Green Procurement Standards

YAMAHA CORPORATION

1st. edition: 11 June 2002
6th. edition: 1 July 2012

Procurement Planning Department
Production Engineering & Planning Division

Quality Planning Department
Quality Assurance Division

Revision history

Edition	Date	Details
1st edition	11 Jun. 2002	First edition issued
2nd edition	1 Mar. 2004	・ Revised to separate "Standards for Chemical Content in Products" for the investigation of chemical substance contents ・ State of investigation of chemical substance control in products added to supplier evaluation items
3rd edition	31 July 2008	・ Overall revisions made due to review of standards and operation ・ Contents of separate “Standards for Chemical Content in Products” combined as Annex 2. In addition, some contents were changed, and some substances were added or deleted – Arsenic and its compounds: Restricted → Prohibited Substances (with exemptions) – Cadmium and its compounds: Restricted → Prohibited Substances (with exemptions) and exemptions added – Mercury and its compounds: Restricted → Prohibited Substances (with exemptions) –-Polychlorinated terphenyls added to Polychlorinated biphenyls – Short chain chlorinated paraffins: Restricted → Prohibited Substances – Hexachlorobenzene added to Prohibited substances – Exemptions added to Lead and its compounds – Nickel: Controlled → Restricted Substances – Perflouorooctane sulfonates added to Restricted Substances – Polyvinyl chloride: Controlled → Restricted Substances – Formaldehyde added as a Volatile Organic Compounds, and standards set for Yamaha Products – Magnesium (and its alloys), copper and its compounds, gold and its compounds, palladium and its compounds, silver and its compounds deleted
4th edition	1 April 2009	Change the name of Division – From “Procurement Planning Department, Purchasing & Logistics Division” to “Procurement Planning Department, Production Engineering & Planning Division” – From “Quality Planning Department, Quality & Engineering Planning Division” to “Quality Planning Department, Production Engineering & Planning Division”
5th edition	29 Dec. 2010	Main changes 1. “YAMAHA’S POLICY ON THE ENVIRONMENT” was obsolete, and “Yamaha Group Environmental Policy” was established. 2. Form 3 was obsolete and the Article Information Sheet (AIS) established by Joint Article Management Promotion-consortium (JAMP) was adopted for chemical content survey in material. 3. “Annex 2 Standards for Chemical Content in Materials” was amended. － The definition of “Article” was added to definitions. － Criteria for controlled substances were added in “Policy of

		applicable standards." — Chemical content standards were changed and some substances were added or deleted. ・Arsenic and its compounds: Prohibited→Restricted substances with applicable scope. ・ Cadmium and its compounds: Prohibited → Restricted substances with applicable scope. ・Mercury and its compounds: Prohibited→Restricted substances with applicable scope. ・Pentachlorophenol and its salts and esters: Content standards were modified. (Define residual concentration level.) ・ 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol: Add to prohibited substances ・Dimethyl fumarate: Add to prohibited substances ・Lead and its compounds: Modify applicable scope ・Tributyl tins and triphenyl tins: Deleted and tri-substituted organostannic compounds add to prohibited substances. ・Perfluorooctane sulfonates: Restricted→Prohibited substances ・Control method for brominated flame retardants were modified. ・Listed substances on the Candidate List of Substance of Very High Concern for Authorisation under EU REACH regulation were add to Controlled substances. — Reference laws and regulations were updated. — EU RoHS directive exemptions were listed on Table 5. — Example substance lists were added.
6th edition	1 July, 2012	Main changes 1. The goods used and consumed in the company were excluded from the scope. 2. "Annex 2 Standards for Chemical Content in Production Materials and Products" was amended. — Chemical content standards were changed and some substances were added ・Concerning the restricted usage for lead and its compounds, the exempted application on surface painting layer was deleted. ・Dibutyltin compounds: Add to restricted substances. ・Dioctyltin compounds: Add to restricted substances. —The candidate list of the SVHC for authorisation based on EU REACH regulation were updated. (as of 19 December 2012) —EU RoHS directive exemptions were updated.

Contents

Yamaha Group Environmental Policy

Premise

Earth exists not only for those of us who currently live on it, but also for our descendants. We must live in a way that will ensure a future for our children and grandchildren. It is, therefore, our duty protect our valuable environment so that all living creatures can continue to live on this planet forever.

Philosophy

The Yamaha Group is aware that taking environmental initiatives is a common issue for all human beings. Accordingly, Yamaha works to contribute to creating a truly affluent society and a better global environment under this slogan.

"Sustaining the Concerto of Yamaha with the Earth"

Principles

Yamaha's corporate objective is to continue to create "*Kando**" and enrich culture with technology and passion born of sound and music, together with people all over the world. We have to be aware that corporate activities are deeply related to the environment and have to acknowledge our responsibility to nature. We have, therefore, established the following Environmental Policy and are conducting environmental management activities.

*"*Kando*" is a Japanese word that signifies an inspired state of mind.

1. We are aware of the environmental impact of our business activities, products, and services. We have set environmental objectives and targets and seek to promote the prevention of environmental pollution as we work to continue to improve our environmental management systems.
2. We comply with applicable legal and other requirements that we have agreed to that apply to environmental aspects, and, having established voluntary management standards, are conducting management activities to maintain them.
3. Among the environment impacts related to our business activities, products, and services, we are taking the initiatives to address the following major environmental management themes and conducting periodic reviews of these activities:
   (1) Make efforts to develop technologies and provide products that are friendlier to the environment.
   (2) Work to make effective use of resources and promote energy saving in all aspects of our activities, including research and development, procurement, production, distribution, sales, and service.
   (3) Design products to minimize waste and facilitate recycling and disposal at each stage of production, distribution, usage, and after the end of product lifetimes.
4. We are expanding our environmental education and training and encourage everyone in our organization to understand this policy and have a stronger awareness of the natural environment.
5. We are contributing to the community by engaging actively in environmental preservation activities, including beautification campaigns in the vicinity of our business locations and environment-related activities in and around our homes.
6. We are working to maintain a healthy global environment by understanding the significance of protecting the natural environment, maintaining biodiversity, and reducing the burden on the environment, as well as promoting the proper use of wood resources, and cooperating with forest protection activities.

Yarnaha's Environmental Policy has been disclosed outside the Company.

Established on 17 March,2010.

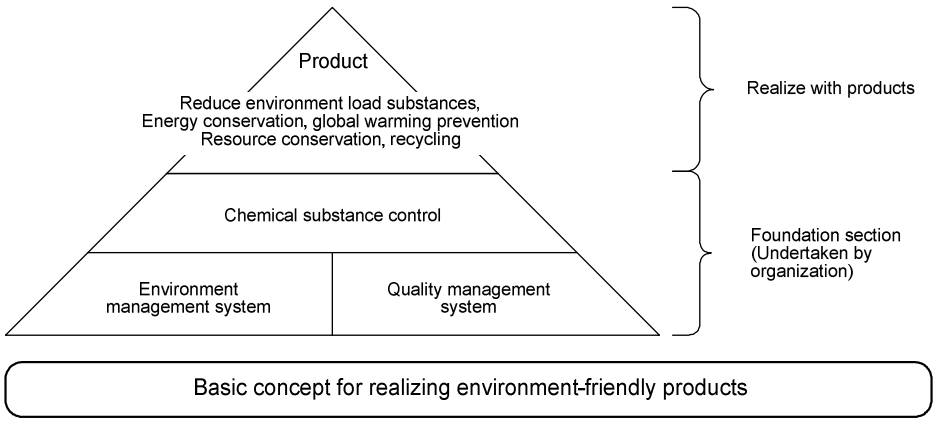
Environment Preservation Activities and Green Procurement

At Yamaha, we have positioned activities to maintain and improve environment preservation as a priority within our corporate activities. We have continued to approach this from various angles. In 1994, we set the "YAMAHA'S POLICY ON THE ENVIRONMENT" outlining our basic policy regarding the environment protection. This clearly indicates our policy on the environment and the principles of our activity.

Based on this policy, we have promoted our environment load reduction activities through a life cycle which covers "extraction of raw materials, manufacture of materials, production of products, distribution, usage, disposal and recycle" so that we may provide eco-friendly products to our users. To promote these activities, we started our Green Procurement activities in 2002 to procure materials from suppliers who are positively taking part in environment preservation. This allows us to procure materials which have a small environmental load throughout the product's life cycle.

Our environment preservation activities aim to "reduce environment load substances", "conserve energy and prevent global warming" and "conserve resources and recycle materials", etc. We have set reduction of environment load substances as a main pillar of our Green Procurement activities while focusing on human health damage and environment pollution.

Environment management system, quality management system and chemical substance control are the foundation of environment-friendly products. The "Green Procurement Standards" confirm the situation of procured materials, and confirm the state of environment-conscious management in our business partner activities.



The green procurement activities are successful only when a partnership is formed with our suppliers. We ask that our suppliers also work positively and continuously to preserve the environment, and cooperate with the investigations, etc., which we periodically conduct.

Green Procurement Standards

I Purpose

Yamaha has been active in Green Procurement activities through which we purchase from suppliers who are positively active in environment preservation. We preferentially procure materials which have a low environment load throughout the product's life cycle from the extraction of raw materials to disposal. This includes resource conserving, energy conserving and reduced toxic chemical substances.

Yamaha's requirements of our suppliers for Green Procurement activities are summarized in these Standards.

II Scope

These Standards apply to the raw materials, parts products, etc. procured by Yamaha, and include the following goods.

- Raw materials and parts (hereinafter "production materials") which configure the products manufactured by Yamaha.
- Accessories including instruction manuals and power adaptors, etc.
- Containers and packages for packaging Yamaha products
- Finished products
- OEM/ODM products

And these standards do not apply to the goods (e.g. fixtures, office supplies) used and consumed in the company.

III Green Procurement Investigation

Yamaha conducts the following two investigations for Green Procurement.

(i) Investigation of supplier
(ii) Investigation of production materials and products

(i) Investigation of supplier

When evaluating our suppliers, we check the conventional matters regarding the quality, price, surety of delivery, the stability, reliability, after-sales service, technical development power, stability of management base, and response in case of troubles, etc. In addition, we also check the supplier's approach to the environment, etc., listed below.

1. Structure of environment management system and quality management system
2. Use of specific chemical substances in manufacturing process
3. Control system for chemical substances contained in delivered production materials and products

(ii) Investigation of production materials and products

When selecting production materials and products, Yamaha checks the required quality and function, the rational price and delivery, and following environmental issues.

1. Presence and content of specific chemical substances in production materials and products

IV Operation

(i) Investigation of supplier

Prospective suppliers are investigated with the "Green Procurement Investigation Sheet for Environmental Aspects" (Form 1) prior to starting business. Prospective suppliers are asked to complete this Investigation for Environmental Aspects and to make a declaration that the response is true with the "Declaration of Environmental Aspects" (Form 2). If the supplier is a trading house, a secondary investigation of the delivered production materials and products manufacturer will be required.

The investigation results are used as reference when selecting suppliers.

Suppliers which have already conducted business transaction with us may also be investigated as prospective suppliers. We ask for your cooperation in this matter.

(ii) Investigation of production materials and products

When newly incorporating a material or a product, suppliers are required to investigate the content of substances listed in "Standards for Chemical Content in Production materials and products" (Annex 2), and list the results in the "Article Information Sheet[1] (AIS)" defined by Joint Article Management Promotion-consortium (JAMP) in principle. The AIS are prepared according to the "JAMP AIS preparation manual". These results must be submitted to Yamaha. Suppliers are also asked to submit the Material Safety Data Sheets (MSDS) for raw materials such as substances and preparations.

Production materials and products which have already been in use may also be investigated as when newly adopted. We ask for your cooperation in this matter.

The submitted results will be confirmed prior to judging the acceptability of procurement.

(iii) Handling of responses

Unless disclosure is required by law, all returned information will be used in Yamaha, and will not be disclosed to any external party.

Any personal information indicated in the investigation shall be appropriately managed following the Yamaha Privacy Protection Policy, and shall not be used for any purpose other than procurement activities.

(iv) Confirmation of responses

Additional information or audits may be requested to confirm the submitted responses.

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[1] AIS and it's related documents are downloadable form the following URL.
http://www.jamp-info.com/english/ais

(v) Notification of changes

If any changes arise in the submitted responses, such as changes to the supplier's management system, supplies, used materials and processes, etc., please submit the data to be changed beforehand.

V Revisions

These standards shall be revised as necessary.

VI Contact regarding these Standards

Please forward any inquiries regarding these Standards to your contact buyer or the followings.

Procurement Planning Department, Production Engineering & Planning Division
(Phone:+81-53-460-2340 FAX:+81-53-460-5941)
Quality Planning Department, Quality Assurance Division
(Phone:+81-53-460-2332 FAX:+81-53-460-2767)

Annex 1　Substances Prohibited in Manufacturing Process of Production Materials and Products

Ozone depleting substances

(the substance provided for the Montreal Protocol (Annex C group I is excluded))

Annex	Group	Substance	Alias Name	Formula
A	I	Trichlorofluoromethane	CFC-11	$CFCl_3$
		Dichlorodifluoromethane	CFC-12	CF_2Cl_2
		Trichlorotrifluoroethane	CFC-113	$C_2F_3Cl_3$
		Dichlorotetrafluoroethane	CFC-114	$C_2F_4Cl_2$
		Chloropentafluoroethane	CFC-115	C_2F_5Cl
	II	Bromochlorodifluoromethane	halon-1211	CF_2BrCl
		Bromotrifluoromethane	halon-1301	CF_3Br
		Dibromotetrafluorometane	halon-2402	$C_2F_4Br_2$
B	I	Chlorotrifluorometane	CFC-13	CF_3Cl
		Pentachlorofluoroethane	CFC-111	C_2FCl_5
		Tetrachlorodifluoroethane	CFC-112	$C_2F_2Cl_4$
		Heptachlorofluoropropane	CFC-211	C_3FCl_7
		Hexachlorodifluoropropane	CFC-212	$C_3F_2Cl_6$
		Pentachlorotrifluoropropane	CFC-213	$C_3F_3Cl_5$
		Tetrachlorotetrafluoropropane	CFC-214	$C_3F_4Cl_4$
		Trichloropentafluoropropane	CFC-215	$C_3F_5Cl_3$
		Dichlorohexafluoropropane	CFC-216	$C_3F_6Cl_2$
		Chloroheptafluoropropane	CFC-217	C_3F_7Cl
	II	Carbon tetrachloride		CCl_4
	III	1,1,1-Trichloroethane[*1]	Methyl chloroform	$C_2H_3Cl_3$
C	II	Dibromofluoromethane		$CHFBr_2$
		Bromodifluoromethane	HBFC-22B1	CHF_2Br
		Bromofluoromethane		CH_2FBr
		Tetrabromofluoroethane		C_2HFBr_4
		Tribromodifluoroethane		$C_2HF_2Br_3$
		Dibromotrifluoroethane		$C_2HF_3Br_2$
		Bromotetrafluoroethane		C_2HF_4Br
		Tribromofluoroethane		$C_2H_2FBr_3$
		Dibromodifluoroethane		$C_2H_2F_2Br_2$
		Bromotrifluoroethane		$C_2H_2F_3Br$
		Dibromofluoroethane		$C_2H_3FBr_2$
		Bromodifluoroethane		$C_2H_3F_2Br$
		Bromofluoroethane		C_2H_4FBr
		Hexabromofluoropropane		C_3HFBr_6
		Pentabromodifluoropropane		$C_3HF_2Br_5$
		Tetrabromotrifluoropropane		$C_3HF_3Br_4$
		Tribromotetrafluoropropane		$C_3HF_4Br_3$
		Dibromopentafluoropropane		$C_3HF_5Br_2$
		Bromohexafluoropropane		C_3HF_6Br
		Pentabromofluoropropane		$C_3H_2FBr_5$

(Continue)

Annex	Group	Substance	Alias Name	Formula
C	II	Tetrabromodifluoropropane		$C_3H_2F_2Br_4$
		Tribromotrifluoropropane		$C_3H_2F_3Br_3$
		Dibromotetrafluoropropane		$C_3H_2F_4Br_2$
		Bromopentafluoropropane		$C_3H_2F_5Br$
		Tetrabromofluoropropane		$C_3H_3FBr_4$
		Tribromodifluoropropane		$C_3H_3F_2Br_3$
		Dibromotrifluoropropane		$C_3H_3F_3Br_2$
		Bromotetrafluoropropane		$C_3H_3F_4Br$
		Tribromofluoropropane		$C_3H_4FBr_3$
		Dibromodifluoropropane		$C_3H_4F_2Br_2$
		Bromotrifluoropropane		$C_3H_4F_3Br$
		Dibromofluoropropane		$C_3H_5FBr_2$
		Bromodifluoropropane		$C_3H_5F_2Br$
		Bromofluoropropane		C_3H_6FBr
	III	Bromochloromethane		CH_2BrCl
E	I	Methyl bromide*2		CH_3Br

*1: This formula does not refer to 1,1,2-trichloroethane.

*2: Applications in which the use of methyl bromide is indispensable for quarantine purposes are excluded.

Annex 2 Standards for Chemical Content in Production Materials and Products

1. Definitions

For the purposes of this Standard, the following definitions apply:

Battery or accumulator:

"Battery" or "accumulator" means any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (nonrechargeable) or consisting of one or more secondary battery cells (rechargeable) include battery pack.

"Battery pack" means any set of batteries or accumulators that are connected together and/or encapsulated within an outer casing so as to form a complete unit that the end user is not intended to split up or open.

Electrical and electronic equipment:

"Electrical and electronic equipment" means equipment which is dependent on electric current or electromagnetic fields in order to work properly, and equipment for the generation, transfer and measurement of such currents and fields.

"Dependent" means the equipment needs electricity as primary energy in order that the appliance fulfils its basic (primary) function.

Homogeneous material:

"Homogeneous material" means a material that cannot be mechanically disjointed (e.g. unscrewing, cutting, crushing, grinding and abrasive processes) into different materials. The term "homogeneous" is understood as "of uniform composition throughout".

Intentionally added:

"Intentionally added" means deliberately utilized in the formulation of a material or component where its continued presence is desired in the final product to provide a specific characteristic, appearance or quality.

Following addition does not handled as "intentionally added".

- Impurities doping in the semi-conductor manufacturing process.
- Product manufacturing which use the material containing known impurities.

Impurities:

"Impurities" mean substances that cannot be completely removed by industrial technology at the time of production in cases like the following:

- chemical substances that exist in the natural world and are contained natural material;

- by-products generated in the synthesis of materials or chemical substances as well as raw materials or catalysts that remain as residues after synthesis;
- chemical substances contained in recycles materials used in metal refining, paper composition, or other process.

Concentration:

The concentration in these Standards is indicated as mass concentration.

The concentration of metal compounds is not the concentration of contained compounds but the value obtained by converting the metal elements contained in those compounds.

Materials which contain volatile compounds, such as paints and bonds, are specified by the content concentration in the solid layer (layer formed by residues from which volatile compounds have been removed).

Article:

The "article" means an object to which during manufacture is given a particular shape, appearance or design that determines the function of the end-use to a degree larger than what is performed by the chemical composition.

In the case of a finished product, the respective functional objects that constitute the product (e.g. main unit, instruction manual, external power supply, packaging material) are managed as individual articles.

Containers and packaging materials:

“Containers and packaging materials” mean the containers and packaging materials used to package Yamaha products. These are materials which are unnecessary when the Yamaha product is consumed or when separated from the product.

Examples of judging containers and packaging materials are given in Table 1.

Table 1: Example of container and packaging material

Items classified as container and packaging materials	Items not classified as container and packaging materials
・ Package boxes (individual boxes, decorative boxes, assembly boxes), Crate (wooden crate) ・ Cushioning material, protective bags (sheets), partitions (spacers) ・ Vinyl bags, envelopes (bags for instruction manuals and warranty cards) ・ Shrink film, binding bands, adhesive tape, staples	・ Cases for CDs and FDs ・ Carrying cases (case enclosed with keyboards or guitars, etc.) ・ Labels (Labels attached to sections other than container or packaging material, or invoice etc. attached by third party)

2. Policy of applicable standards

The product content standards shall be set for each substance based on the applicable legal regulations.

2-1. Prohibited Substances

Inclusion of the following substances in the production materials and products is prohibited. When using under the applicable exemption clause, the application, usage area, content and content rate, etc., must be clear.

- Substances of which content in product is prohibited by law
- Substances of which content in product is voluntarily prohibited by Yamaha

2-2. Restricted Substances

Inclusion of the following substances in the production materials and products is restricted, or inclusion in specific applications is prohibited. When included within the restricted level or when included for purposes other than specific applications, the application, usage area, content and content rate, etc., must be clear.

- Substance of which content or concentration is restricted by law
- Substance of which content in specific application is prohibited or restricted by law
- Substance of which content in product is voluntarily restricted or in specific application is voluntarily prohibited by Yamaha

2-3. Controlled Substances

Use of the following substances in the production materials and products is not restricted. However, if such substances are contained in the production materials or products, the application, usage area, content and content rate, etc., must be clear to enable product recycling and suitable treatment, etc. depending on the product destination, the status of recycle and the status of industrial activity on contained chemical management.

- Substances which might have a negative impact in view of the environment, health or safety and sanitation
- Substances for which laws and ordinances to prohibit or restrict use in product are under review
- Substances for which display or disclosure is required when included in product
- Substances for which legal disclosure regarding wastes is required (Hazard and toxicity of waste)
- Substances which must be understood to avoid negative effect within the product's life cycle

3. Standards for Chemical Content in Production Materials and Products

3-1. Prohibited Substances

Substance group: Bis (tri-butyl tin) oxide (TBTO)

Target substance: Bis (tri-butyl tin) oxide CAS No. 56-35-9

Content standards: Use shall be prohibited in the following case:

- Intentional addition

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance)(Japan), EU regulation No.1907/2006 (REACH) Candidate list of SVHC for authorisation

Substance group: Polybrominated biphenyls (PBBs)

Examples of polybrominated biphenyls (PBBs)

Substance name	CAS No.
Decabromobiphenyl	13654-09-6
Nonabromo-1,1'-biphenyl	27753-52-2
Octabromobiphenyl	27858-07-7
Heptabromobiphenyl	35194-78-6
Hexabromobiphenyl	36355-01-8
Pentabromobiphenyl	56307-79-0
Tetrabromobiphenyl	40088-45-7

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, 2011/65/EU (EU RoHS directive (recast)), Basel Convention, etc.

Substance group: Polybrominated diphenylethers (PBDEs)

Example of polybrominated diphenylethers (PBDEs).

Substance name	CAS No.
Decabromodiphenyl ether	1163-19-5
Nonabromodiphenylether	63936-56-1
Diphenyl ether, octabromo derivative	32536-52-0
2,2',4,4',5-pentabromodiphenyl ether	32534-81-9
Tetrabromodiphenyl ether	40088-47-9

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, 2011/65/EU (EU RoHS directive (recast)), Product Regulations (Norway), Brominated flame retardant law (state statute in US), Basel Convention, etc.

Substance group: Polychlorinated biphenyls (PCBs) and Polychlorinated terphenyls (PCTs)

Substance details:

Polychlorinated biphenyls and polychlorinated terphenyls include the following analogs. Examples are given below.

Examples of polychlorinated biphenyls (PCBs) and polychlorinated terphenyls (PCTs)

Substance name	CAS No.
Polychlorinated biphenyl	1336-36-3
Aroclor	12767-79-2
Chlorodiphenyl (Aroclor 1260)	11096-82-5
Kanechlor 500	27323-18-8
Aroclor 1254	11097-69-1
Monomethyl – tetrachlorodiphenyl methane (Ugilec 141)	76253-60-6
Monomethyl-dichloro-diphenyl methane (Ugilec 121, Ugilec 21)	—
Monomethyl-dibromo-diphenyl methane (DBBT)	99688-47-8
Polychlorinated terphenyl	61788-33-8

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following case:

- Intentional addition

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance) (Japan), EU regulation No.1907/2006 (REACH) Annex XVII, etc.

Substance group: Polychloronapthalenes (more than 3 chlorine atoms)

Examples of polychloronapthalenes (more than 3 chlorine atoms).

Substance name	CAS No.
Naphthalene, chloro derivatives	70776-03-3
Octachloronaphthalene	2234-13-1
Heptachloronaphthalene	32241-08-0
Hexachloronaphthalene	1335-87-1
Pentachloronaphthalene	1321-64-8

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following case:

- Intentional addition

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1) (Japan).

Substance group: Short chain chlorinated paraffins (C10～13)

Examples of short chain chlorinated paraffins (C10~13).

Substance name	CAS No.
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8
Alkanes, C12-13, chloro	71011-12-6

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm

Major reference laws and regulations:

EU commission decision 2004/1/EC, EU regulation No.1907/2006 (REACH) candidate list of SVHC for authorisation, Regulations relating to restrictions on the use of chemicals and other products hazardous to health and the environment (Norway), etc.

Substance group: Asbestos

Examples of asbestos

Substance name	CAS No.
Chrysotile	12001-29-5
Amosite	12172-73-5
Crocidolite	12001-28-4
Actinolite	77536-66-4
Anthophyllite	77536-67-5
Tremolite	77536-68-6

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm

Major reference laws and regulations:

Industrial safety and health law (Japan), EU regulation No.1907/2006 (REACH) Annex XVII, ChemVerbotsV (Germany), TSCA(US), etc.

Substance group: Ozone depleting substances (Class I substances)

Substance details:

Ozone depleting substances (Class I substances) defined under the Montreal Protocol excluding those listed in the annex C group I (HCFCs) . Refer to table 2 for details.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm

Exemption: Use in the following applications shall be permitted

- The use of methyl bromide is indispensable for quarantine purposes.

Major reference laws and regulations:

Montreal Protocol, Ozone Layer Protection Law(Japan), EU regulation No. 2037/2000, Clean Air Act (US), etc.

Substance group: Radioactive substances

Examples of radioactive substances

Substance name	CAS No.
Americium-241	14596-10-2
Thorium-232	7440-29-1

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following case:

- Intentional addition

Exemption: Use in the following applications shall be permitted

- Lamps with radiological dosages which will not affect human bodies

Major reference laws and regulations:

Law for the regulation of nuclear source material,fuel material reactors 1986 (Japan), Law concerning prevention from radiation hazards due to radio-isotopes, etc.

Note: Although laws noted in the regulations do not correspond to Yamaha product fields, this has been set as a prohibited substances in view of worker health.

Substance group: Pentachlorophenol and its salts and esters

Examples of Pentachlorophenol and its salts and esters

Substance name	CAS No.
Pentachlorophenol	87-86-5
Potassium pentachlorophenolate	7778-73-6
Sodium Pentachlorophenate	131-52-2
Zinc bis(pentachlorophenolate)	2917-32-0

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following case:

- Intentional addition
- A residual concentration in the homogeneous material exceeding 5 ppm when material was treated with the mixture containing target substance.

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, ChemVerbotsV (Germany), etc.

Substance group: Hexachlorobenzene

Target substance: Hexachlorobenzene CAS No. 118-74-1

Content standards: Use shall be prohibited in the following case:

- Intentional addition
- An impurity concentration level in homogeneous material is clearly high compared to BAT (best available technology) level.

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance), Stockholm Convention, etc.

Substance group: Tri-substituted organostannic compounds (excluding TBTO)

Examples of tri-substituted organostannic compounds (excluding TBTO)

Substance name	CAS No.
Triphenyltin=N,N-dimethyldithio carbamate	1803-12-9
Triphenyltinfluoride	379-52-2
Triphenyltinacetate	900-95-8
Triphenyltinchloride	639-58-7
Triphenyltinhydroxide	76-87-9
Tributyltinacetate	56-36-0
Tributyltin laurate	3090-36-6
Bis(Tributyltin) phthalate	4782-29-0
Tributyltinchloride	1461-22-9

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition
- An impurity concentration in the homogeneous material exceeding 1000ppm of Tin.

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance), EU regulation No.1907/2006 (REACH) Annex XVII

Substance group: Perfluorooctane sulfonates (PFOSs)

Substance details: Perfluorooctane sulfonates refer to $C_8F_{17}SO_2X$ (OH, metal salt (O-M+), halide, amide and other derivatives). This substance group includes perfluorooctane sulfonyl fluoride (PFOSF CAS No. 1763-23-1, 307-35-7). Examples are given below.

Examples of Perfluorooctane sulfonates (PFOSs).

Substance name	CAS No.
Perfluoro(octane-1-sulfonic acid)	1763-23-1
Ammonium perfluorooctane-1-sulfonate	29081-56-9
Bis(2-hydroxyethyl)ammonium perfluorooctanesulfonate	70225-14-8
Potassium perfluorooctane-1-sulfonate	2795-39-3
Lithium perfluorooctane-1-sulfonate	29457-72-5

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases:

- Intentional addition

Exemption: Use in the following applications shall be permitted

- Photoresists or anti reflective coatings for photolithography processes.
- Photographic coatings applied to films, papers, or printing plates
- Mist suppressants for non-decorative hard chromium (VI) plating and wetting agents for use in controlled electroplating systems. (Limited to parts already in use)

Major reference laws and regulations:

Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance) (Japan), EU regulation No.1907/2006 (REACH) Annex XVII, Stockholm Convention, etc.

Substance group: 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-*tert*-butylphenol	
	Target substance: 2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-*tert*-butylphenol CAS No. 3846-71-7
	Content standards: Use shall be prohibited in the following cases: ・ Intentional addition
	Major reference laws and regulations: Law Concerning Examination and Regulation of Manufacture and Handling of Chemical Substances (Class 1 substance) (Japan),

Substance group: Dimethyl fumarate	
	Target substance: Dimethyl fumarate CAS No. 624-49-7
	Content standards: Use shall be prohibited in the following cases: ・ Intentional addition ・ An impurity concentration in the article exceeding 0.1ppm Note: If a silica-gel drier is used with the product for EU, a certificate of analysis is needed.
	Major reference laws and regulations EU regulation No.1907/2006 (REACH) Annex XVII

3-2. Restricted Substances

Substance group: Hexavalent chromium compounds

Examples of hexavalent chromium compounds

Substance name	CAS No.
Chromium(VI) oxide	1333-82-0
Sodium chromate	7775-11-3
Potassium chromate	7789-00-6
Calcium chromate	13765-19-0
Zinc chromate	13530-65-9
Barium chromate	10294-40-3
Lead(II) chromate	7758-97-6
Potassium dichromate	7778-50-9
Sodium dichromate	10588-01-9
Ammonium dichromate	7789-09-5

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Materials used for electrical and electronic equipments
  - ✓ Intentional addition
  - ✓ An impurity concentration in the homogeneous material exceeding 1000ppm
- Container and packaging material
  - ✓ Total mass concentration of cadmium, mercury, lead and hexavalent chromium exceeding 100ppm

Major reference laws and regulations:

94/62/EEC (EU Packaging directive), Toxics in packaging laws (state statute in US), 2011/65/EU (EU RoHS directive (recast)), etc.

Substance group: Lead and its compounds

Examples of lead and its compounds

Substance name	CAS No.
Lead	7439-92-1
Lead(II) carbonate	598-63-0
Lead(II) oxide	1317-36-8
Lead(IV) oxide	1309-60-0
Lead(II,IV) oxide	1314-41-6
Lead(II) chromate	7758-97-6
Lead(II) sulfide	1314-87-0
Lead(II) sulfate	7446-14-2
Lead(II) phosphate	7446-27-7
Lead(II) titanate	12060-00-3
Lead stearate	1072-35-1

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Accessible parts to consumer during normal use
  - ✓ A concentration in the surface painting layer exceeding 90ppm.
- Materials used for electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 1000ppm. For paint, a concentration level exceeding 600ppm. For PVC outer coatings of external connection cable, a concentration level exceeding 300ppm.
- Paint, pigment, ink or resin additive used for applications other than electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 100ppm
- Container and packaging material
  - ✓ Total mass concentration of cadmium, mercury, lead and hexavalent chromium exceeding 100ppm

Note:

- In the U.S., when a product is classified the "furniture article" of consumer products, the certificate that the lead concentration in the painting material does not exceed 90 ppm, may be required.
- Batteries and accumulators are not included in electrical and electronic equipments, but if the lead content exceeds 40ppm/piece, a LEAD indication will be required in the EU. Notify Yamaha in this case.

Exemptions for application in electrical and electronic parts:

In accordance with the EU RoHS exemptions listed on table 5.

However, "Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation " (China law) requires to indicate the presence of hazardous substances.

Reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, 94/62/EEC (EU Packaging directive), Toxics in packaging laws (USA State law), 2011/65/EC (EU RoHS recast), California Proposition 65 (US, California state), Statutory Order No. 1082 of September 13, 2007 on prohibition of import and marketing of products containing lead (Denmark), Consumer Product Safety Improvement Act and Ban of Lead Containing Paint (16CFR1303) (US), etc.

Substance group: Nickel and its compounds

Examples of nickel and its compounds

Substance name	CAS No.
Nickel	7440-02-0
Nickel(II) oxide	1313-99-1
Nickel(II) carbonate	3333-67-3
Nickel(II) sulfate	7786-81-4
Nickel sulfide	12035-72-2

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Materials of products intended for use on body parts, and which directly contact with the skin (e.g. necklaces, bracelets and chains, wrist-watch cases, watch straps and tighteners)
  - ✓ Release of nickel exceeds 0.5μg/cm²/week when tested EN1811

Reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, etc.

Substance group: Azo colorants

Substance details:

Azo colorants which, by reductive cleavage of one or more azo groups, may release one or more of the certain aromatic amines.

List of certain amines

Substance name	Formula	CAS No.
4-Amino azobenzene	$C_{12}H_{11}N_3$	60-09-3
o-Anisidine	C_7H_9NO	90-04-0
2-Naphthylamine	$C_{10}H_9N$	91-59-8
3,3'-Dichlorobenzidine	$C_{12}H_{10}Cl_2N_2$	91-94-1
Biphenyl-4-ylamine	$C_{12}H_{11}N$	92-67-1
Benzidine	$C_{12}H_{12}N_2$	92-87-5
o-Toluidine	C_7H_9N	95-53-4
4-Chloro-*o*-toluidine	C_7H_8ClN	95-69-2
2,4-Diaminotoluene	$C_7H_{10}N_2$	95-80-7
o-Aminoazotoluene	$C_{14}H_{15}N_3$	97-56-3
5-Nitro-o-toluidine	$C_7H_8N_2O_2$	99-55-8
3,3'-Dichloro-4,4'-diaminodiphenylmethane	$C_{13}H_{12}Cl_2N_2$	101-14-4
4,4'-Methylenedianiline	$C_{13}H_{14}N_2$	101-77-9
4,4'-Diaminodiphenylether	$C_{12}H_{12}N_2O$	101-80-4
p-Chloroaniline	C_6H_6ClN	106-47-8
3,3'-Dimethoxybenzidine	$C_{14}H_{16}N_2O_2$	119-90-4
3,3'-Dimethylbenzidine	$C_{14}H_{16}N_2$	119-93-7
6-Methoxy-*m*-toluidine	$C_8H_{11}NO$	120-71-8
2,4,5-Trimethylaniline	$C_9H_{13}N$	137-17-7
4,4'-Thiodianiline	$C_{12}H_{12}N_2S$	139-65-1
4-Methoxy-*m*-phenylenediamine	$C_7H_{10}N_2O$	615-05-4
4,4'-Methylenedi-*o*-toluidine	$C_{15}H_{18}N_2$	838-88-0

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Textile or leather materials of products intended for use on body parts, and which directly contact with the skin (e.g. headphones, straps)
  - ✓ Intentional addition
- Textile or leather materials of products intended for oral use, and which directly enter mouth
  - ✓ Intentional addition

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, etc.

Substance group: Creosotes

Substance detail: Target substances are listed below.

List of creosotes

Substance	CAS No.
Creosote	8001-58-9
Creosote oil	61789-28-4
Distillates (coal tar), naphthalene	84650-04-4
Creosote oil, acenaphtene fraction	90640-84-9
Distillates (coal tar), upper	65996-91-0
Anthracene oil	90640-80-5
Tar acids, Coal, Crude	65996-85-2
Creosote, wood	8021-39-4
Low temperature tar oil, alkaline	122384-78-5

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Wood materials (veneer, plywood, MFD, etc.)
  - ✓ Intentional addition

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, etc.

Substance group: Vinyl Chloride Polymer (PVC)

Target substance: Vinyl chloride polymer (PVC) CAS No. 9002-86-2

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Container and packaging material
  - ✓ Intentional addition

Major reference laws and regulations:

Basel Convention, Taxes on Polyvinyl chloride and Phthalate Act (Denmark), etc.

Note:

Having regard to the environmental impact of packaging materials, this substance has been set as a restricted substance voluntarily by Yamaha. If technologically impossible, please contact us.

Substance group: Volatile Organic Compounds (VOC)

Content Standards:

In-house Standards are set for the VOC which are emitted by Yamaha products. To achieve these Standards, differ requirements have been set according to the procured material in use. Contact the Procurement Supervisor for details.

Yamaha In-house standards for VOCs emitted by product

Substance \ Emission concentration	Standard value (Same as Ministry of Health, Labor and Welfare Guidelines)	
	μg/m3	ppm
Formaldehyde	100	0.08
Toluene	260	0.07
Xylene	870	0.20
p-Dichlorobenzene	240	0.04
Styrene	220	0.05
Ethylbenzen	3,800	0.88

Measurement conditions:

Temperature 25°C, humidity 50%, measurement using Chamber method

Major reference laws and regulations:

ChemVerbotsV (Germany), Standards for School Environmental Sanitation (Japan)

Substance group: Arsenic and its compounds

Examples of arsenic and its compounds

Substance name	CAS No.
Arsenic	7440-38-2
Gallium arsenide	1303-00-0
Arsenic pentoxide	1303-28-2
Arsenic trioxide	1327-53-3
Cupric aceto arsenite	12002-03-8
Lead (II) arsenite	10031-13-7
Potassium arsenite	10124-50-2
Arsenic trisulfide	1303-33-9
Potassium arsenate	7784-41-0
Calcium arsenate	7778-44-1
Calcium arsenite	27152-57-4
Cacodylic acid	75-60-5

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Treatment with the mixture contained target substance for the preservation of wood
- Paint, pigment, ink or resin additive
  - ✓ An impurity concentration in the homogeneous material exceeding 100ppm

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, (88/378/EEC(on the safety of toys)) etc.

Note:

In view of the target substance's acute toxicity and carcinogenic possibilities, this substance has been set as a restricted substance for paint, pigment, ink and resin additive voluntarily by Yamaha.

Substance group: Cadmium and its compounds

Examples of cadmium and its compounds

Substance name	CAS No.
Cadmium	7440-43-9
Cadmium oxide	1306-19-0
Cadmium sulfide	1306-23-6
Cadmium chloride	10108-64-2
Cadmium iodide	7790-80-9
Cadmium sulfate	10124-36-4
Diethyl cadmium	592-02-9
Bis(diethyl-dithio carbamato) cadmium	14239-68-0
Cadmium fluoroborate	14486-19-2
Cadmium nitrate	10325-94-7

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Plating containing cadmium
- Fluorescent lamps containing cadmium.
- Materials used for electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 100ppm.
- Paint, pigment, ink or resin additive used for applications other than electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 75ppm
- Batteries and accumulators
  - ✓ A concentration exceeding 20ppm/piece
- Container and packaging material
  - ✓ Total mass concentration of cadmium, mercury, lead and hexavalent chromium exceeding 100ppm

Exemption: Use in the following applications shall be permitted

In accordance with the EU RoHS exemptions listed on table 5.

However, "Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation " (China law) requires to indicate the presence of hazardous substances.

Major reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, 2011/65/EU (EU RoHS directive (recast)), 2006/66/EC (EU Batteries directive), 94/62/EEC (EU Packaging directive), Toxics in packaging laws (state statute in US), Cadmium decree 1999 (Netherlands), Cadmium regulation (Denmark), etc.

Substance group: Mercury and its compounds

Examples of mercury and its compounds

Substance name	CAS No.
Mercury	7439-97-6
Mercury(II) oxide	21908-53-2
Mercury(I) chloride	10112-91-1
Mercury(II) chloride	7487-94-7
Mercury sulfate	7783-35-9
Mercury dinitrate	10045-94-0
Mercury(II) sulfide	1344-48-5
Phenyl mercury acetate	62-38-4

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- Materials used for electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 1000ppm.
- Surface treatment, paint, pigment, ink or resin additive used for applications other than electrical and electronic equipments
  - ✓ An impurity concentration in the homogeneous material exceeding 100ppm
- Batteries and accumulators
  - ✓ A concentration exceeding 5ppm/piece
  - ✓ For manganese batteries or alkaline batteries, concentration exceeding 1ppm/piece.
  - ✓ For button cells, concentration exceeding 2wt%.
- Container and packaging material

Total mass concentration of cadmium, mercury, lead and hexavalent chromium exceeding 100ppm

Exemption: Use in the following applications shall be permitted

In accordance with the EU RoHS exemptions listed on table 5.

However, "Management Methods for Controlling Pollution Caused by Electronic Information Products Regulation " (China law) requires to indicate the presence of hazardous substances.

Reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII, 2006/66/EC (EU Batteries directive), 94/62/EEC (EU Packaging directive), Toxics in packaging laws (state statute in US), 2011/65/EU (EU RoHS directive (recast)), Statutory Order No. 627 of 1 July 2003 on Prohibition of Import, Sale and Export of Mercury and Mercury-Containing Products (Denmark), Mercury Law (U.S.A., State Law), Supervisory Management Rules Regarding Inspection of Mercury Content in Import/Export Battery Products (China)

Substance group: Dibutyltin compounds (DBTs)

Examples of dibutyltin compounds

Substance name	CAS No.
Dibutyl tin	1002-53-5
Dibutyltin oxide	818-08-6
Di-n-butyltin di(monobutyl)maleate	15546-16-4
Dibutyltin dilaurate	77-58-7
Dibutyltin maleate	78-04-6
Dibutyltin di(acetate)	1067-33-0

Note: This table does not indicate all the target substances.

Content standards: Use shall be prohibited in the following cases

- A concentration in the article or part thereof exceeding 0.1 % by weight of Tin.

Exemption: Use in the following applications shall be permitted until 1 January 2015

- one-component and two-component room temperature vulcanisation sealants (RTV-1 and RTV-2 sealants) and adhesives,
- paints and coatings containing DBT compounds as catalysts when applied on articles,
- soft polyvinyl chloride (PVC) profiles whether by themselves or coextruded with hard PVC,
- fabrics coated with PVC containing DBT compounds as stabilisers when intended for outdoor applications,
- outdoor rainwater pipes, gutters and fittings, as well as covering material for roofing and façades.

Reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII

Substance group: Dioctyltin compounds (DOTs)

Examples of dioctyltin compounds

Substance name	CAS No.
Dioctyltin oxide	870-08-6
Dioctyltin dilaurate	3648-18-8

Note: This table does not indicate all the target substances.

Prohibited applications and content standards: Use shall be prohibited in the following cases

- A concentration in the following articles or part thereof exceeding 0.1 % by weight of Tin.
  - ✓ textile articles intended to come into contact with the skin,
  - ✓ gloves,
  - ✓ footwear or part of footwear intended to come into contact with the skin,
  - ✓ wall and floor coverings,
  - ✓ childcare articles,
  - ✓ two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits).

Reference laws and regulations:

EU regulation No.1907/2006 (REACH) Annex XVII

3-3. Controlled Substances

Substance group: Antimony and its compounds

Examples of antimony and its compounds

Substance name	CAS No.
Antimony	7440-36-0
Antimony trichloride	10025-91-9
Antimony trioxide	1309-64-4
Antimony pentoxide	1314-60-9
Sodium antimonite	15432-85-6
Potassium antimonite	14459-60-0
Antimony(III) sulfide	1345-04-6
Antimony pentachloride	7647-18-9
Antimony pentasulfide	1315-04-4
Potassium antimony tartrate	28300-74-5

Note: This table does not indicate all the target substances.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

Industrial safety and health law (Japan), Basel Convention, Proposition 65((US, California state), etc.

Substance group: Beryllium and its compounds

Examples of beryllium and its compounds

Substance name	CAS No.
Beryllium	7440-41-7
Beryllium-aluminum alloy	12770-50-2
Beryllium-copper alloy	11133-98-5
Beryl	1302-52-9
Beryllium oxide	1304-56-9
Beryllium chloride	7787-47-5
Beryllium fluoride	7787-49-7
Beryllium hydroxide	13327-32-7
Beryllium hydrogen phosphate	13598-15-7
Beryllium sulfate	13510-49-1
Beryllium nitrate	13597-99-4
Beryllium carbonate	66104-24-3

Note: This table does not indicate all the target substances.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

Industrial safety and health law (Japan), Basel Convention, Proposition 65((US, California state), etc.

Substance group: Bismuth and its compounds

Examples of bismuth and its compounds

Substance name	CAS No.
Bismuth	7440-69-9
Dibismuth trioxide	1304-76-3
Dibismuth trisulphide	1345-07-9
Bismuth nitrate	10361-44-1
Bismuth(Ⅲ) phosphate	10049-01-1
Bismuth telluride	1304-82-1
Bismuth(III) selenide	12068-69-8

Note: This table does not indicate all the target substances.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

None in particular

Substance group: Selenium and its compounds

Examples of selenium and its compounds

Substance name	CAS No.
Selenium	7782-49-2
Selenous acid	7783-00-8
Sodium selenide	1313-85-5
Selenium dioxide	7446-08-4
Disodium selenate	13410-01-0
Selenium disulfide	7488-56-4
Selenium monosulfide	7446-34-6
Selenic acid	7783-08-6
Selenium trioxide	13768-86-0

Note: This table does not indicate all the target substances.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

Industrial safety and health law (Japan), Basel Convention, etc.

Substance group: Brominated Flame Retardants (excluding PBBs and PBDEs)

Examples of brominated flame retardants (excluding PBBs and PBDEs)

Substance name	CAS No.
3,5,3',5'-Tetrabromo-bisphenol A (TBBA)	79-94-7
2,3-dibromopropan-1-ol	96-13-9
TBBA-(2,3-dibromo-propyl-ether)	21850-44-2
Poly(2,6-dibromo-phenylene oxide)	69882-11-7
Brominated epoxy resin end-capped with tribromophenol	139638-58-7

Note: This table does not indicate all the target substances.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

2002/96/EC(WEEE directive), Basel Convention

Substance group: Ozone depleting substances (Class II substances)

Substance details: Ozone depleting substances (Class II substances) defined under the Montreal Protocol annex C group I (HCFCs) . Refer to table 3 for details.

Control Standards:

- Intentional addition where concentration in homogeneous material exceeds 1000ppm.

Major reference laws and regulations:

Montreal Protocol, Ozone Layer Protection Law, EU regulation No. 2037/2000, etc.

Substance group: Phthalates

Substance details: Phthalates refer to the following six substances.

List of Phthalates

Substance	CAS No.
Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7
Dibutyl phthalate (DBP)	84-74-2
Benzyl butyl phthalate (BBP)	85-68-7
Di-'isononyl' phthalate (DINP)	28553-12-0, 68515-48-0
Di-'isodecyl' phthalate (DIDP)	26761-40-0, 68515-49-1
Di-n-octyl phthalate (DNOP)	117-84-0

Control Standards:

- Intentional addition where total weight of the six substances exceeds a 1000ppm concentration in the homogeneous material.

Major reference laws and regulations:

76/769/EEC and its amendments, Industrial safety and health law (Japan),etc.

Substance group: Listed substances on the Candidate list of Substance of Very High Concern for Authorisation under EU REACH regulation	
	Substance detail: The substances of this group meet the criteria for classification as the "Substance of Very High Concern (SVHC)" in Article 57 of EU regulation No. 1907/2006 (REACH regulation), and are identified in accordance with Article 59 of REACH. These substances are published on the European Chemical Agency's (ECHA's) website. Table 4 shows the candidate substance list for Authorisation as of 19 December, 2011. Please refer to the latest list on the following URL, since this list is updated frequently. URL http://echa.europa.eu/web/guest/candidate-list-table
	Control Standards: ・ Intentional addition where concentration in homogeneous material exceeds 1000ppm.
	Major laws and regulations: EU regulation No.1907/2006 (REACH) Candidate list of SVHC for Authorisation

Table 2: Ozone depleting substances (Class I substances)

Annex	Group	Substance	Alias Name	Formula
A	I	Trichlorofluoromethane	CFC-11	$CFCl_3$
		Dichlorodifluoromethane	CFC-12	CF_2Cl_2
		Trichlorotrifluoroethane	CFC-113	$C_2F_3Cl_3$
		Dichlorotetrafluoroethane	CFC-114	$C_2F_4Cl_2$
		Chloropentafluoroethane	CFC-115	C_2F_5Cl
	II	Bromochlorodifluoromethane	halon-1211	CF_2BrCl
		Bromotrifluoromethane	halon-1301	CF_3Br
		Dibromotetrafluorometane	halon-2402	$C_2F_4Br_2$
B	I	Chlorotrifluorometane	CFC-13	CF_3Cl
		Pentachlorofluoroethane	CFC-111	C_2FCl_5
		Tetrachlorodifluoroethane	CFC-112	$C_2F_2Cl_4$
		Heptachlorofluoropropane	CFC-211	C_3FCl_7
		Hexachlorodifluoropropane	CFC-212	$C_3F_2Cl_6$
		Pentachlorotrifluoropropane	CFC-213	$C_3F_3Cl_5$
		Tetrachlorotetrafluoropropane	CFC-214	$C_3F_4Cl_4$
		Trichloropentafluoropropane	CFC-215	$C_3F_5Cl_3$
		Dichlorohexafluoropropane	CFC-216	$C_3F_6Cl_2$
		Chloroheptafluoropropane	CFC-217	C_3F_7Cl
	II	Carbon tetrachloride		CCl_4
	III	1,1,1-Trichloroethane[*1]	Methyl chloroform	$C_2H_3Cl_3$
C	II	Dibromofluoromethane		$CHFBr_2$
		Bromodifluoromethane	HBFC-22B1	CHF_2Br
		Bromofluoromethane		CH_2FBr
		Tetrabromofluoroethane		C_2HFBr_4
		Tribromodifluoroethane		$C_2HF_2Br_3$
		Dibromotrifluoroethane		$C_2HF_3Br_2$
		Bromotetrafluoroethane		C_2HF_4Br
		Tribromofluoroethane		$C_2H_2FBr_3$
		Dibromodifluoroethane		$C_2H_2F_2Br_2$
		Bromotrifluoroethane		$C_2H_2F_3Br$
		Dibromofluoroethane		$C_2H_3FBr_2$
		Bromodifluoroethane		$C_2H_3F_2Br$
		Bromofluoroethane		C_2H_4FBr
		Hexabromofluoropropane		C_3HFBr_6
		Pentabromodifluoropropane		$C_3HF_2Br_5$
		Tetrabromotrifluoropropane		$C_3HF_3Br_4$
		Tribromotetrafluoropropane		$C_3HF_4Br_3$
		Dibromopentafluoropropane		$C_3HF_5Br_2$
		Bromohexafluoropropane		C_3HF_6Br
		Pentabromofluoropropane		$C_3H_2FBr_5$

(Continue)

Annex	Group	Substance	Alias Name	Formula
C	II	Tetrabromodifluoropropane		$C_3H_2F_2Br_4$
		Tribromotrifluoropropane		$C_3H_2F_3Br_3$
		Dibromotetrafluoropropane		$C_3H_2F_4Br_2$
		Bromopentafluoropropane		$C_3H_2F_5Br$
		Tetrabromofluoropropane		$C_3H_3FBr_4$
		Tribromodifluoropropane		$C_3H_3F_2Br_3$
		Dibromotrifluoropropane		$C_3H_3F_3Br_2$
		Bromotetrafluoropropane		$C_3H_3F_4Br$
		Tribromofluoropropane		$C_3H_4FBr_3$
		Dibromodifluoropropane		$C_3H_4F_2Br_2$
		Bromotrifluoropropane		$C_3H_4F_3Br$
		Dibromofluoropropane		$C_3H_5FBr_2$
		Bromodifluoropropane		$C_3H_5F_2Br$
		Bromofluoropropane		C_3H_6FBr
	III	Bromochloromethane		CH_2BrCl
E	I	Methyl bromide		CH_3Br

*1: This formula does not refer to 1,1,2-trichloroethane.

Table 3: Ozone depleting substances (Class II substances)

Annex	Group	Substance	Alias Name	Formula
C	I	Dichlorofluoromethane*	HCFC-21	$CHFCl_2$
		Chlorodifluoromethane*	HCFC-22	CHF_2Cl
		Chlorofluoromethane	HCFC-31	CH_2FCl
		Tetrachlorofluoroethane	HCFC-121	C_2HFCl_4
		Trichlorodifluoroethane	HCFC-122	$C_2HF_2Cl_3$
		Dichlorotrifluoroethane*	HCFC-123	$C_2HF_3Cl_2$
		Chlorotetrafluoroethane*	HCFC-124	C_2HF_4Cl
		Trichlorofluoroethane	HCFC-131	$C_2H_2FCl_3$
		Dichlorodifluoroethane	HCFC-132	$C_2H_2F_2Cl_2$
		Chlorotrifluoroethane	HCFC-133	$C_2H_2F_3Cl$
		Dichlorofluoroethane	HCFC-141	$C_2H_3FCl_2$
		1,1-Dichloro-1-fluoroethane*	HCFC-141b	CH_3CFCl_2
		Chlorodifluoroethane	HCFC-142	$C_2H_3F_2Cl$
		1-Chloro-1,1-difluoroethane*	HCFC-142b	CH_3CF_2Cl
		Chlorofluoroethane	HCFC-151	C_2H_4FCl
		Hexachlorofluoropropane	HCFC-221	C_3HFCl_6
		Pentachlorodifluoropropane	HCFC-222	$C_3HF_2Cl_5$
		Tetrachlorotrifluoropropane	HCFC-223	$C_3HF_3Cl_4$
		Trichlorotetrafluoropropane	HCFC-224	$C_3HF_4Cl_3$
		Dichloropentafluoropropane	HCFC-225	$C_3HF_5Cl_2$
		3,3-Dichloro-1,1,1,2,2-pentafluoropropane*	HCFC-225ca	$CF_3CF_2CHCl_2$
		1,3-Dichloro-1,1,2,2,3-pentafluoropropane*	HCFC-225cb	CF_2ClCF_2CHClF
		Chlorohexafluoropropane	HCFC-226	C_3HF_6Cl
		Pentachlorofluoropropane	HCFC-231	$C_3H_2FCl_5$
		Tetrachlorodifluoropropane	HCFC-232	$C_3H_2F_2Cl_4$
		Trichlorotrifluoropropane	HCFC-233	$C_3H_2F_3Cl_3$
		Dichlorotetrafluoropropane	HCFC-234	$C_3H_2F_4Cl_2$
		Chlorotetrafluoropropane	HCFC-235	$C_3H_2F_5Cl$
		Tetrachlorofluoropropane	HCFC-241	$C_3H_3FCl_4$
		Trichlorodifluoropropane	HCFC-242	$C_3H_3F_2Cl_3$
		Dichlorotrifluoropropane	HCFC-243	$C_3H_3F_3Cl_2$
		Chlorotetrafluoropropane	HCFC-244	$C_3H_3F_4Cl$
		Trichlorofluoropropane	HCFC-251	$C_3H_4FCl_3$
		Dichlorodifluoropropane	HCFC-252	$C_3H_4F_2Cl_2$
		Chlorotrifluoropropane	HCFC-253	$C_3H_4F_3Cl$
		Dichlorofluoropropane	HCFC-261	$C_3H_5FCl_2$
		Chlorodifluoropropane	HCFC-262	$C_3H_5F_2Cl$
		Chlorofluoropropane	HCFC-271	C_3H_6FCl

*: The substances with the largest possibility to be used in commerce was described.

Table 4: The candidate list of the substance of very high concern (SVHC) for authorisation based on EU REACH regulation (as of 19 December, 2011)

Substance name	CAS No.	EC No.	Date of inclusion
Anthracene	120-12-7	204-371-1	2008/10/28
4,4'- Diaminodiphenylmethane	101-77-9	202-974-4	2008/10/28
Dibutyl phthalate	84-74-2	201-557-4	2008/10/28
Cobalt dichloride	7646-79-9	231-589-4	2008/10/28 2011/6/20
Diarsenic pentaoxide	1303-28-2	215-116-9	2008/10/28
Diarsenic trioxide	1327-53-3	215-481-4	2008/10/28
Sodium dichromate	7789-12-0, 10588-01-9	234-190-3	2008/10/28
5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	201-329-4	2008/10/28
Bis (2-ethyl(hexyl) phthalate) (DEHP)	117-81-7	204-211-0	2008/10/28
Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified (α-HBCDD, β-HBCDD, γ-HBCDD)	134237-50-6, 134237-51-7, 134237-52-8	247-148-4 and 221-695-9	2008/10/28
Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	287-476-5	2008/10/28
Bis(tributyltin)oxide	56-35-9	200-268-0	2008/10/28
Lead hydrogen arsenate	7784-40-9	232-064-2	2008/10/28
Benzyl butyl phthalate	85-68-7	201-622-7	2008/10/28
Triethyl arsenate	15606-95-8	427-700-2	2008/10/28
Anthracene oil	90640-80-5	292-602-7	2010/1/13
Anthracene oil, anthracene paste, distn. Lights	91995-17-4	295-278-5	2010/1/13
Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	295-275-9	2010/1/13
Anthracene oil, anthracene-low	90640-82-7	292-604-8	2010/1/13
Anthracene oil, anthracene paste	90640-81-6	292-603-2	2010/1/13
Pitch, coal tar, high temp.	65996-93-2	266-028-2	2010/1/13

(Continue)

Substance name	CAS No.	EC No.	Date of inclusion
Aluminosilicate Refractory Ceramic Fibres*1			2010/1/13
Zirconia Aluminosilicate, Refractory Ceramic Fibres*2			2010/1/13
2,4-Dinitrotoluene	121-14-2	204-450-0	2010/1/13
Diisobutyl phthalate	84-69-5	201-553-2	2010/1/13
Lead chromate	7758-97-6	231-846-0	2010/1/13
Lead chromate molybdate sulfate red (C.I. Pigment Red 104)	12656-85-8	235-759-9	2010/1/13
Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	215-693-7	2010/1/13
tris(2-chloroethyl)phosphate	115-96-8	204-118-5	2010/1/13
Acrylamide	79-06-1	201-173-7	2010/3/30
Trichloroethylene	79-01-6	201-167-4	2010/6/18
Boric acid	10043-35-3 / 11113-50-1	233-139-2 / 234-343-4	2010/6/18
Disodium tetraborate, anhydrous	1330-43-4 12179-04-3 1303-96-4	215-540-4	2010/6/18
Tetraboron disodium heptaoxide, hydrate	12267-73-1	235-541-3	2010/6/18
Sodium chromate	7775-11-3	231-889-5	2010/6/18
Potassium chromate	7789-00-6	232-140-5	2010/6/18
Ammonium dichromate	7789-09-5	232-143-1	2010/6/18
Potassium dichromate	7778-50-9	231-906-6	2010/6/18

(Continue)

*1: Aluminosilicate Refractory Ceramic Fibres are fibres covered by 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 fulfil the two following conditions:

a) Al_2O_3 and SiO_2 are present within the following concentration ranges:

- Al_2O_3: 43.5 – 47 % w/w, and SiO_2: 49.5 – 53.5 % w/w,

or

- Al_2O_3: 45.5 – 50.5 % w/w, and SiO_2: 48.5 – 54 % w/w,

b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm).

*2: Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by 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 fulfil the two following conditions:

a) Al_2O_3, SiO_2 and ZrO_2 are present within the following concentration ranges:

Al_2O_3: 35 – 36 % w/w, and SiO_2: 47.5 – 50 % w/w, and ZrO_2: 15 - 17 % w/w,

b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm).

Substance name	CAS No.	EC No.	Date of inclusion
2-Ethoxyethanol	110-80-5	203-804-1	2010/12/15
Cobalt(II) sulphate	10124-43-3	233-334-2	2010/12/15
2-Methoxyethanol	109-86-4	203-713-7	2010/12/15
Acids generated from chromium trioxide and their oligomers. Group containing: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5, 13530-68-2	231-801-5, 236-881-5	2010/12/15
Cobalt(II) diacetate	71-48-7	200-755-8	2010/12/15
Cobalt(II) carbonate	513-79-1	208-169-4	2010/12/15
Chromium trioxide	1333-82-0	215-607-8	2010/12/15
Cobalt(II) dinitrate	10141-05-4	233-402-1	2010/12/15
Strontium chromate	7789-06-2	232-142-6	2011/6/20
1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	271-084-6	2011/6/20
1,2,3-Trichloropropane	96-18-4	202-486-1	2011/6/20
2-Ethoxyethyl acetate	111-15-9	203-839-2	2011/6/20
1-Methyl-2-pyrrolidone	872-50-4	212-828-1	2011/6/20
1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	276-158-1	2011/6/20
Hydrazine	302-01-2, 7803-57-8	206-114-9	2011/6/20
4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	205-426-2	2011/12/19
Dichromium tris(chromate)	24613-89-6	246-356-2	2011/12/19
2-Methoxyaniline; o-Anisidine	90-04-0	201-963-1	2011/12/19
Lead styphnate	15245-44-0	239-290-0	2011/12/19

(Continue)

Substance name	CAS No.	EC No.	Date of inclusion
Aluminosilicate Refractory Ceramic Fibres*3			2011/12/19
Zirconia Aluminosilicate Refractory Ceramic Fibres*4			2011/12/19
Pentazinc chromate octahydroxide	49663-84-5	256-418-0	2011/12/19
N,N-dimethylacetamide	127-19-5	204-826-4	2011/12/19
Bis(2-methoxyethyl) phthalate	117-82-8	204-212-6	2011/12/19
1,2-dichloroethane	107-06-2	203-458-1	2011/12/19
Phenolphthalein	77-09-8	201-004-7	2011/12/19
Arsenic acid	7778-39-4	231-901-9	2011/12/19
Lead diazide, Lead azide	13424-46-9	236-542-1	2011/12/19
Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	234-329-8	2011/12/19
Formaldehyde, oligomeric reaction products with aniline	25214-70-4	500-036-1	2011/12/19
Lead dipicrate	6477-64-1	229-335-2	2011/12/19
Trilead diarsenate	3687-31-8	222-979-5	2011/12/19
Bis(2-methoxyethyl) ether	111-96-6	203-924-4	2011/12/19
Calcium arsenate	7778-44-1	231-904-5	2011/12/19
2,2'-dichloro-4,4'-methylenedianiline	101-14-4	202-918-9	2011/12/19

*3: Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 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 fulfil the three following conditions:

a) oxides of aluminium and silicon are the main components present (in the fibres) within variable concentration ranges

b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm)

c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight

*4: Zirconia Aluminosilicate Refractory Ceramic Fibres are fibres covered by index number 650-017-00-8 in Annex VI, part 3, table 3.1 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 fulfil the three following conditions:

a) oxides of aluminium, silicon and zirconium are the main components present (in the fibres) within variable concentration ranges

b) fibres have a length weighted geometric mean diameter less two standard geometric errors of 6 or less micrometres (μm).

c) alkaline oxide and alkali earth oxide (Na2O+K2O+CaO+MgO+BaO) content less or equal to 18% by weight.

Table 5: List of exempted applications under EU RoHS directive (2011/65/EU)

Exemption		Scope and dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner):	
1(a)	For general lighting purposes < 30 W: 5 mg	Expires on 31 December 2011; 3,5 mg may be used per burner after 31 December 2011 until 31 December 2012; 2,5 mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes ≧30 W and < 50 W: 5 mg	Expires on 31 December 2011; 3,5 mg may be used per burner after 31 December 2011
1(c)	For general lighting purposes ≧50 W and ＜150 W: 5 mg	
1(d)	For general lighting purposes ≧150 W: 15 mg	
1(e)	For general lighting purposes with circular or square structural shape and tube diameter ≦17 mm	No limitation of use until 31 December 2011; 7 mg may be used per burner after 31 December 2011
1(f)	For special purposes: 5 mg	
2(a)	Mercury in double-capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp):	
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter > 9 mm (e.g. T2): 5 mg	Expires on 31 December 2011; 4 mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter ≧9 mm and ≦17 mm (e.g. T5): 5 mg	Expires on 31 December 2011; 3 mg may be used per lamp after 31 December 2011
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter ＞17 mm and ≦28 mm (e.g. T8): 5 mg	Expires on 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12): 5 mg	Expires on 31 December 2012; 3,5 mg may be used per lamp after 31 December 2012
2(a)(5)	Tri-band phosphor with long lifetime (≧25 000 h): 8 mg	Expires on 31 December 2011; 5 mg may be used per lamp after 31 December 2011
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(1)	Linear halophosphate lamps with tube > 28 mm (e.g. T10 and T12): 10 mg	Expires on 13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters): 15 mg	Expires on 13 April 2016

(Continue)

Exemption		Scope and dates of applicability
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp):	
3(a)	Short length (≦500 mm)	No limitation of use until 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
3(b)	Medium length (> 500 mm and ≦ 1 500 mm)	No limitation of use until 31 December 2011; 5 mg may be used per lamp after 31 December 2011
3(c)	Long length (> 1 500 mm)	No limitation of use until 31 December 2011; 13 mg may be used per lamp after 31 December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra > 60:	
4(b)-I	P ≦ 155 W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011
4(b)-II	155 W < P ≦ 405 W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(b)-III	P > 405 W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner):	
4(c)-I	P ≦ 155 W	No limitation of use until 31 December 2011; 25 mg may be used per burner after 31 December 2011
4(c)-II	155 W < P ≦ 405 W	No limitation of use until 31 December 2011; 30 mg may be used per burner after 31 December 2011

(Continue)

Exemption		Scope and dates of applicability
4(c)-III	P > 405 W	No limitation of use until 31 December 2011; 40 mg may be used per burner after 31 December 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e)	Mercury in metal halide lamps (MH)	
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	
5(a)	Lead in glass of cathode ray tubes	
5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	
6(a)	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	
6(c)	Copper alloy containing up to 4 % lead by weight	
7(a)	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	
7(c)-I	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
7(d)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors'	
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	

(Continue)

Exemption		Scope and dates of applicability
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	
11(a)	Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before 24 September 2010
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
12	Lead as a coating material for the thermal conduction module C-ring	May be used in spare parts for EEE placed on the market before 24 September 2010
13(a)	Lead in white glasses used for optical applications	
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	
14	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	Expires on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
16	Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ($(Sr,Ba)_2\ MgSi_2O_7$:Pb)	Expires on 1 January 2011
18(b)	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 ($BaSi_2\ O_5$:Pb)	
19	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)	Expires on 1 June 2011

(Continue)

Exemption		Scope and dates of applicability
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 1 June 2011
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	May be used in spare parts for EEE placed on the market before 24 September 2010
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	
26	Lead oxide in the glass envelope of black light blue lamps	Expires on 1 June 2011
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on 24 September 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
33	Lead in solders for the soldering of thin copper wires of 100 μm diameter and less in power transformers	
34	Lead in cermet-based trimmer potentiometer elements	
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expired on 1 July 2010
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39	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	Expires on 1 July 2014
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expires on 31 December 2013’

Table 6: Relation of Main Regulations and Green Procurement Target Substances

			Prohibited Substances															Restricted Substances												Controlled Substances							
Region	Law / Regulation	Application scope	Bis (tri-butyl tin) oxide (TBTO)	Polybrominated biphenyls (PBBs)	Polybrominated diphenylethers (PBDEs)	Polychlorinated biphenyls (PCBs) and Polychlorinated terphenyls (PCTs)	Polychloronapthalenes (more than 3 chlorine atoms)	Short chain chlorinated paraffins (C10～13)	Asbestos	Ozone depleting substances (Class I substances)	Radioactive substances	Pentachlorophenol and its salts and esters	Hexachlorobenzene	Tri-substituted organostannic compounds (excluding TBTO)	Perfluorooctane sulfonates (PFOSs)	2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol	Dimethyl fumarate	Hexavalent chromium compounds	Lead and its compounds	Nickel and its compounds	Azo colorants	Creosotes	Vinyl Chloride Polymer (PVC)	Volatile Organic Compounds (VOC)	Arsenic and its compounds	Cadmium and its compounds	Mercury and its compounds	Dibutyltin compounds (DBTs)	Dioctyltin compounds (DOTs)	Antimony and its compounds	Beryllium and its compounds	Bismuth and its compounds	Selenium and its compounds	Brominated Flame Retardants (excluding PBBs and PBDEs)	Ozone depleting substances (Class II substances)	Phthalates	Listed substances on the Candidate list of Substance of Very High Concern for Authorisation under EU REACH regulation
Japan	Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 1 Specified Chemical Substances)	All	×	×	×	×	×						×		×	×																					
	Law concerning the Examination and Regulation of Manufacture etc. of Chemical Substances (Class 2 Specified Chemical Substances)	All												×																							
	Industrial Safety and Health Act (Manufacturing prohibited substances)	All							×																												
	Law Concerning the Protection of the Ozone Layer	All								×																											
	Standards of School Environmental Sanitation	All																						×													
	Regulations for Nuclear Furnaces, Etc.										×																										
U.S.A	Toxic Substances Control Act (TSCA)	All				×			×																												
	Flame Retardant Substance Laws (State Law)	All			×																																
	Clean Air Act (CAA)	All								×																											
	Consumer Product Safety Improvement Ac(CPSIA) (Ban of lead containing paint 16CFR1303)	Furniture paint, surface coating material																	×																		
	Heavy Metal Packaging Law (State Law)	Packaging material																×	×							×	×										
	Mercury Product Law (State Law)	All																									×										
	Proposition 65 (State Law)	Indication of Exposure Risk		△		△		△	△									△	△	△					△	△	△			△	△		△			△	
EU	REACH regulation (Regulation (EC) No 1907/2006) Annex XVII	All			×	×			×					×	×													×									
		Resin, paint, plating																								×											
		Paint (lead carbonate, lead sulfate)																	×																		
		Wood																				×			×		×										
		Antifoulant (water use)	×																								×										
		Textiles		×																									×								
		Contact on skin																		×	×								×								
		Leather treatment						×																													
		Toys																																		×	
	REACH regulation (Regulation (EC) No 1907/2006) Candidate list of SVHC for Authorisation	All						(△)										(△)	(△)			(△)			(△)									(△)		(△)	△
	ODS regulation (REGULATION (EC) No 2037/2000)	All								×																									×		
	Battery Directive (2006/66/EC)	Batteries																	△							×	×										
	Packaging Directive (94/62/EC)	Packaging material																×	×							×	×										
	RoHS Directive (2002/95/EC)	Electrical and electronic equipments		×	×													×	×							×	×										
	WEEE Directive (2002/96/EC)	Electrical and electronic equipments		△	△	△				△																								△	△		
	Safety of Toy (88/378/EEC)	Toys (contact sections)																×	×						×	×	×			×			×				
Individual country regulations (Only sections added to EC Directives)																																					
	Chemikalienverbotsverordnung (Chemical Product Restrictions, Germany)	(Various targets)										×												×													
	Lead Regulations (Denmark)	Resin, etc.																	△																		
	Law Prohibiting Mercury (Denmark)	Resin, etc.																									×										
	Tax on PVC and Phthalates (Denmark)																						△													△	
	Law on Restriction of Chemicals and Other products Harmful to Health and Environment (Norway)	(Various targets)	×	×	×	×		×	×	×		×	×					×	×	×	×	×			×	×	×										
Other regions																																					
	Administration on the Control of Pollution Caused by Electronic Information Product (China)	Electrical and electronic equipments		△	△													△	△							△	△										
	Procedures Governing the Inspection and Supervision of Mercury Content in Imported and Exported Batteries (China)	Batteries																									×										
	The Act for Resource Recycling of Electrical/Electronic Products and Automobiles (Korea)	Electrical and electronic equipments		×	×													×	×							×	×										

×: Substance of which use is restricted by law

△: Substance requiring declaration and/or indication by law

Note that not all regulations are indicated in this table.

Form 1: The Investigation Sheet for Environmental Aspects

Number	Company code, Manufacturer code

Company code		Company name	
Manufacturer code		Manufacturer name	
Factory		Main products	
Respondent		Respondent division	
Telephone		Fax	
E-mail address		Answered date	

Questions	Answers	Explanatory Note
I Status of building management system		
1. Environmental management system		
(1) Status of certification on environmental management system		
Are you certified for any standards about environmental management system by the qualified certification body?		"YES"=1、"NO"=0 (If "YES", please answer to I-1-(1) A～D. If "NO", please answer to I-1-(2) A～B.
A) Certified standard		e.g.: ISO14001、Ecoaction21、KES、EMAS
B) Certified date		Please fill in the certified date in the form of "yyyy/mm/dd".
C) Certification body		Name of the certification body
D) Certification number		Certification No.
(2) Plan to acquire the standards about Environmental Management System		
Is there a plan to acquire any certification about environmental management system?		"YES"=1,"NO"=0
A) Name of the standard to acquire.		Please fill in the name of the standard if there is a plan to acquire one.
B) Scheduled date to acquire		Please fill in the scheduled date to acquire the standard in the form of "yyyy/mm/dd".
2.Quality Management System		
(1) Status of Quality Management System		
Are you certified for any standards about quality management system by the qualified certification body?		"YES"=1、"NO"=0 (If "YES", please answer to (1) A～D. If "NO", please answer to (2) Quality Management System.
A) Certified standard		e.g.: ISO9001、QS9000、ISO/TS 16949
B) Certified date		Please fill in the certified date in the form of "yyyy/mm/dd".
C) Certification body		Name of the certification body
D) Certification number		Certification No.
(2) Plan to acquire the standards about Quality Management System		
Is there a plan to acquire any certification about quality management system?		"YES"=1,"NO"=0
A) Name of the standard to acquire.		Please fill in the name of the standard if there is a plan to acquire any.
B) Scheduled date to acquire		Please fill in the scheduled date to acquire the standard in the form of "yyyy/mm/dd".
II Use of certain chemical substances in manufacturing process		
1.Use of ozone depleting substances		
(1) Are any ozone depleting substances (Appendix1) used in your manufacturing process for producing our parts?		"YES"=1,"NO"=0
A) Name of the ozone depleting substances used in manufacturing process.		* If "YES", please fill in the standard for contained quantity for product.

(to be continued)

III Control of the certain chemical substances contained in the parts to be delivered to Yamaha.		
1.Policy		
(1) Policy and principle		
A) Is the policy to engage in the contained substances in products defined and announced to public?		"YES"=1,"NO"=0
2. Plan making		
(1) Specifying the needs, requirements and concretization of scope to control.		
A) Are the rules including the requirements of relevant regulations/customers about the contained substances in products defined?		"YES"=1,"NO"=0
B) Is the scope of the contained substances in products defined?		"YES"=1,"NO"=0
C) Are the scope of the " product " and the " manufacturing process " defined?		"YES"=1,"NO"=0
D) Are the criteria and the method to verify the operation and the control of the scope and the substances?		"YES"=1,"NO"=0
E) Are there criteria open to public about the substances contained in products?		＊If "YES", please submit the criteria about the substances contained in products
(2) Setting the objectives and the targets		
A) Are the objectives and the targets defined in order to control the contained substances in products?		"YES"=1,"NO"=0
(3) In-house organization, function, responsibility and authority		
A) Is the structure (organization, function and responsibility) to promote the control of the substances in products defined?		"YES"=1,"NO"=0
3. Implementation / Operation		
(1) Operation Control		
A) Does your company obtain information about the certain substances contained in your parts / materials?		"YES"=1,"NO"=0
B) Does your company request the adequate control of certain substances to your vendors ?		"YES"=1,"NO"=0
C) Are the rules required for the incoming inspection defined and implemented?		"YES"=1,"NO"=0
D) Is the change control including chemical reaction / change in concentration implemented?		"YES"=1,"NO"=0
E) Are the rules including the notifying metod about the change control of the contained substances in products defined?		"YES"=1,"NO"=0
F) Is the framework to cope with trouble established and implemented?		"YES"=1,"NO"=0
(2) Education and Training		
A) Are the education and the training required for the control of the substances in products specified and implemented?		"YES"=1,"NO"=0
(3) Document control		
A) Are the in-house organization chart and the standards documented? Are the records well controlled and stored?		"YES"=1,"NO"=0
4. Evaluation and improvement of performance		
(1) Internal Audit		
A) Is there a operational procedure for the in house audit and is the audit implemented more than one time a year?		"YES"=1,"NO"=0
5. Others		
(1) Transactions with others		Please fill in the name of the company that approves your company. (Please fill in all that apply)
A) If you are approved by any other company, please fill in the name of the one that approves your company.		

＊If there are more than one manufacturer / factory, please copy this sheet.

Yamaha shall not disclose to a third party any investigation result unless otherwise required under the provision of applicable laws

Form 2: Declaration of Environmental Aspects

Declaration of Environmental Aspects

DATE: _____

TO: YAMAHA CORPORATION

We declare the truth of our answer to your "The Investigation Sheets for Environmental Aspects" dated _____and will inform you without any delay when any of our answered contents is to be changed.

Signature: _____

Responsible person: _____

Position: _____

Department: _____

Company: _____

Address: _____

Telephone: _____