



Green Procurement Standard

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IRISO Electronics Co., Ltd.

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1. Purpose

The main purpose of this standard is to prevent prohibited substances from being mixed into our products and to comply with laws and regulations by clarifying the management standards for environmentally hazardous substances contained in products, parts, and materials procured by IRISO ELECTRONICS CO. (hereinafter abbreviated as IRISO).

Therefore, for suppliers, this document shall be the standard to take part in the management of chemical substances contained in products in their supply chain as well as IRISO.

2. Scope

The following shall apply to this standard.

- (1) Component parts (products)/ materials/ secondary materials for the products which are designed, manufactured and sold by IRISO (Including products which design, or production is outsourced to a third party and then sold by IRISO).
- (2) Chemical products, etc. (including secondary materials) used in the manufacturing process by IRISO.
- (3) Packaging materials used to transport and protect IRISO products.
Packaging materials used by supplier for transportation and protection to IRISO.
- (4) production equipment and tools. However, production equipment and tools that are unlikely to contain environmentally hazardous substances in IRISO products are excluded.

3. Definition of terms

Terms used in this document are defined as follows.

(To avoid misunderstandings, we quote from official documents as much as possible, but some definitions are specific to IRISO)

No.	Term	Description
1	Chemical substance	A chemical element or compound that either exists in nature or is obtained through a manufacturing process.
2	Mixture	A mixture intentionally comprising two or more chemical substances. (Example : paints, inks, alloy ingot, solder, resin pellets, etc.).
3	Chemical	Chemical substance or mixture.
4	Mold(Article)	An item of specific shape, appearance or design created during manufacture which substantially determines functions in final use rather than functions provided by its chemical composition.
5	Secondary materials	Items which are required in the manufacturing process but are not part of the product. (example, mold release materials, gloves, marking pens, etc.)
6	Packing material	Packing materials used to transport and protect IRISO products (embossing, magazines, reels, etc. are also considered packing materials) and packing materials used by suppliers to transport and protect IRISO products (bags, cardboard, etc.)
7	Prohibited substances	Chemical substances for which basically include in products, parts, and materials is prohibited. However, for chemical substances for which the maximum permissible concentration value is defined, if the concentration value is below that value, it is not considered to be contained. Sufficient information (substance name, content concentration, intended use, etc.) is required for appropriate management of the contained substances. In addition, depending on the customer's request, etc., there are cases where prohibited substances are added individually.

No.	Term	Description
8	Controlled substances	Chemical substances for which usage records are judged based on laws and regulations, customer demands, industry trends, etc., and management and substitution are promoted. In addition, depending on the customer's request, etc., there are cases where prohibited substances are added individually.
9	Contain	Regardless of whether it is intentional or not, it refers to making it a component of parts, and refers to addition, filling, mixing or adhesion (including contamination caused by chemical reaction and unintentional mixing or adhesion).
10	Intentional Inclusion	Intentional use of any chemical substance in the formation of a target article to add a particular property, appearance, or quality, regardless of its content ratio.
11	Impurities	Substances that are contained in natural raw materials and cannot be completely removed during the manufacturing process as industrial materials.
12	JAMP (Joint Article Management Promotion-consortium)	Article management promotion association https://chemsherpa.net/ An association that creates and disseminates a specific system for appropriately managing information such as chemical substances contained in articles (another name for parts and molded products) and disclosing and promoting them smoothly.
13	chemSHERPA	Chemical Substance Communication Formats provided by JAMP https://chemsherpa.net/ There are two formats. • chemSHERPA-CI --- Chemicals substance contained in chemical products • chemSHERPA-AI --- Chemical substances contained in molding articles
14	Jama	Japan Automobile Manufacturers Association, Inc. https://www.jama.or.jp/
15	JAPIA	Japan Auto Parts Industries Association https://www.japia.or.jp/
16	JAPIA sheet	The JAMA sheet (formally, "JAMA/JAPIA Unified Datasheet") has been modified, and now it has changed to the JAPIA sheet (formally, "JAPIA Unified Datasheet").
17	IMDS (International Material Data System)	Developed with the German "Verband der Automobilindustrie"(VDA) as the center, with the ELV directive in mind. Supply chain environmental information transmission system
18	Suppliers	For the purposes of this standard, refer to IRISO's first-tier supplier.
19	Parallel production	Production of products which restrict the content of specific chemical substances and Production of products using the specific chemicals and/or parts containing such chemical substances carried out in the same building at the same time in any process; Receiving→ storage warehouse → manufacturing process → work in progress /finished product warehouse →until delivery

4. Major laws and regulations

Major laws and regulations which are referenced in determining environmentally controlled substances.

In addition, we will also make individual requests to our suppliers to comply with the regulations of the destination country depending on the customer's request.

No.	Laws and regulations	Overview
1	Japan Chemical Substances Control Law	Chemical Substances Control Law: "Law Concerning the Examination and Regulation of Manufacture, etc. of Chemical Substances" hereinafter abbreviated as "Chemicals Control Law". Act to examine and regulate chemical substances that are considered to be of concern to the human body and the environment.
2	Ozone Layer Protection Law	Act to implement the resolutions of the Conference of the Parties to the Montreal Protocol, in addition to the obligations of the Parties under the Vienna Convention, an international framework for the protection of the ozone layer, and the Montreal Protocol on Substances that Deplete the Ozone Layer.

No.	Laws and regulations	Overview
3	EU REACH regulations (No. 1907/2006)	Registration, Evaluation, Authorization and Restriction of Chemical Substances, act from June 1, 2007.
4	ELV Directive (2000/53/EC)	ELV ((End of Life Vehicles) Directive / European End-of-Life Vehicles Directive) A directive that requires manufacturers (including importers), dismantlers, etc. to regulate the recycling and content of specified chemical substances in automobiles marketed in the EU.
5	EU RoHS Directive (2011/65/EU)	RoHS (Restriction of Hazardous Substances Directive) Directive Law restricting the content of specified hazardous substances (exceeding the maximum permissible concentration) in electrical and electronic equipment. Enforced in July 2006. Revised in 1 July 2011 (2011/65/EU). The revised version is called the RoHS (II) Directive to distinguish it from the old Directive.
6	POPs Convention (Stockholm Convention)	Persistent organic pollutants such as polychlorinated biphenyls (PCB), DDT, etc., which are highly persistent, bio accumulative, and toxic to humans and organisms in the environment and are of concern for long-distance transport. (POPs: Persistent Organic Pollutants) The treaty stipulates the abolition, restriction, and reduction of the production and use of pollutants, and the proper disposal of wastes containing these substances. Countries that have signed the treaty, such as Japan, are supposed to regulate the target substances according to their domestic laws. (In the case of Japan, "Chemical Substances Control Law")
7	U.S. TSCA	TSCA (Toxic Substance Control Act/ Toxic Substances Control Law) Risk-based assessment to prevent bad effects of chemicals on human health and the environment. Regulates "chemicals, mixtures, or molding articles containing mixtures" manufactured, processed, or imported into the United States for commercial use.
8	Proposition 65 (California law, USA)	Regulate carcinogens and reproductive toxicants Aimed at "Drinking Water Discharge Regulations" and "Pre-Exposure Warnings" Laws.

5. Standards of Business with Suppliers

The following agreement is a condition of business.

(1) Agreement on the items to be described in this "Green Procurement Standards".

(A separate agreement is required)

(2) Suppliers must have established a management system for chemical substances contained in products.

At the start of business, IRISO will confirm the management system. Your cooperation will be requested.

(3) Shall acquire environmental management system (ISO14001). If not, specific acquisition plan is required.

(4) Shall reply to the survey of chemical substances contained in products.

6. Request to Suppliers

(1) Maintenance and management of chemical substance management system

- ① Shall comply with the management of "Prohibited Substances" and "Controlled Substances" in this standard.
- ② Shall establish the control measures against mixing, contamination and transfer
Suppliers are requested to establish management procedures to prevent mixing/ transfer/ contamination of prohibited substances into non-containing substances in each process from the receipt of materials by supplier through the arrival at IRISO.
- ③ Thorough management of change point and communication
After the start of mass production, any change that affect chemical substances contained in "parts/materials", "suppliers", "production sites", "inspection methods", "manufacturing methods", "manufacturing equipment", etc., shall be surely reported to IRISO.
Please understand that changed products without prior approval by IRISO cannot be accepted.
- ④ Strict management of non-conformity
 - a) If non- conformity products occur, shall segregate the non- conformity products and conduct appropriate measures.
 - b) If any non-conformity products have been mistakenly shipped, or if there is a suspect, shall contact to IRISO immediately and identify the object lot and quantity within 24 hours.
- ⑤ In-house training
 - a) Implement RoHS (II)/REACH training for all employees [once/year].
(This may not be applied depending on the product application and destination country)
 - b) Establish an educational process for content determined to require training within your company.
- ⑥ Implement internal audits of chemical substances contained in products
 - a) Implement internal audits [once/year].
 - b) Implement regular audit of your supplier
- ⑦ Prohibit the use of imitation resins
Materials should be purchased through authorized sales channels.
- ⑧ Traceability management
Shall establish traceability system which can trace the parts used, the lots of raw materials, and the equipment to be used.

(2) Others

① Update information on chemical substance content

IRISO requires suppliers to submit the following. [Update once a year]

IRISO will contact suppliers each time accordingly and require cooperation by suppliers.

- a) IRISO Certificate of Non-Containment of Prohibited Chemical Substances.
- b) Applicable part number list.
- c) chemSHERPA-CI (chemical substance/mixed product) or chemSHERPA-AI (Mold product).
Depending on the usage of the customer's product, we may require a JAPIA sheet.
- d) Analysis data for each homogeneous material (ICP analysis, GC-MS analysis results).

7. Revision of this standard

This standard may be revised without notice, and any revision will be posted on the IRISO website.

(<https://www.irisoele.com/jp/>)

Whenever the Standard is revised, the updated version will be posted on the website. In addition, suppliers will be notified of the revision.

8. Contact information

If you have any questions about the contents of this standard, please contact the responsible logistics staff or the following.

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9. Revision history

No.	Revision date	Revision history
Ver.0	October 2022	Issue the first edition

[List of Prohibited Substances]

In principle, the chemical substances (groups) that are prohibited from being contained in products, parts, and materials are as follows. However, for chemical substances for which a maximum allowable concentration value is specified, inclusion is not considered to be prohibited if the concentration value is less than or equal to the maximum allowable concentration value. But the amount of the substance contained in the product or part must be sufficiently controlled.

No.	Chemical substance or substance group name	Legal regulation values	IRISO regulation value	Reference laws
1	Cadmium and its compounds ^{*1}	- 100 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- Resin, plating, PCB, Solder paste: 5 ppm or less - Metal material: 20 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- EU RoHS Directive - Packaging and packaging waste Directive (EU)
2	Lead and its compounds ^{*1}	- 1,000 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- Resin: 100 ppm or less - Metal materials, plating film: 500 ppm or less - PCB/solder: 700 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- EU RoHS Directive - Packaging and packaging waste Directive (EU)
3	Mercury and its compounds ^{*1}	- 1,000 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- 100 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- EU RoHS Directive - Packaging and packaging waste Directive (EU)
4	Hexavalent chromium and its compounds ^{*1}	- 1,000 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- 100 ppm or less - 100 ppm or less (packaging material) (Cd+Pb+Hg+Cr ⁶⁺)	- EU RoHS Directive - Packaging and packaging waste Directive (EU)
5	Specified brominated flame retardants (PBBs)	- 1,000 ppm or less	- 100 ppm or less	- EU RoHS Directive
6	Specified brominated flame retardants (PBDEs)	- 1,000 ppm or less - Prohibition of use (DecaBDE)	- 100 ppm or less - Prohibition of use (DecaBDE)	- EU RoHS Directive - TSCA PBT Regulation
7	Bis phthalate (2-Ethylhexyl) (DEHP)	- 1,000 ppm or less	In one or four types in total 1,000 ppm or less	- EU RoHS Directive - EU REACH regulations
8	Dibutyl phthalate (DBP)	- 1,000 ppm or less		
9	Butyl benzyl phthalate (BBP)	- 1,000 ppm or less		
10	Diisobutyl phthalate (DIBP)	- 1,000 ppm or less		
11	Polychlorinated biphenyl (PCBs)	- Intentional inclusion prohibition	Intentional inclusion prohibition	- chemical substance control law (Class 1 designated chemical substances) - Stockholm Convention
12	Polyvinyl chloride	-	Intentional inclusion prohibition	[Customer Request]
13	Polychlorinated naphthalenes (Chlorine number 1 or more)	- Intentional inclusion prohibition	Same as left	- chemical substance control law (Class 1 designated chemical substances)
14	Polychlorinated terphenyls (PCTs) ^{*2}	in mixtures, including waste oils, or in equipment, in concentrations greater than 50 ppm.	Same as left	EU REACH regulations

No.	Chemical substance or substance group name	Legal regulation values	IRISO regulation value	Reference laws
15	Short Chain Chlorinated Paraffins ^{*2*3}	Manufacture, use, import / export prohibited	Intentional inclusion prohibition	- chemical substance control law (Class 1 designated chemical substances) - Stockholm Convention
16	Asbestos ^{*2}	Production, marketing and use of asbestos fibers and intentionally added articles and mixtures are prohibited.	Intentional inclusion prohibition	- EU REACH regulations
17	Ozone-depleting substances (ODS)	Manufacture, use, import / export prohibited	Intentional inclusion prohibition	Montreal Protocol CLASS I
18	Perfluorooctanoic acid(PFOA), its salts and PFOA Related compounds	- PFOA and its salts: Concentration less than 0.025 ppm - PFOA-related chemicals:1 ppm	Same as left	- EU REACH regulations - Stockholm Convention
19	PFOS and its analogous Compounds	Prohibition of sales, import and use in the EU	Intentional inclusion prohibition	- EU REACH regulations - Stockholm Convention
20	Red phosphorus flame retardant	-	Intentional inclusion prohibition	[Customer Request]
21	Tris (isopropylphenyl) phosphate (PIP(3:1))	No Processing and Distribution of "PIP (3:1)" and "Articles containing PIP (3:1)" for use in Articles	Intentional inclusion prohibition	TSCA PBT Regulation
22	Organic silicon	-	Intentional inclusion prohibition	[Customer Request]
23	Tri-substituted organostannic compounds ^{*2} Tributyltin compounds (TBT) Triphenyltin compounds(TPT) Bis (tributyltin) oxide (TBTO, etc.)	Prohibit articles containing trisubstituted organotin compounds in concentrations exceeding 1,000 ppm by weight of tin	Same as left	EU REACH regulations
24	2-(2H-1,2,3-benzotriazole-2-YL)-4,6-di-tert-ButylPhenol	Substance on the market, use prohibited unless ECHA (European Chemicals Agency) authorization is obtained.	Intentional inclusion prohibition	EU REACH regulations
25	Hexabromocyclododecane (HBCDD)	Substance on the market, use prohibited unless ECHA (European Chemicals Agency) authorization is obtained.	Intentional inclusion prohibition	EU REACH regulations
26	Dimethyl fumarate (DMF) ^{*2}	Shall not be used in articles or any parts there of in concentrations greater than 0,1 ppm.	Same as left	EU REACH regulations

No.	Chemical substance or substance group name	Legal regulation values	IRISO regulation value	Reference laws
27	Dicofol	Prohibition of production, use, import and export in principle	Intentional inclusion prohibition	Stockholm Convention [Customer Request]
28	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances ^{*2}	- C9-C14 PFCA and, Of their salts 0.025 ppm in total - Related to C9-C14 PFCA total 0.26 ppm	Same as left	EU REACH regulations

*1: Metals include their alloys.

*2: REACH restricted substances that are judged to be fully restricted regardless of application and handling.

*3: Applies to Short-chain chlorinated paraffins of carbon chain length 10 through 13

[List of Controlled Substances Used]

Control the use of the following chemical substances (groups). Also, promote the use of alternatives.

No.	Chemical substance or substance group name
1	Antimony and its compounds ^{*1}
2	Arsenic and its compounds ^{*1}
3	Beryllium and its compounds ^{*1}
4	Nickel and its compounds ^{*1}
5	Selenium and its compounds ^{*1}
6	Bismuth and its compounds ^{*1}
7	Un-specified brominated flame retardants ^{*2}
8	Cobalt and its compounds ^{*1}
9	Ozone Depleting Substances (Class II: HCFC)
10	Radioactive substances
11	Disubstituted organotin compounds (dibutyltin compounds), Dioctyltin compounds
12	Azodyes and azocolourants which form specific amines
13	Formaldehyde
14	Benzene
15	Fluorine-based greenhouse gases
16	2,4,6-tris(tert-butyl)phenol (2,4,6-TTBP)
17	Pentachlorothiophenol (HCBT)
18	Hexachlorobutadiene (PCTP)
19	Polycyclic-aromatic hydrocarbons (PAHs) corresponding to REACH / restriction substance
20	REACH/restriction substances
21	REACH/authorization substances
22	REACH/SVHC
23	JAMP declarable substances ^{*3}
24	Phthalate esters other than No.7 – No.10 of Prohibited Substances
25	Perchlorate

No.	Chemical substance or substance group name
26	Chlorinated flame retardants
27	Mirex
28	Aldrin
29	Dieldrin
30	Endrin
31	DDT
32	Chlordane
33	Heptachlor
34	Toxaphene
35	Pentachlorobenzene (PeCB)
36	α -hexachlorocyclohexane
37	β -hexachlorocyclohexane
38	Lindane (γ -hexachlorocyclohexane)
39	Chlordecone
40	Tetrabromodiphenyl ether
41	Pentabromodiphenyl ether
42	Hexabromodiphenyl ether
43	Heptabromodiphenyl ether
44	Endosulfan
45	Benzidine and its salts
46	4-Nitrodiphenyl and its salts
47	4-Aminodiphenyl and its salts
48	Pentachlorophenol and its salts and esters
49	Polychlorinated normal paraffin
50	Yellow phosphorus

*1: Metals include alloys thereof

*2: Brominated flame retardants other than PBBs and PBDEs listed as prohibited substances

*3: Substances to be controlled as defined by JAMP (Joint Article Management Promotion-consortium)