



Group of
Soshin Electric companies

Green Procurement Guidelines

Rev. 7

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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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, conduct CO₂ emission reduction activities, implement countermeasures to prevent exhaustion of resources such as water risks and other, preserve biodiversity and address the issue of 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 for greenhouse-gas emission reduction, and even for 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 of 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, plated goods and molded plastics)
 - (2) Sub-materials for use in products (paints, adhesives, solders, pastes, plastic materials and materials used for ceramics)
 - (3) Packaging materials (trays, reels, bags, cushions, cartons, tapes, 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 revision 7 Guidelines will take effect on September 1, 2018.

5. Environmentally Controlled Substances

- (1) Classification and list of environmentally controlled substances

Environmentally controlled substances are classified into substances prohibited from use, controlled substances, substances not to be contained in packing / packaging materials.

For details, please refer to the separately available Environmentally Controlled Substance List of the Group of Soshin Electric companies.

- (2) Definition of terms

- Substances prohibited from use

Chemical substances which are prohibited in 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 used for packing / packaging materials

Applicable to packing / packaging materials used or procured 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 levels which define 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.

- IEC62474

One of the international standards published by the International Electrotechnical Commission (IEC)

A document that specifies material declarations related to products and the electricity / electronic industry, as a successor to the JIG-101 (Material Composition Declaration Guide for Electrotechnical Products)

- chemSHERPA

Generic name given to the new scheme for communicating information on chemical substances in products. This scheme was developed under the leadership of the Ministry of Economy, Trade and Industry of Japan.

chemSHERPA-AI : Format for transfer of information on molded goods

Composition information : Content rate (amount) of chemical substances contained in the products, parts and materials

Compliance information : Whether or not any declarable substances are contained that are defined in the specified legal regulations and industry standards.

ChemSHERPA-CI : Format for transfer of information on chemicals

Composition information : Content rate (amount) of chemical substances in the products, parts and materials

- JAMA/JAPIA unified data sheet form (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)

6. Request to Suppliers

(1) Control system for environmentally controlled substances

1) Request to suppliers for assistance to our supplier environmental assessment team

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) Control of environmentally controlled substances

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.

3) Prevention of mixture and contamination of environmentally controlled substances

Implementation of control by discriminate 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.

(Please refer to the individual specifications for the use of recycled materials.)

4) Change control

Change to goods to be delivered to us may be implemented only after we have approved the previously submitted change proposals subject to mutual confirmation of it.

(2) Control of suppliers and their sources (2nd-tier suppliers)

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 and understood by their management.

(3) Investigation into and reduction activities of CO₂ emission amount

CO₂ emission reduction has become an important subject for prevention of global warming. Suppliers are no exception from exercising efforts for grasping and reducing CO₂ emissions resulting from business activities. Suppliers are requested to submit to us information about the extent of their success in implementing such efforts.

(4) Enhanced implementation of water risk control

In addition to water pollution prevention, also growing into a serious problems these days are a variety of water-related issues such as shortages, floods, etc. and which has led to increasing social demands for business enterprises to take the measures for water risks.

We would like our suppliers also to exercise efforts to control water and deliver to us information on such exercise upon our request.

(5) Efforts for preservation of biodiversity

The importance of biodiversity has recently been stressed and business enterprises are no exception from joining biodiversity preservation activities.

We would like you to inform us of your activity details upon our request.

(6) 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 as quickly as possible.

* 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

Submission timings	Classifications	Tools and document titles	Management organization, etc.	Remarks
At the times of the initial business discussions, amendments made to legislation and application of changes	Controlled-substance content information	chemSHERPA-AI	JAMP	The latest revision must be complied with.
	Analysis data 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 10 substances prohibited by the RoHS Directive)	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)	Analysis data of 4 heavy metals (Pb, Cd, Hg and Cr6+) are sufficient for metal products where brominated flame retardants (PBBs and PBDEs) and 4 substances of phthalic esters are not to be used and for ceramic products.
When requested by us	Information about chemical ingredients	JAMA sheet	JAMA/JAPIA	The latest revision must be complied with.
	Letter of guarantee	Certificate for non-use of prohibited substances	-	Soshin format

(b) Sub-materials for use in products (Chemicals)

Submission timing	Classification	Document title	Management organization., etc.	Remarks
At the times of the initial business discussions, amendment made to legislation and application of changes	Information about characteristics and handling of chemical goods	SDS (Safety data sheet)	-	Version for GHS
	Chemical substance content information	chemSHERPA-CI	JAMP	The latest revision must be complied with.
	Analysis data 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 10 substances prohibited by the RoHS Directive)	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).	Analysis data of 4 heavy metals (Pb, Cd, Hg and Cr6+) are sufficient for metal products where brominated flame retardants (PBBs and PBDEs) and 4 substances of phthalic esters are not to be used and for ceramic products.
	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.
	Letter of guarantee	Certificate for non-use of prohibited materials	-	Soshin format

*[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. If no such method is used, the name of the method 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 and of the analyzing laboratory, and the ISO/IEC17025 certificate number
- 4) Date of analysis : The date of the analysis must not be older than one year.
- 5) Analysis result : Lower limit value of determination in case of ND

- 6) Analysis flowchart : The specimen for pre-processing for analysis must be completely solved into solution. This fact must be stated in the analysis report or flowchart as “Completely solved.”
- 7) Analysis of plating : Plating must be analyzed separately for both plating film and the base material. (Simultaneous 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:

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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.

Revised and 7th edition issued on September 1, 2018.

Major changes: chemSHERPA-AI was AIS.
chemSHERPA-CI was MSDSplus.
For analysis data of substances restricted or prohibited by law in the survey documents table, analysis data of 4 heavy metals are made sufficient for metal and ceramic products.
Three items of 3) Investigation into and reduction activities of CO₂ emission amount, 4) Enhanced implementation of water risk control, and (5) Efforts for preservation of biodiversity were added to 6. Request to Suppliers.

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.	Substances	Threshold levels	Examples of use
1	Cadmium / cadmium compounds	0.01weight% (100 ppm) in homogeneous materials	Paints, inks, conductive pastes, plastics (including rubber, films, cable jackets, adhesives, adhesive tapes, and insulation tapes), surface finishes (plating and coating), glass frits, glass pastes, 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		
2	ChromiumVI / ChromiumVI compounds	0.1 weight % (1000 ppm) in homogeneous materials	Plating films, paints, inks and glass pastes
3	Lead/lead compounds	0.01 weight % (100 ppm) in homogeneous materials	Paints, inks, plastics (including rubber, films, cable jacket, adhesives, adhesive tapes and insulation tapes)
		0.05 weight % (500 ppm) in homogeneous materials	Solders (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			
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)
			Exemption:: Items meeting RoHS exemption per Appendices (1)-1
5	Tributyl tin oxide (TBTO)	Intentionally added	Preservative agents, fungicides, paints, 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) of part weight	Stabilization agents, anti-oxidizing agents, anti-bacteria and anti-fungus agents, anti-contamination agents, preservative agents, fungicides, paint, pigments, dyes and anti-contamination agents
	Tri-substituted organotin compounds are tin compounds with three organic substitutions such as tributyl tin compounds (TBT) and triphenyl tin compounds (TPT).		

Table 1, continued

No.	Substances	Threshold levels	Examples of use
7	Dibutyltin (DBT) compounds	0.1 weight % (1000 ppm) of part weight	Stabilization agents for PVC, and hardening catalysts for silicon resins and urethane resins
8	Diocetyl tin compounds (DOT)	0.1 weight % (1000 ppm) of part weight	Stabilization agents for PVC, and hardening catalysts for silicon resins and urethane resins
	Items which will be prohibited as soon as the above threshold values are reached: (1) Textile products and leather products intended for contact with skin (2) Nursery products (3) Two-component room temperature vulcanization molding kits (RTV-2 molding kits) 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 use.		
9	Polybrominated biphenyls (PBBs)	0.1 weight % (1000 ppm) in homogeneous materials	Flame retardants
10	Polybrominated diphenyl-ethers (PBDEs)	Intentionally added or 0.1 weight % (1000 ppm) in homogeneous materials	Flame retardants
11	Polychlorinated biphenyl (PCBs) and specific substitutes (PCBs)	Intentionally added	Insulating oils, lubricating oils, electric insulating materials, solvents, electrolytes and fireproofing agents
12	Polychlorinated terphenyls (PCTs)	0.005 weight % (50 ppm) in homogeneous materials	Insulating oils, lubricating oils, 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, insulating materials and flame retardants
14	Short-chain chlorinated paraffins (SCCPs) (C10 - C13)	0.1 weight % (1000 ppm) of the weight of molded goods	PVC plasticizers and flame retardants
15	Perfluoro-octane sulfonate (PFOS)	Intentionally added or 0.1 weight % (1000 ppm) of part weight $1\mu\text{g}/\text{m}^2$ in fabrics or other coated materials	Photolithography, photograph coating materials, hydraulic fluids, metal plating, detergents, fire extinguishing agents and paper coating agents
	Exempted items (1) Photoresist or anti-mirror coating for photolithography processes (2) Photograph coating used for films, documents or printing plates		

Table 1, continued

No.	Substances	Threshold levels	Examples of use
16	Perfluorooctanoic acid (PFOA) and its salts and esters	Intentionally added	Photolithography, photo-coating materials, hydraulic fluid, metal plating, detergents, fire extinguishing agents and paper coating materials
	Perfluorooctanoic acid (PFOA, its salts and esters per Appendix (1)-2		
17	Fluorinated greenhouse gases (PFC, SF6 and HFC)	Intentionally added Exempt when we define so specifically.	Coolant, digestive aids, fire extinguishing agent, cleaning agents, insulation materials and caustic gases
18	Asbestos	Intentionally added	Insulating materials, fillers, abrading agents, dyes and heat insulating materials
19	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.		
20	Ozone-layer depleting substances	Intentionally added	Coolant, foaming agents, fire extinguishing agents and cleaning agents
	Substances defined in Annexes A, B, C and E of the Montreal Protocol Reference http://www.env.go.jp/earth/ozone/montreal_protocol.html (Website of Ministry of the Environment of Japan) http://ozone.unep.org/ (Website of UNEP Ozone Secretariat)		
21	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl) (UV-320)	Intentionally added	Adhesives, paints, printing inks, plastics, ink ribbons, putty, caulking and sealing fillers (ultraviolet absorbers)
22	Dimethyl fumarate	0.00001 weight % (0.1 ppm) of part weight	Insect repellents and anti-fungus agents
23	Polyvinyl chloride (PVC) and its mixture	Intentionally added	Following applications except for applications categorized for controlled substances Heat-shrinking 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
24	Beryllium oxide	0.1 weight % (1000 ppm) of part weight	All applications
25	Hexabromocyclododecane(HBCDD)	Intentionally added or 0.1 weight % (1000 ppm) of part weight	Flame retardants
26	Bis(2-ethylhexyl)phthalate(DEHP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizers

27	Dibutyl phthalate(DBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizers
28	Butyl benzyl phthalate(BBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizers
29	Diisobutyl phthalate(DIBP)	0.1 weight % (1000 ppm) in homogeneous materials	Plasticizers
30	Polycyclic aromatic hydrocarbons (PAHs)	When more than 1ppm in rubber or plastic components that come into direct contact with human skin of oral cavity for long period of time or repeatedly	Pigments in rubber or plastic components (as impurity)
	Polycyclic aromatic hydrocarbons (PAHs) per Appendix (1)-4		

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

Nos.	Substances	Legal Nos.	Exempted applications
1	Cadmium/Cadmium compounds	8(b)	Cadmium and its compounds in electrical contacts
		13(b)-()	Cadmium in striking optical filter glass types excluding applications falling under point 39 of this Annex (expires on 22 January 2021) *Exclusion number 39 (Excluded unused in this regulation): Cadmium included in color conversion - compound semiconductor LED (cadmium per mm ² of light emitting area <10 μ g) for illumination or display system applications
		13(b)-()	Cadmium in glazes used for reflectance standards
2	Lead/Lead compounds	5(b)	Lead in glass of fluorescent tubes not exceeding 0.2 weight %
		6(a)-	Lead as alloying element in steel for machining purposes containing up to 0.35% lead by weight and in batch hot dip galvanized steel components containing up to 0.2% lead by weight.
		6(b)-	Lead as an alloying element in aluminium containing up to 0.4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling.
		6(b)-	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0.4%by weight.
		6(c)	Lead of up to 4 weight % contained in copper alloys
		7(a)	Lead in high melting point solders (i.e. alloys containing 85% or more lead by weight)
		7(c)-	Electrical and electronic components containing lead in glass or ceramic other than dielectric ceramics in capacitors, e.g. piezo-electronic devices, or in a glass or ceramic matrix compounds
		7(c)-	Lead in dielectric ceramics in capacitors for a rated voltage of 125V AC or 250V DC or higher.
		13(a)	Lead in white glasses used for optical applications.
		13(b) - ()	Lead in ion-colored optical fiber glass types.
		13(b) - ()	Lead in glazes used for reflectance standards.
		15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit Flip Chip packages.
3	Mercury/Mercury compounds	3(a)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp) - Short length (= 500 mm) : 3.5mg may be used per lamp
		3(b)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp) - Medium length (> 500 mm and = 1500mm): 5mg may be used per lamp
		3(c)	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp) - Long length (> 1500 mm) : 13mg may be used per lamp

Appendix (1) – 2 : Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA

Substances	CAS No.
PFOA-perfluorooctanoic acid	335-67-1
Ammonium salt of PFOA	3825-26-1
Perfluorooctanoic acid sodium salt: Sodium salt of PFOA	335-95-5
Potassium salt of PFOA	2395-00-8
Silver salt of PFOA	335-93-3
Pentadecafluorooctyl fluoride	335-66-0
Pentadecafluoro-octanoicacimethylester	376-27-2
Pentadecafluoro-octanoicaciethylester	3108-24-5

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

Substances	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

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. The threshold level of 30 ppm specified in the applicable range does not apply to azo dyes / pigments but to the amines listed in Appendix (1)-3.

Appendix (1) – 4 : Polycyclic aromatic hydrocarbons (PAH)

Substances	CAS No.
Benzo[a]pyrene(BaP)	50-32-8
Benzo[e]pyrene(BeP)	192-97-2
Benzo[a]anthracene(BaA)	56-55-3
Chrysen(CHR)	218-01-9
Benzo[b]fluoranthene(BbFA)	205-99-2
Benzo[j]fluoranthene(BjFA)	205-82-3
Benzo[k]fluoranthene(BkFA)	207-08-9
Dibenzo[a,h]anthracene(DBAhA)	53-70-3

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

Nos.	Substances	Threshold levels	Examples of use
1	Nickel and its compounds	Intentional addition in the parts that come into contact with skin for a long period of time	Stainless steel, plating and use where direct contact with skin occurs for an extended period of time
2	Polyvinyl chloride (PVC)	0.1 weight % (1000 ppm) of homogenous materials	Following applications except for applications for substances prohibited from use: Resin materials, electric wire covering materials, insulators, chemical resistance, transparent sheath materials, binder for resins used for paints, inks, coating agents and adhesives
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	Chlorinated flame retardants(CFR)	1) Inclusion of 0.1 weight % (1000 ppm) or more of total content of chlorine in plastic materials	Flame retardants
		2) Inclusion of more than 0.09 weight % (900 ppm) of chlorine in a laminated printed wiring boards (total content in the laminated boards)	Flame retardants
5	Diisononyl phthalate (DINP) Diisodecyl phthalate (DIDP) Di-n-butyl phthalate octyl (DNOP) Di-n-hexyl phthalate (DnHP)	0.1 weight % (1,000ppm) in plasticized materials	Plasticizers, dyes, pigments, paints, inks, adhesives
6	Formaldehyde	See below	Insecticides for the wood, corrosion prevention and adhesives
	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 % (75 ppm)		
7	Perchlorate	0.006 ppm in products	Coin cell batteries
8	4,4'-isopropylidenediphenol BPA, Bisphenol A)	Intentionally added or 0.1 weight % (1000 ppm) in molded goods	Plastic materials and plasticizers
9	Radioactive substance	Intentionally added	Optical properties (thorium), measuring instruments, gauges and detectors
10	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)

Nos.	Substances	Threshold levels	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, and stabilizers for PVC
2	Arsenic compounds	When used in timber as antiseptic agents	Wood preservative
3	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 inks. 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>		
4	Bis (2-ethylhexyl) phthalate (DEHP) Dibutyl phthalate (DBP) Benzyl butyl phthalate (BBP) Diisobutyl phthalate (DIBP), as regulated	Intentionally added	Plasticizers
5	Cobalt chloride	When contained as an indicator in drying agents	Humidity indicator cards (HIC) and moisture indicators 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.

Revised on September 1st, 2018

Major changes:

Threshold levels are updated to coincide with IEC62474 and chemSHERPA.
 Phthalic esters (DEHP, DBP, BBP and DIBP) are added to (3) List of substances prohibited in packing / packaging materials.