

# Group of Soshin Electric companies

## Green Procurement Guidelines

Rev. 6

**双信電機株式会社**  
**SOSHIN ELECTRIC CO., LTD.**

Soshin Powertech Co., Ltd.

Soshin Device Co., Ltd.

Risshin Electronics Co., Ltd.

Soshin Electronics (M) Sdn. Bhd.

Soshin Electronics (SZ) Limited

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Attachment: Environmentally Controlled Substance List of the Group of Soshin Electric companies

## Introduction

We at the Group of Soshin Electric companies are committed to continually endeavoring to preserve the global natural environment, a duty which we regard as a key business issue across all our business activities covering the stages of development, designing, manufacturing and marketing of products. Growing social concern about environmental issues and progression by the EU with environmental legislation has made requirements for fulfillment of social responsibilities by business enterprises mandatory and more stringent.

Having recognized that green procurement is an important role business enterprises must play, the Group of Soshin Electric companies has updated its Green Procurement Guidelines to facilitate procurement of products that are least hazardous to the environment.

Our Green Procurement Guidelines constitute the base for our procurement activities of the least environmentally hazardous product formation elements (parts, sub-materials, packaging materials, etc.) from supply sources which are actively and seriously exercising their efforts to reduce their supplies' hazard on the environment, in observance of legislation. Successful achievement of our procurement policy outlined above totally depends upon cooperation from you, our valued suppliers.

It is a social requirement that we establish an environmental management system, exert CO<sub>2</sub> emission reduction activities, implement countermeasures to prevent exhaustion of resources such as water and other and preserve biodiversity and conflict materials, which we cordially request that our suppliers also observe.

In this sense, your understanding and support, which we highly appreciate, are also essential for mutual benefits and prospect.

Soshin Electric Co., Ltd.  
Procurement Division  
Environment Control Office

## **1. Environmental Activities of the Group of Soshin Electric Companies**

### **Management Philosophy**

SOSHIN WAY - Connecting people with the future through communication

Toward “realization of a society where we can co-exist with the environment,” we are committed to protecting the harmony between people and the earth through mutual trust.

“Even smaller and friendlier”

Each and every employee works voluntarily and actively to reduce greenhouse-gas emissions, and zero emissions, in order to realize the Group of Soshin Electric companies which stick to Green Parts (excerpt from the environmental section).

### **Environmental policy**

- Observance of laws, agreements and arrangements established with customers, and of self-defined standards
- Definition of environmental targets and their implementation by working together with local communities in an organized and continual manner to reduce environmental loads together
- Development, designing, manufacturing and marketing of products friendlier to the environment
- Exercising and monitoring efforts to prevent environmental pollution
- Further provision of education and enlightenment activities for employees of the Group of Soshin Electric companies and those who are involved in business with the Group for higher level consciousness of their roles and responsibilities

## **2. Purpose of Green Procurement by the Group of Soshin Electric Companies**

We aim for supply of environmentally friendlier products to our customers through the development and design of the least environmentally hazardous products by promoting Green Procurement.

As a sphere of achievement efforts for the target, we will encourage procurement of the least environmentally hazardous materials and parts from suppliers who work on environmental preservation.

These Guidelines identify our basic ideas about green procurement and the specific requirements of the Group of Soshin Electric companies that we request our suppliers to meet.

The Group of Soshin Electric companies will share with our suppliers environmental preservation activity-related issues in a bid to deal with such issues in cooperation with them, based on these Guidelines. The Group is determined to show preference for the purchase of products and services from suppliers which have successfully addressed and will continue to address environmental issues giving even deeper consideration to the environment.

### 3. Scope of Application of Our Green Procurement Program

- (1) Parts (electrical and mechanical parts, semiconductor devices, PWBs, wires, metal cases, screws and so on)
  - (2) Sub-materials for use in products (plastics, pastes, silicone, ink, paint, adhesive, wire, metal cases, screws, solder, etc.)
  - (3) Packaging materials (trays, reels, bags, cushions, cartons, tape, stickers, printing inks, etc.)
- \* Facilities, jigs and tools, and dies and molds for which there are no possibilities of being contained in products are exempted from application.

### 4. Date of Application

These guidelines will take effect on April 1st, 2016.

### 5. Environmentally Controlled Substances

- (1) Classification of environmentally controlled substances and list of applicable items  
Environmentally controlled substances are classified into substances prohibited from use, controlled substances, substances not to be contained in packing/package materials.  
For details, please refer to the separately available Environmentally Controlled Substance List of the Group of Soshin Electric companies.
- (2) Definition of terms
  - RoHS Directive:  
A directive concerning restricted use in the EU of 6 specified hazardous substances contained in electrical and electronic equipment (such as lead, mercury, cadmium, chromium VI, polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs))
  - REACH Regulation  
Regulation concerning the use and restriction in the EU of chemical substances for the protection of human health and the environment. The EU has assessed substances and made public a list of substances of very high concern (SVHC).
  - Substances prohibited from use  
Chemical substances which are prohibited in the substances within the scope of application of the Green Procurement Guidelines
  - Controlled substances  
Chemical substances to be investigated regarding use within the scope of the application of the Green Procurement Guidelines, and the amount if used
  - Substances not to be contained in packing/package materials  
Applicable to packing/package materials used for items covered by the scope of these Green Procurement Guidelines

- Homogeneous materials
 

Materials that cannot be disjointed into different materials by mechanical operations. The term “homogeneous” means “uniform in composition throughout.”
- Intentionally added
 

Deliberate use in the formulation of a product where its continued presence is desired to provide a specific characteristic, appearance or quality
- Threshold level
 

Concentration level which defines the limit above (or equal to) which the presence of a substance in a product shall be declared based on the requirements of these Guidelines. Numerical threshold levels are provided in weight % (and parts per million, or ppm). The conversion to be used to calculate ppm is 0.1 % = 1000 ppm.
- Substance
 

(Material) A single chemical substance
- Preparation
 

Mixture of several substances such as solder, alloys and inks
- Article
 

(Molded goods, parts and so on) Goods molded using substances or by preparation into a specific fixed configuration with unique functions, such as capacitors, resistors, circuit boards, bolts, nuts, cases and so on
- SDS (MSDS)
 

Safety data Sheet. A common format to furnish the receiving party with information about hazards that it may encounter and with handling precaution on an occasion where chemical substances and products defined in the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act) and the Industrial Safety and Health Act are dealt among businesses
- JAMP
 

Joint Article Management Promotion consortium  
A consortium established to manage information on chemical substances containing articles and build and penetrate a specific mechanism to allow for disclosure and smooth transmission of such information across the supply chain  
(<http://www.jamp-info.com/>)
- MSDSplus
 

A basic sheet JAMP recommends for use to convey information on chemical substances and chemical substances contained in preparations. A format to convey to the buying party information on titles of relevant legislation, the presence of controlled substances, and their names, CAS numbers and concentration, to control ingredients contained in the substances

- AIS

A basic sheet recommended by JAMP for conveying information on chemical substances contained in molded goods. A format to convey to the buying party information on titles of legislation, the presence of controlled substances, and their names, CAS numbers and concentration, to control ingredients contained in molded products

- JAMA/JAPIA unified data sheet form (hereinafter, JAMA sheet)

Format for survey of chemical substances contained in parts and materials, provided by JAMA (Japan Automobile Manufacturers Association, Inc.) and JAPIA (Japan Auto Parts Industries Association)

- High precision analysis data:

Analysis data obtained in compliance with IEC62321, Electro technical products – Determination of levels of regulated substances, an international standard, designated for RoHS analysis

## 6. Request to Suppliers

### (1) Management system for environmentally controlled substances

- 1) We will assess your management system before commencing business and periodically thereafter. To know better about your management system, we will send a check list for you to complete and send back to us. We may send a team to your relevant operation sites as necessary. Should this be the case, you are requested to receive our team and provide it with assistance so that it can carry out the purpose of its visit without inconvenience.
- 2) Compliance with laws concerning the goods to be delivered to us by you, and understanding and control of substances defined in the separately available Environmentally Controlled Substance List of the Group of Soshin Electric companies are requested. Please be reminded of the importance of accessing the latest version of our Green Procurement Guidelines of the Group of Soshin Electric companies at our URL, <http://www.soshin.co.jp>.
- 3) Implementation of control by discriminant control is requested to prevent mixture of and contamination by environmentally controlled substances. In addition, recycled materials may be used subject to prior verification of their contents and retention of their production history.
- 4) A change to goods to be delivered to us may be implemented only after we have approved the previously submitted change proposal subject to mutual confirmation of it.

### (2) Management of procuring parties and their sources (2nd-tier suppliers, hereafter)

It must be ensured that our requirements and information including items contained in these Guidelines are communicated to 2nd-tier suppliers and that guidance is provided to their management and understood.

(3) Survey of contents of chemical substances

Your cooperation to provide us with information regarding contents of environmentally controlled substances identified in our Environmentally Controlled Substance List of the Group of Soshin Electric companies is requested. Survey documents must be submitted upon our request.

\* In addition to the following survey items, we may request you to analyze and examine some more when necessary to meet our customers' needs.

<Survey documents>

(a) Parts (Articles)

Submission timing	Classification	Document title	Specs., etc.	Remarks
At the times of the initial business discussion, amendments made to legislation and application of changes	Controlled-substance content information	AIS	JAMP	The latest revision must be complied with.
	Analysis of contents of substances restricted or prohibited by law	High-precision analysis data specific to each homogeneous material location (report on analysis by means of high-precision analysis methods such as the ICP analysis and GC-MS of 6 substances prohibited by the RoHS Directive)	IEC62321	The generators of the reports must be analysis laboratories certified for ISO/IEC 17025:2005 (General requirements for the competence of testing and calibration laboratories).
	Letter of guarantee	Certificate for non-use	Soshin format	
When requested	Information about ingredients	JAMA sheet	JAMA/JAPIA	The latest revision must be complied with.
		Green Procurement (Survey Response Tool designed by now-defunct JGPSSI)	VT62474 national committee	The latest revision must be complied with.



(b) Sub-materials for use in products (Substances and preparations)

Submission timing	Classification	Document title	Specs., etc.	Remarks
At the times of the initial business discussion, amendment made to legislation and application of changes	Information about characteristics and handling of chemical goods	SDS (MSDS)	JIS Z-7253	The most recent legislation must be complied with.
	Controlled-substance content information	MSDSplus	JAMP	The latest revision must be complied with. Content rates of substances identified in the relevant laws shall be reported in units of ppm in the event of the difficulty to produce MSDSplus.
	Analysis of contents of substances restricted or prohibited by law	High precision analysis data (report on analysis by means of high-precision analysis methods such as the ICP analysis and GC-MS of 6 substances prohibited by the RoHS Directive)	IEC62321	The generators of the reports must be analysis laboratories certified for ISO/IEC17025 (General requirements for the competence of testing and calibration laboratories).
	Letter of guarantee	Certificate for non-use	Soshin format	
When requested	Information about ingredients	JAMA sheet	JAMA/JAPIA	The latest revision must be complied with.
		Green Procurement (JGPSSI) (Survey Response Tool designed by now-defunct JGPSSI)	VT62474 national committee	The latest revision must be complied with.

**[Requirements for high-precision analysis data]**

The following items must be included in the report:

- 1) Pre-processing method                      Name of the official method used or of the method used. If this is not used, the name of the method that is used instead
- 2) Analysis method                              Name of the analysis method used or of the official method
- 3) Name of analyzer                              Name of the person responsible for the analysis, name of the analyzing laboratory and the certificate number for ISO/IEC17025
- 4) Date of analysis:                              Date of the analysis must not be greater than one year previously.
- 5) Analysis result                                Enter the lower limit value of determination in case of ND.

- 6) Analysis flowchart It must be clearly stated by entering “Completely solved” in an analysis report or analysis flowchart that the specimen for analysis was completely solved into solution during the preprocessing.
- 7) Analysis of plating Plating must be analyzed separately for both plating film and the base material. (Collective analysis of the plating film and the base material together will end up with substantial difference from the correct figures.)

## 7. Contact

For more information, please contact us at:  
Environment Control Office  
664-1 Sarukubo, Saku-city, Nagano-prefecture, Japan  
TEL (+81)-267-67-4580  
FAX (+81)-267-68-4553  
E-mail: [environment@soshin.co.jp](mailto:environment@soshin.co.jp)

## 8. Revision records

Originally issued on May 21, 2004

Revised and 2nd edition issued on Sept. 19, 2006

Major change: Survey Substance List changed to comply with Ver. 3, which is JIG compatible, from JGPSSI Ver. 2

Revised and 3rd edition issued on Jan. 13, 2010

Major changes: Survey Substance List changed to comply with Ver. 4 of No.JIG-101 Ed2.0. JAMP AIS and MSDSplus employed for compatibility with REACH requirements

Revised and 4th edition issued on Jan. 1, 2012

Major changes: Reference to Survey Substance List changed to JIG-101 Ed4.0  
Dibutyltin compounds (DBT) and Dioctyltin compounds (DOT) added to substances prohibited from use  
JIG-201 Ed1.0 adopted for substances prohibited from use in packaging materials

Revised and 5th edition issued on Dec. 1, 2013

Major changes: The list of environmentally controlled substances was separated from this document with its title changed to the Group of Soshin Electric companies' list of environmentally controlled substances.  
The List of Substances to be surveyed was changed from JIG-101 to JAMP Declarable Substances List.  
The reference for processing method for prohibited substance analysis data was changed to IEC62321.

Revised and 6th edition issued on April 1, 2016

Major changes: Batteries and substances prohibited from use in batteries were removed.  
SDS (MSDS) was removed from Articles.  
The separately available Group of Soshin Electric companies' list of environmentally controlled substances was amended.

## Environmentally Controlled Substance List, the Group of Soshin Electric companies

Table 1: Substances prohibited from use  
(Chemical substances prohibited from being contained in parts and sub-materials)

No.	Substance / category	Threshold level	Examples of use
1	Cadmium / cadmium compounds	0.01 weight % (100 ppm) in homogeneous materials	Paints, inks, conductive pastes, plastics (including rubber, film, cable jackets, adhesive, adhesive tape, and insulation tape), surface finishes (plating and coatings), glass frits, glass paste, and metals including zinc (brass and hot-dip galvanization)
		0.002 weight % (20 ppm) in homogeneous materials	Solder (purchased separately from anything else)
	Exemption: Items meeting RoHS exemption per Appendices (1)-1 and (1)-2		
2	Chromium VI/ Chromium VI compounds	0.1 weight % (1000 ppm) in homogeneous materials	Plating film, paint, ink and glass paste
3	Lead/lead compounds	0.01 weight % (100 ppm) in homogeneous materials	Paint, ink, plastics (including rubber, film, cable jacket, adhesives, adhesive tape, and insulation tape)
		0.05 weight % (500 ppm) in homogeneous materials	Solder (purchased separately from anything else)
		0.1 weight % (1000 ppm) in homogeneous materials	For applications other than those mentioned above (surface finish materials for external terminals of parts and lead wires)
	Exemption: Items meeting RoHS exemption per Appendices (1)-1 and (1)-2		
4	Mercury / mercury compounds	Intentionally added or 0.1 weight % (1000 ppm) in homogeneous materials	All applications (fluorescent bulbs, electrical contact materials, pigments, anti-corrosion agents, switches, high-efficiency light emitters and anti-microbial processing)
5	Tributyl tin oxide (TBTO)	Intentionally added or 0.1 weight % (1000 ppm) in products	Preservative agents, fungicides, paint, anti-contamination agents, coolants, foaming agents, fire extinguishing agents and cleaning agents
6	Tri-substituted organostannic compounds	Intentionally added or 0.1 weight % (1000 ppm) in homogeneous materials	Stabilization agents, anti-oxidizing agents, anti-bacteria and anti-fungus agents, anti-contamination agents, preservative agents, fungicides, paint, pigments, dyes and anti-contamination agents

Table 1, continued

No.	Substance/ category	Threshold level	Examples of use
7	Dibutyltin (DBT) compounds	0.1 weight % (1000 ppm) of homogeneous materials	Stabilization agents for PVC, and hardening catalysts for silicon resins and urethane resins
8	Diocetyl tin compound (DOT)	0.1 weight % (1000 ppm) in homogeneous materials	Stabilization agents for PVC, and hardening catalysts for silicon resins and urethane resins
	<p>Items which will be prohibited as soon as the above threshold values are reached</p> <p>(1) Textile products and leather products intended for contact with skin</p> <p>(2) Nursery products</p> <p>(3) Two-component room temperature vulcanization molding kits (RTV-2 molding kits)</p> <p>Note: Weight % of metal is to be used for the concentration in the articles. They can be exempt from applications when we stipulate specifically for contain use.</p>		
9	Polybrominated biphenyls (PBBs)	0.1 weight % (1000 ppm) in homogeneous materials	Flame retardant
10	Polybrominated diphenyl-ethers (PBDEs) including Deca BDE)	Intentionally added or 0.1 weight % (1000 ppm) in homogeneous materials	All applications, and plastic products in general
11	Polychlorinated biphenyl (PCBs) and specific substitutes (PCBs)	Intentionally added	Insulating oil, lubricating oil, electric insulating materials, solvents, electrolytes and fireproofing agents
12	Polychlorinated terphenyls (PCTs)	0.005 weight % (50 ppm) in homogeneous materials	Insulating oil, lubricating oil, electric insulating materials, solvents, electrolytes and fireproofing agents
13	Polychlorinated naphthalenes (PCNs) (more than 3 chlorine atoms)	Intentionally added	Lubricants, paints, stabilizing agents, (electric properties and flame retardancy and resistance to water
14	Short-chain chlorinated paraffins (SCCPs) (C10 - C13)	0.1 weight % in products (1000 ppm)	PVC plasticizers and flame retardant
15	Perfluoro-octane sulfonate (PFOS)	Intentionally added or 0.1 weight % (1000 ppm) in homogeneous materials	Photolithography, photograph coating materials, hydraulic fluid, metal plating, detergents and paper coating agent
	<p>Exempted items</p> <p>(1) Photoresist or anti-mirror coating for photolithography processes</p> <p>(2) Photograph coating used for films, documents or printing plates</p>		

Table 1, continued

No.	Substance/ category	Threshold level	Examples of use
16	Fluorinated greenhouse gases (PFC, SF6 and HFC)	Intentionally added	Coolant, digestive aids, fire extinguishing agent, cleaning agents, insulation materials and caustic gases
17	Asbestos	Intentionally added	Insulating materials, fillers, abrading agents, dyes and heat insulating materials
18	Certain azo dyes and pigments generating some aromatic amines	0.003 weight % (30 ppm) of finished textile products and leather products	Pigments, dyes, coloring agents
	Substance falling under this category are aromatic azo dyes and pigments listed in Appendix (1)-3		
19	Ozone-layer depleting substances	Intentionally added	Coolant, foaming agents, fire extinguishing agents and cleaning agents
	Substances falling under this category are those stipulated in the Annexes to the Montreal Protocol and are given in Appendix (1)-4.		
20	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethyl-ethyl)	Intentionally added	Adhesives, paint, printing ink, plastics, ink ribbons, putty, caulking and sealing fillers (ultraviolet absorbers)
21	Dimethyl fumarate	0.00001 weight % (0.1 ppm) in homogeneous materials	Insect repellents, anti-fungus agents
22	polyvinyl chloride (PVC) and its mixture	Intentionally added	Following applications except for applications categorized for controlled substances Heat shrinkable tubes, insulating plates, base materials for non-contact IC cards, accessories, binding bands for connecting cables, flexible flat cables (FFC), decorative sheets, labels, sheets and laminates
23	Beryllium oxide	Intentionally added	All applications
24	Hexabromocyclododecane(HBCDD)	Intentionally added	Flame retardant
25	Bis(2-ethylhexyl)phthalate(DEHP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizer
26	Dibutyl phthalate(DBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizer
27	Butyl benzyl phthalate(BBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizer
28	Diisobutyl phthalate(DIBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizer

Note: The threshold levels indicated for (1) Substances prohibited from use shall be applied to liquid materials (such as conductive paste and ink), if such materials have been dried, hardened or baked.

Appendix (1) -1, substances exempted from applications by RoHS Directive

No	Exemption	Threshold level	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	2.5mg	-
	1(b) For general lighting purposes ≥ 30 W and < 50 W	3.5mg	-
	1(c) For general lighting purposes ≥ 50 W and < 150 W	5mg	-
	1(d) For general lighting purposes ≥ 150 W	15mg	-
	1(e) For general lighting purposes with circular or square structural shape and tube diameter ≤ 17 mm	7mg	-
	1(f) For special purposes	5mg	-
2	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)	4mg	-
	2(a)(2) Tri-band phosphor with normal lifetime and a tube diameter ≥ 9 mm and ≤ 17 mm (e.g. T5)	3mg	-
	2(a)(3) Tri-band phosphor with normal lifetime and a tube diameter > 17 mm and ≤ 28 mm (e.g. T8)	3.5mg	-
	2(a)(4) Tri-band phosphor with normal lifetime and a tube diameter > 28 mm (e.g. T12)	3.5mg	-
	2(a)(5) Tri-band phosphor with long lifetime (≥ 25 000 h)	5mg	-
	2(b) Mercury in other fluorescent lamps not exceeding (per lamp)	-	-
	2(b)(2) Non-linear halophosphate lamps (all diameters)	15mg	Expires on April 13th in 2016
	2(b)(3) Non-linear tri-band phosphor lamps with tube diameter > 17 mm (e.g. T9)	15mg	-
	2(b)(4) Lamps for other general lighting and special purposes (e.g. induction lamps)	15mg	-
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)	3.5mg	-
	3(b) Medium length (> 500 mm and ≤ 1 500 mm)	5mg	-
	3(c) Long length (> 1 500 mm)	13mg	-

No	Exemption		Threshold level	Scope and dates of applicability
4	4(a)	Mercury in other low pressure discharge lamps (per lamp)	15mg	-
	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	30mg	-
	4(b)- II	155 W < P ≤ 405 W	40mg	-
	4(b)-III	P > 405 W	40mg	-
	4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner)	-	-
	4(c)- I	P ≤ 155 W	25mg	-
	4(c)- II	155 W < P ≤ 405 W	30mg	-
	4(c)-III	P > 405 W	40mg	-
	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	5(a)	Lead in glass of cathode ray tubes	-	-
	5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	<0.2wt%	-
6	6(a)	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35 % lead by weight	<0.35wt%	-
	6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	<0.4wt%	-
	6(c)	Copper alloy containing up to 4 % lead by weight	<4wt%	-
7	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 tele-communications	-	-
	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)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors'	-	Expires on July 21th in 2016



No	Exemption		Threshold level	Scope and dates of applicability
8	8(b)	Cadmium and its compounds in electrical contacts	-	-
9	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	<0.75wt%	-
	9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	-	-
13	13(a)	Lead in white glasses used for optical applications	-	-
	13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	-	-
15	15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	-	-
17	17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	-	-
18	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 (BaSi2O5:Pb)	<1wt%	-
21	21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	-	-
24	24	Lead in solders for the soldering to machine through hole discoidal and planar array ceramic multilayer capacitors	-	-
25	25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	-	-
29	29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC	-	-
30	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	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	32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	-	-
33	33	Lead in solders for the soldering of thin copper wires of 100 µm diameter and less in power transformers	-	-
34	34	Lead in cermet-based trimmer potentiometer elements	-	-
37	37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	-	-
38	38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	-	-

Appendix (1) - 2, 2011/65/EU (RoHS Directive) ANNEX XIV

Applications exempt from the restriction defined in 4 (1) specialized medical equipment (category 8) and monitoring and controlling equipment (category 9)

Classification	No.	Exemption
Equipment utilising or detecting ionising radiation	1	Lead, cadmium and mercury in detectors for ionising radiation.
	2	Lead bearings in X-ray tubes.
	3	Lead in electromagnetic radiation amplification devices: micro-channel plate and capillary plate.
	4	Lead in glass frit of X-ray tubes and image intensifiers and lead in glass frit binder for assembly of gas lasers and for vacuum tubes that convert electromagnetic radiation into electrons.
	5	Lead in shielding for ionising radiation.
	6	Lead in X-ray test objects.
	7	Lead stearate X-ray diffraction crystals.
	8	Radioactive cadmium isotope source for portable X-ray fluorescence spectrometers.
Sensors, detectors and electrodes	1a	Lead and cadmium in ion selective electrodes including glass of pH electrodes.
	1b	Lead anodes in electrochemical oxygen sensors.
	1c	Lead, cadmium and mercury in infra-red light detectors.
	1d	Mercury in reference electrodes: low chloride mercury chloride, mercury sulphate and mercury oxide.
Others	9	Cadmium in helium-cadmium lasers.
	10	Lead and cadmium in atomic absorption spectroscopy lamps.
	11	Lead and cadmium in atomic absorption spectroscopy lamps.
	12	Lead and cadmium in metallic bonds to superconducting materials in MRI and SQUID detectors.
	13	Lead in counterweights.
	14	Lead in single crystal piezoelectric materials for ultrasonic transducers.
	15	Lead in solders for bonding to ultrasonic transducers.
	16	Mercury in very high accuracy capacitance and loss measurement bridges and in high frequency RF switches and relays in monitoring and control instruments not exceeding 20 mg of mercury per switch or relay.
	17	Lead in solders in portable emergency defibrillators.
	18	Lead in solders of high performance infrared imaging modules to detect in the range 8-14 µm.
	19	Lead in Liquid crystal on silicon (LCoS) displays.
	20	Cadmium in X-ray measurement filters.

Notes:

Exemptions quoted above are as of April 1st, 2016 and do not guarantee compatibility with requirements of the latest relevant legislation.

Please refer to the original text of the latest relevant information for the most up-to-date details.

Numbers of items exempt from RoHS requirements are exemption numbers.

Appendix (1) - 3: Aromatic amines developing from decomposition of one or more azo groups

Some aromatic amines developed by the decomposition of one or more azo groups	
Name of aromatic amine	CAS No.
4-aminoazobenzene	60-09-3
o- Anisidine	90-04-0
2-naphthylamine	91-59-8
3,3'-dichlorobenzidine	91-94-1
4-aminobiphenyl	92-67-1
benzidine	92-87-5
o-Toluidine	95-53-4
4-chloro-2-toluidine	95-69-2
2,4-toluenediamine	95-80-7
o-azotoluene	97-56-3
5-Nitro-o-toluidine	99-55-8
3,3'-dichloro-4,4'-diaminodiphenyl methane	101-14-4
4,4'-diaminodiphenylmethane(MDA)	101-77-9
4,4'-diaminodiphenyl ether	101-80-4
p-chloroaniline	106-47-8
3,3'-dimethoxybenzidine	119-90-4
3,3'-Dimethylbenzidine	119-93-7
2-methoxy-5-methylaniline	120-71-8
2,4,5-trimethylaniline	137-17-7
4,4'-diaminodiphenyl sulfide	139-65-1
2,4-diaminoanisole	615-05-4
4,4-diamino-3,3'-dimethyldiphenyl-methane	838-88-0
<p>Note: The object of control under these Standards is "azo dye/pigment that generates some aromatic amines." This refers to azo compounds that generate any of the amines listed in Appendix (1) - 3 during the reductive decomposition of azo groups.</p> <p>The threshold level of 30 ppm specified in the applicable range applies not to the azo dyes / pigments but to the amines listed in Appendix (1)-3.</p>	

Appendix (1) - 4: Ozone-layer depleting substances

Name of ozone-layer depleting substances	CAS No.
CFC-11:Trichlorofluoromethane	75-69-4
CFC-12:Dichlorodifluoromethane	75-71-8
CFC-113: Trichlorofluoroethane	76-13-1
CFC-114:Dichlorotetrafluoroethane	76-14-2
CFC-115:Chloropentafluoroethane	76-15-3
Halon -1211:Bromochlorodifluoromethane	353-59-3
Halon -1301:Bromotrifluoromethane	75-63-8
Halon -2402:Dibromotetrafluoroethane	124-73-2
CFC-13:Chlorotrifluoromethane	75-72-9
CFC-111:Pentachlorofluoroethane	354-56-3
CFC-112:Tetrachlorodifluoroethane	76-12-0
CFC-211:Heptachlorofluoropropane	422-78-6
CFC-212:Hexachlorodifluoropropane	3182-26-1
CFC-213:Pentachlorotrifluoropropane	2354-06-5
CFC-214:Tetrachlorotetrafluoropropane	29255-31-0
CFC-215:Trichloropentafluoropropane	1599-41-3
CFC-216:Dichlorohexafluoropropane	661-97-2
CFC-217: Chloroheptafluoropropane	422-86-6
Tetrachloromethane (Tetrachlorocarbon)	56-23-5
1,1,1-Trichloroethane:Methylchloroform	71-55-66
<p>Note: Typical ozone layer depleting substances are shown above. For other substances, please refer to JAMP Declarable Substances List.</p>	

(2): List of controlled substances (Chemical substances subject to examination regarding the presence in parts and sub-materials, and amounts if present)

No.	Name of substance	Threshold level	Application
1	Nickel	Intentional addition in the parts that come into contact with skin for a long period of time	Stainless steel, plating and use in contact with skin for an extended period of time (head phones, etc.)
2	Polyvinyl chloride (PVC)	0.1 weight % of products (1000ppm)	Following applications except for applications for substances prohibited from use: Resin materials, electric wire covering material, insulators, chemical resistance, transparent sheath material
3	Brominated flame retardants (other than PBDEs, and HBCDD)	See below	Flame retardants
Scope of application: Either of the following cases: (1) Total bromine contents in plastic materials of more than 1000 ppm or greater (2) Total contents in laminated printed wiring boards of more than 900 ppm of bromine in a laminated board			
4	Diisononyl phthalate (DINP) Diisodecyl phthalate (DIDP) di-n-butyl phthalate octyl (DNOP)	0.1 weight % (1,000ppm) in plasticized materials	Plasticizer, dye, pigments, paint, ink, adhesive
5	Formaldehyde	See below	Insecticide of the wood, corrosion prevention, adhesive
Scope of applications: (1) Intentional addition in products made of wood (plywood, particle boards, MDF) or in parts made of wood (2) Textile products containing formaldehyde of more than 0.0075 weight % (75ppm)			
6	Perchlorate	0.006 ppm in products	Coin cell batteries
7	Diarsenic pentoxide Diarsenic trioxide	0.1% weight % (1000ppm) in products Content of 1000 ppm or greater is prohibited on and after Jul. 1, 2014, except for applications we specifically designate...	Semiconductor substrates, glass defoaming agents, pigments, dyes, flame retardant
8	Boric acid	0.1 weight % (1000ppm) of product	Flame retardants in wood, cotton and other plant derived material, cross-linking agent, pH-adjusting agent, antiseptic agents
9	Disodium tetraborate, anhydrous	0.1 weight % (1000ppm) of product	Flame retardants in wood, cotton and other plant derived material, cross-linking agent, pH-adjusting agent, antiseptic agents
10	Tris (2-chloroethyl) phosphate (TCEP)	0.1% weight % (1000ppm) of products	flame retardant
11	Tetraboron disodium heptaoxide, hydrate	0.1 weight % (1000ppm) of product	Flame retardants in wood, cotton and other plant derived material, cross-linking agent, pH-adjusting agent, antiseptic agents
12	Diheptyl phthalate (DIHP)	0.1 weight % (1000ppm) of product	Plasticizers, dyes, pigments, paints, inks, adhesives and lubricants
13	Heptylundecylphthalate (DHNUP)	0.1 weight % (1000ppm) of product	Plasticizers, dyes, pigments, paints, inks, adhesives and lubricants
14	4-[4,4'-bis(dimethylaminophenyl)methylene]benzhydrylidene] 2,5-cyclohexadien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)	0.1 weight % (1000ppm) of product	Colorant for plastic and paints
15	Radioactive substance	Intentionally added	Optical properties (thorium), measuring instruments, gauges and detectors
16	Candidate substances for recognition for REACH Regulation (SVHC)	0.1 weight % (1000ppm) of product	Latest SVHC

(3) List of substances prohibited in packing / packaging materials

(Applicable to packing and packaging materials used for parts and materials delivered to us.  
Also applicable to packaging materials procured by us, the Group of Soshin Electric companies)

No.	Name of substance	Threshold level	Examples of use
1	Cadmium and its compounds, chromium VI and its compounds, lead and its compounds and mercury and its compounds	Intentionally added or 0.1 weight % (1000 ppm) in total of the 4 substances of homogeneous materials indicated on the left	Pigments, paints, stabilizers for PVC
2	Halogen compounds and halogen resins	Intentionally added	Flame retardants and adhesives
	<p>Typical chemical substances falling under this category: Bromine compounds, chloride compounds, polyvinyl chloride (PVC), fluorine resins and fluorine compounds</p> <p>Exemption: When parts and materials whose main function of which is not packaging are used for packaging "When the main function is not packaging" refers to instances where intended use is for the purposes other than protection or packaging (as containers or cushions) of products.</p> <p>Example: Halogen compounds and fluorine additives used as dyes for hologram labels or printing ink</p> <p>However, halogen compounds will be exempted from application if they are prohibited substances identified in Table 3: Substances not to be contained in packing/packaging materials.</p>		
3	Cobalt chloride	When contained as an indicator in drying agents	Humidity indicator cards (HIC) and moisture indicator in silica gel

Revision records:

Revised on April 1st, 2016

Major changes:

- 1) The status of the following five substances were changed from "controlled" to "prohibited."  
Hexabromocyclododecane (HBCDD), Bis(2-ethylhexyl)phthalate (DEHP), Dibutyl phthalate (DBP), Butyl benzyl phthalate (BBP) and Diisobutyl phthalate (DIBP)
- 2) The exempted items in the Dibutyltin (DBT) compounds were removed.
- 3) Substances prohibited from use in batteries were removed.