Core)</u>	<u>Intentionally added or 0.05 ppm</u>
			<u>MDF (Medium density fibers)</u>	<u>Intentionally added or 0.21 ppm (until December 31, 2010), 0.11 ppm (from January 1, 2011)</u>
			<u>Textiles</u>	<u>0.0075% by weight (75 ppm) of textile product</u>
19	-	Cobalt chloride	<u>All</u>	<u>0.1% by weight (1 000 ppm) of the product</u>
			Indicator in desiccant	<u>Intentionally added or 100 ppm of the product</u>
20	-	<u>Dimethyl fumarate (DMF)</u>	<u>Products intended for consumer or that may be used by consumer</u>	<u>0.00001% by weight (0.1 ppm) in a material</u>
21		<u>Dibutyltin (DBT) compounds</u>	<u>All</u>	<u>0.1% by weight (1 000 ppm) of tin in a material</u>
22		<u>Diocetyl tin (DOT) compounds</u>	<u>(a) textile and leather articles intended to come into contact with the skin, (b) childcare articles, and (c) two components room temperature vulcanisation moulding kits (RTV-2 moulding kits)</u>	<u>0.1% by weight (1 000 ppm) of tin in a material</u>
23		<u>Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)</u>	<u>All</u>	<u>Intentionally added</u>

Please submit a Material Analysis Sheet of your products upon improvements in each case

For JUKI use

	SEAL FOR RECEIPT

Formulated: Oct. 1, 2004  
Revised: July 10, 2010

REQUEST FOR IMPROVEMENT IN GREEN PROCUREMENT (REGISTER № )

Issue date: \_\_\_\_\_

### Green Procurement Improvement/Confirmation Form

To

JUKI Group ( )  
 \_\_\_\_\_ DEPT.

Signed-off	Originated

Dear Sir or Madam:

We would to inform you that the goods purchased from your company may not comply with management criteria of the JUKI Group Green Procurement Activity Guideline as shown in Table 1, and ask you to confirm it after your investigation as soon as possible.

Table 1 Description of Unconformity

P/#	Description	Details of unconformity	Request for Improvement and Confirmation

\* For analysis results, please refer to

-----  
 Please do not separate, and submit it as it is.

Issue date: \_\_\_\_\_

### Nonconformity and Measure Report

TO: JUKI GROUP

COMPANY \_\_\_\_\_  
 LOCATION: \_\_\_\_\_  
 CEO OR HEAD OF THE PROJECT: (with authentic signature) \_\_\_\_\_  
 BUSINESS CONTACT FOR JUKI: \_\_\_\_\_

1. SECTION: \_\_\_\_\_  
 2. NAME OF PERSON: \_\_\_\_\_  
 3. PHONE NO/EMAIL ADDRESS: \_\_\_\_\_

Reporting Items

Cause of defect	
Countermeasures against the defect	
Results of countermeasures	
Time to implement the improvement	

## Attached List A-2-1.Draft List of Compounds Potentially Degrading to PFOS in the Environment

The following are opened to the public in the HP of the Ministry of Economy, Trade and Industry as main PFOS and Compounds potentially degrading to PFOS, where the PFOS and Compounds potentially degrading to PFOS existing on the earth are not all described. The object substance in this survey is "All chemicals that have perfluorooctane sulphonyl group (C8F17SO2 --) in the molecule."

Ref No	CAS Number	PFOS related substance
1	307-35-7	1-Octanesulphonyl fluoride,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
2	376-14-7	2-Propenoic acid,2-methyl-,2[ethyl(heptadecafluorooctyl)sulphonyl]amino]ethyl ester
3	383-07-3	2-Propenoic acid,2-[butyl]((heptadecafluorooctyl)sulphonyl)amino]ethyl ester
4	423-82-5	2-Propenoic acid,2-[ethyl]((heptadecafluorooctyl)sulphonyl)amino]ethyl ester
5	423-86-9	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -2-propenyl-
6	754-91-6	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
7	1652-63-7	1-Propanaminium,3-[[heptadecafluorooctyl)sulphonyl]amino]- <i>N,N,N</i> -trimethyl-,iodide
8	1691-99-2	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(2-hydroxyethyl)-
9	1763-23-1	1-Octanesulphonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
10	1869-77-8	Glycine, <i>N</i> -ethyl- <i>N</i> -[(heptadecafluorooctyl)sulphonyl]-,ethyl ester
11	2250-98-8	1-Octanesulphonamide, <i>N,N',N''</i> -[phosphinylidynetris(oxy-2,1-ethanediy)]tris[ <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
12	2263-09-4	1-Octanesulphonamide, <i>N</i> -butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(2-hydroxyethyl)-
13	2795-39-3	1-Octanesulphonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,potassium salt
14	2991-50-6	Glycine, <i>N</i> -ethyl- <i>N</i> -[(heptadecafluorooctyl)sulphonyl]-
15	2991-51-7	Glycine, <i>N</i> -ethyl- <i>N</i> -[(heptadecafluorooctyl)sulphonyl]-,potassium salt
16	3820-83-5	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -[2-(phosphonoxy)ethyl]-
17	3871-50-9	Glycine, <i>N</i> -ethyl- <i>N</i> -[(heptadecafluorooctyl)sulphonyl]-,sodium salt
18	4151-50-2	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
19	13417-01-1	1-Octanesulphonamide, <i>N</i> -[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
20	14650-24-9	2-Propenoic acid,2-methyl-,2[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester
21	24448-09-7	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(2-hydroxyethyl)- <i>N</i> -methyl-
22	24924-36-5	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -2-propenyl-
23	25268-77-3	2-Propenoic acid,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester
24	29081-56-9	1-Octanesulphonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,ammonium salt
25	29117-08-6	Poly(oxy-1,2-ethanediy),.alpha.-[2-ethyl]((heptadecafluorooctyl)sulphonyl)amino]ethyl-.omega.-hydroxy-
26	29457-72-5	1-Octanesulphonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,lithium salt
27	30295-51-3	1-Octanesulphonamide, <i>N</i> -[3-(dimethylamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-
28	30381-98-7	1-Octanesulphonamide, <i>N,N'</i> -[phosphinicobis(oxy-2,1-ethanediy)]bis[ <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,ammonium salt
29	31506-32-8	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -methyl-
30	38006-74-5	1-Propanaminium,3-[[heptadecafluorooctyl)sulphonyl]amino]- <i>N,N',N''</i> -trimethyl-,chloride
31	50598-29-3	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(phenylmethyl)-
32	52550-45-5	Poly(oxy-1,2-ethanediy),.alpha.-[2-[[heptadecafluorooctyl)sulphonyl]propylamino]ethyl-.omega.-hydroxy-
33	56773-42-3	Ethanaminium, <i>N,N',N''</i> -triethyl-,salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulphonic acid(1:1)
34	57589-85-2	Benzoic acid,2,3,4,5-tetrachloro-6-[[[3-[[heptadecafluorooctyl)sulphonyl]oxy]phenyl]amino]carbonyl]-,monopotassium salt
35	58920-31-3	2-Propenoic acid,4-[[heptadecafluorooctyl)sulphonyl]methylamino]butyl ester

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Ref No	CAS Number	PFOS related substance
36	61577-14-8	2-Propenoic acid,2-methyl-,4-[[heptadecafluorooctyl)sulphonyl]methylamino]butyl ester
37	61660-12-6	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -[3-(trimethoxysilyl)propyl]-
38	67939-42-8	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -[3-(trichlorosilyl)propyl]-
39	67969-69-1	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -[2-(phosphonoxy)ethyl]-,diammonium salt
40	67939-88-2	1-Octanesulphonamide, <i>N</i> -[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,monohydrochloride
41	68081-83-4	Carbamic acid,(4-methyl-1,3-phenylene)bis-,bis[2-[ethyl[(perfluoro-C4-8-alkyl)sulphonyl]amino]ethyl]ester
42	68298-11-3	1-Propanaminium,3-[[heptadecafluorooctyl)sulphonyl](3-sulphopropyl)amino]- <i>N</i> -(2-hydroxyethyl)- <i>N,N</i> -dimethyl-,hydorxide,inner salt
43	68392-56-6	2-Propenoic acid,eicosyl ester,polymer with 2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate,hexadecyl 2-propenoate,2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(undecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate and octadecyl 2-propenoate
44	68293-73-6	1-Octanesulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(4-hydroxybutyl)- <i>N</i> -methyl-
45	68310-75-8	1-Propanaminium,3-[[heptadecafluorooctyl)sulphonyl]amino]- <i>N,N',N''</i> -trimethyl-,iodide,ammonium salt
46	68541-80-0	2-Propenoic acid,polymer with 2-[ethyl[heptadecafluorooctyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-propenoate
47	68555-90-8	2-Propenoic acid,butyl ester,polymer with 2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate,2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate
48	68555-91-9	2-Propenoic acid,2-methyl-,2-[ethyl[heptadecafluorooctyl)sulphonyl]amino]ethyl ester,polymer with 2-[ethyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[ethyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-ethyl [(tridecafluorohexyl)sulphonyl]amino]ethyl 2-methyl-2-,propenoate,2-[ethyl(undecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate
49	68555-92-0	2-Propenoic acid,2-methyl-,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester,polymer with 2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and octadecyl 2-methyl-2-propenoate
50	68608-14-0	Sulphonamides,C4-8-alkane,perfluoro, <i>N</i> -ethyl- <i>N</i> -(hydroxyethyl),reaction products, with 1,1'-methylenebis[4-isocyanatobenzene]
51	68649-26-3	1-Octanesulphonamide, <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(2-hydroxyethyl)-,reaction products with <i>N</i> -ethyl-1,1,2,2,3,3,4,4,4-nonafluoro- <i>N</i> -(2-hydroxyethyl)-1-butan Sulphonamide,1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -(2-hydroxyethyl)-1-heptanesulphonamide, <i>N</i> -ethyl-,1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro- <i>N</i> -(2-hydroxyethyl)-1-hexanesulphonamide, <i>N</i> -ethyl-,1,1,2,2,3,3,4,4,5,5,5-undecafluoro- <i>N</i> -(2-hydroxyethyl)-1-pentanesulphonamide,polymethylenepolyphenyleneisocyanate and stearyl alc.

Table A2. 1: Draft List of Compounds Potentially Degrading to PFOS in the Environment		
Ref No	CAS Number	PFOS related substance
52	68867-60-7	2-Propenoic acid,2[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl ester,polymer with 2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-propenoate and.alpha.-(1-oxo-2-propenyl)-.omega.-methoxypoly(oxy-1,2-ethanediyl)
53	68877-32-7	2-Propenoic acid,2-methyl-,2-[ethyl[heptadecafluorooctyl)sulphonyl]amino]ethyl ester,polymer with 2-[ethyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-methyl2-propenoate,2-[ethyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[ethyl [(tridecafluoro-hexyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate,2-[ethyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and 2-methyl-1,3-butadiene
54	68891-96-3	Chromium,diaquatetrachloro[.mu.-[N-ethyl-N-[(heptadecafluorooctyl)sulphonyl]glycinato-.kappa.O:kappa.O']]-.mu.hydroxybis(2-methylpropanol)di-
55	68909-15-9	2-Propenoic acid,eicosyl ester,polymers with branched octylacrylate,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl acrylate,2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl acrylate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl acrylate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl acrylate,2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl acrylate,polyethylene glycol acrylate Me ether and stearyl acrylate
56	68958-61-2	Poly(oxy-1,2-ethanediyl),.alpha.-[2-ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl-.omega.-methoxy-
57	70225-14-8	1-Octanesulphonic acid,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,compd.with 2,2'-iminobis[ethanol](1:1)
58	70776-36-2	2-Propenoic acid,2-methyl-,octadecyl ester,polymer with 1,1-dichloroethene,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate,N-(hydroxymethyl)-2-propenamido,2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate,2[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-propenoate and 2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-propenoate
59	71463-78-0	Phosphonic acid,[3-[ethyl [(heptadecafluorooctyl)sulphonyl]amino]propyl]-
60	71463-80-4	Phosphonic acid,[3-[ethyl [(heptadecafluorooctyl)sulphonyl]amino]propyl]-,diethyl ester
61	71487-20-2	2-Propenoic acid,2-methyl-,methyl ester,polymer with ethenylbenzene,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate,2-[methyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-propenoate,2-[methyl[(undecafluoropentyl)sulphonyl]amino]ethyl 2-propenoate and 2-propenoic acid
62	91081-99-1	Sulphonamides,C <sub>4-8</sub> -alkane,perfluoro,N-(hydroxyethyl)-N-methyl, reaction products with epichlorohydrin, adipates(esters)
63	92265-81-1	Ethanaminium,N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-,polymer with 2-ethoxyethyl 2-propenoate,2-[[heptadecafluorooctyl)sulphonyl]methylamino]ethyl 2-propenoate and oxiranylmethyl 2-methyl-2-propenoate
64	94133-90-1	1-Propanesulphonic acid, 3-[[3-(dimethylamino)propyl][(heptadecafluorooctyl)sulphonyl]amino]-2-hydroxy-,monosodium salt
65	94313-84-5	Carbamic acid,[5-[[[2-[(heptadecafluorooctyl)sulphonyl]methylamino]ethoxy]carbonyl]amino]-2-methylphenyl]-,9-octadecenyl ester,(Z)-
66	98999-57-6	Sulphonamides,C <sub>7-8</sub> -alkane,perfluoro,N-methyl-N-[2-[(1-oxo-2-propenyl)oxy]ethyl],polymers with 2-ethoxyethyl acrylate,glycidyl methacrylate and N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]ethanaminium chloride
67	127133-66-8	2-Propenoic acid,2-methyl-,polymers with Bu methacrylate,lauryl methacrylate and 2-[methyl[perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl methacrylate

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Ref No	CAS Number	PFOS related substance
68	129813-71-4	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -methyl- <i>N</i> -(oxiranylmethyl)
69	148240-78-2	Fatty acids, C <sub>18</sub> -unsatd., trimers, 2-[[heptadecafluorooctyl]sulphonyl]methylamino]ethyl esters
70	148684-79-1	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -(hydroxyethyl)- <i>N</i> -methyl, reaction products with 1,6-diisocyanatohexane homopolymer and ethylene glycol
71	160901-25-7	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -ethyl- <i>N</i> -(hydroxyethyl), reaction products with 2-ethyl-1-hexanol and polymethylenepolyphenylene isocyanate
72	178094-69-4	1-Octanesulphonamide, <i>N</i> -[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, potassium salt
73	178535-22-3	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -ethyl- <i>N</i> -(hydroxyethyl)-, polymers with 1,1'-methylenebis[4-isocyanatobenzene] and polymethylenepolyphenylene isocyanate, 2-ethylhexyl esters, Me Et Ketone oxime-blocked
74	182700-90-9	1-Octanesulphonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -methyl-, reaction products with benzene-chlorine-sulphur chloride (S <sub>2</sub> Cl <sub>2</sub> ) reaction products chlorides
75	L-92-0151 (US Pre-manufacture notice)	2-Propenoic acid, 2-methyl-, butyl ester, polymer with 2-[ethyl[(heptadecafluorooctyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(nonafluorobutyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulphonyl]amino]ethyl 2-methyl-2-propenoate and 2-propenoic acid
76	P-94-2205 (US Pre-manufacture notice)	Polymethylenepolyphenylene isocyanate and bis(4-NCO-phenyl)methane reaction products with 2-ethyl-1-hexanol, 2-butanone, oxime, <i>N</i> -ethyl- <i>N</i> -(2-hydroxyethyl)-1-C <sub>4</sub> -C <sub>8</sub> perfluoroalkanesulphonamide
77	192662-29-6	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -[3-(dimethylamino)propyl], reaction products with acrylic acid
78	251099-16-8	1-Decanaminium, <i>N</i> -decyl- <i>N,N</i> -dimethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-1-octanesulphonic acid (1:1)
79	306973-46-6	Fatty acids, linseed-oil, dimers, 2-[[heptadecafluorooctyl]sulphonyl]methylamino]ethyl esters
80	306973-47-7	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -(hydroxyethyl)- <i>N</i> -methyl, reaction products with 12-hydroxystearic acid and 2,4-TDI, ammonium salts
81	306974-19-6	Sulphonamides, C <sub>4-8</sub> -alkane, perfluoro, <i>N</i> -methyl- <i>N</i> -[(3-octadecyl-2-oxo-5-oxazolidinyl)methyl]
82	306974-28-7	Siloxanes and Silicones, di-Me, mono[3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl]group-terminated, polymers with 2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl acrylate and stearyl methacrylate
83	306974-45-8	Sulphonic acids, C <sub>6-8</sub> -alkane, perfluoro, compounds with polyethylene glycol bis(2-aminopropyl)ether
84	306974-63-0	Fatty acids, C <sub>18</sub> -unsatd., dimers, 2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl esters
85	306975-56-4	Propanoic acid, 3-hydroxy-2-(hydroxymethyl)-2-methyl-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and <i>N,N'</i> ,2-tris(6-isocyanatohexyl)imidodicarbonic diamide, reaction products with <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro- <i>N</i> -(2-hydroxyethyl)-1-octanesulphonamide and <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro- <i>N</i> -(2-hydroxyethyl)-1-heptanesulphonamide, compounds with triethylamine

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Ref No	CAS Number	PFOS related substance
86	306975-57-5	Propanoic acid,3-hydroxy-2-(hydroxymethyl)-2-methyl-,polymer with 1,1'methylenebis[4-isocyanatobenzene]and 1,2,3-propanetriol, reaction products with <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro- <i>N</i> -(2-hydroxyethyl)-1-octanesulphonamide and <i>N</i> -ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentafluoro- <i>N</i> -(2-hydroxyethyl)-1-heptanesulphonamide, compounds with morpholine
87	306975-62-2	2-Propenoic acid,2-methyl-,dodecyl ester,polymer with 2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl acrylate and vinylidene chloride
88	306975-84-8	Poly(oxy-1,2-ethanediyl),.alpha.-hydro-.omega.-hydroxy-,polymer with 1,6-diisocyanatohexane, <i>N</i> -(hydroxyethyl)- <i>N</i> -methyl perfluoro C <sub>4-8</sub> -alkane sulphonamides-blocked
89	306975-85-9	2-Propenoic acid,2-methyl-,dodecyl ester,polymers with <i>N</i> -(hydroxymethyl)-2-propenamide,2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl methacrylate,stearyl methacrylate and vinylidene chloride
90	306976-25-0	1-Hexadecanaminium, <i>N,N</i> -dimethyl- <i>N</i> -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-,bromide,polymers with Bu acrylate,Bu methacrylate and 2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl acrylate
91	306976-55-6	2-Propenoic acid,2-methyl-,2-methylpropyl ester,polymer with 2,4-diisocyanato-1-methylbenzene,2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 2-propenoic acid, <i>N</i> -ethyl- <i>N</i> -(hydroxymethyl)perfluoro-C <sub>4-8</sub> -alkanesulphonamides-blocked
92	306977-58-2	2-Propenoic acid,2-methyl-,3-(trimethoxysilyl)propyl ester,polymers with acrylic acid,2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl acrylate and propylene glycol monoacrylate,hydrolysed,compounds with 2,2'-(methylimino)bis[ethanol]
93	306978-04-1	2-Propenoic acid,butyl ester,polymers with acrylamide,2-[methyl[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]amino]ethyl acrylate and vinylidene chloride
94	306978-65-4	Hexane,1,6-diisocyanato-,homopolymer, <i>N</i> -(hydroxymethyl)- <i>N</i> -methyl perfluoro-C <sub>4-8</sub> -alkane sulphonamides-and stearyl alc.-blocked
95	306979-40-8	Poly(oxy-1,2-ethanediyl),.alpha,-[2-(methylimino)ethyl]-.omega.-[[1,1,3,3-tetramethylbutyl)phenoxy]-, <i>N</i> -[(perfluoro-C <sub>4-8</sub> -alkyl)sulphonyl]
96	306980-27-8	Sulphonamides,C <sub>4-8</sub> -alkane,perfluoro, <i>N,N'</i> -[1,6-hexanediylbis[(2-oxo-3,5-oxazolidinediyl)methylene]]bis[ <i>N</i> -methyl-

Sources:US EPA(2002a); US EPA(2002b); Environment Agency(2001); Consultation with Environment Canada(note that RPA reviewed a confidential draft list of PFOS precursors that was provided by Environment Canada. This was developed from the 182 PFAS that were listed in a June 2000 survey to Canadian industry (Environment Canada,2000). The draft list will be available as an appendix in the draft screening assessment report on PFOS and its Precursors that the Departments of Environment and Health Canada will release for public comment in early 2004(Windle,2003)).

# **JUKI CORPORATION**

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