



Green Procurement Guidelines

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8th edition

OTOWA ELECTRIC CO. , LTD.

CERAON Co. , LTD.

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1. Introduction

OTOWA ELECTRIC CO., LTD. and GERAON CO., LTD. (hereinafter referred to as "our company") position the protection of the global environment as one of the most important management issues, and reduce the environmental load through all corporate activities of product development, design, manufacturing, sales, and distribution. We have continued to work on.

In recent years, due to the growing social interest in environmental issues, the laws and regulations of each country, including the EU's environmental regulations, have been strengthened, and CO₂ and greenhouse gas emissions due to global warming have been reduced, resources have been depleted, and biodiversity has occurred. The demand for social responsibility for corporate activities, such as the problem of global warming and the efforts of conflict minerals, is becoming more stringent. We recognize that it is an important role as a company to actively respond to such requests. Therefore, in order to promote the procurement of materials and equipment with less environmental impact, we have established the "Green Procurement Guidelines".

We encourage our business partners to promote the provision of materials and services that have a low environmental impact based on this "Green Procurement Guidelines" in order to promote business as a continuous partner. It will be indispensable for procurement.

We would like to share environmental (conservation activities) issues with our business partners and promote green procurement based on mutual cooperation. We appreciate your understanding and cooperation.

OTOWA ELECTRIC CO., LTD
Environmental Management Division
Procurement Department

2. Otowa Group's environmental activities

(1) Management Philosophy

In order to coexist with the natural threat “lightning”, we are always inquisitive and create a market for lightning business together with our customers. And we aim to be a number-one company that can share the joy to contribute to society in the 21st century with our employees and we find our true existence value in this.

And, we are here that is operated by people who dream and pursue fulfillment and happiness will do our best without neglecting efforts to be appreciated by society.

(2) Environmental policy

As a comprehensive manufacturer of lightning, OTOWA ELECTRIC CO., LTD. will refine, grow and develop its core technology while upholding “lightning” as an important key phrase. To this end, we will recognize the importance of the global environment, consider the environmental impact of our business activities, and develop new activities to sustainably improve our sacred environment for today and for the future. We are determined to move toward the reality of a sustainable society.

1. We will strive to continuously improve the environmental management system and prevent pollution by setting environmental targets and reviewing them regularly.
2. Comply with domestic and foreign laws and regulations related to the environment and various requirements set by ourselves.
3. Promote green procurement and carry out environmentally friendly technology development and production activities.
4. We will promote the effective use of resources and aim to build a sound-cycle society.
5. Strive to conserve natural ecosystems and biodiversity, and aim to build a sustainable society.
6. Make all employees aware of our environmental activities and make them thorough.
7. Publish this environmental policy to the public.

OTOWA ELECTRIC CO., LTD.
President Osamu Yoshida

March 14, 2016

3. Purpose

We promote green procurement in order to deliver environmentally friendly products and services.

As part of this, we will prioritize the procurement of materials and parts that have a low environmental impact from our business partners who are engaged in environmental conservation activities. The purpose of this guideline is to show the basic concept of the Otowa Group regarding green procurement and the specific content of requests to our business partners regarding environmentally controlled substances, and to comply with our requirements.

4. Scope of green procurement

- (1) Raw materials (chemical substances, metal materials, resin materials, solvents, etc.)
- (2) Parts (electronic parts, mechanical parts, semiconductor devices, printed circuit boards, wire rods, metal cases, screws, etc.)
- (3) Auxiliary materials (paints, adhesives, solder materials, plating materials, etc.)
- (4) Packaging materials (cardboard, bags, cushioning materials, tapes, labels, printing inks, etc.)
- (5) If there is a possibility that chemical substances may be scattered or dropped from the equipment, jigs, etc. used in the manufacturing process of the goods delivered to us, and the delivered goods may be contaminated, this guideline should be applied to the equipment, jigs, etc. We apply the standards for environmentally controlled substances that we set.

In addition, even if there is a possibility that chemical substances may adhere to or transfer to the delivered goods due to contact with equipment, jigs, etc., the standards for environmentally controlled substances stipulated in this guideline will be applied to the parts that come into contact, so it is appropriate. Please manage it accordingly.

5. Policy

We will prioritize purchases from environmentally friendly business partners, improve yield, and improve quality, all stages of business activities such as improvement of man-hours, promotion of recycling, effective utilization of energy resources, etc. and work to reduce the environmental burden and contribute to the construction of a sound material-cycle society.

We consider the following requirements when purchasing goods:

- (1) It does not contain substances that adversely affect the environment or human health.
- (2) It consumes less resources and energy.
- (3) We use sustainable resources.
- (4) It can be used and reused for a longer period of time than conventional ones.
- (5) Many recycled materials and reused parts are used.
- (6) It is easy to disassemble and dispose of when it is disposed of, and the environmental load such as soil pollution is small.
- (7) When using, there should be little noise, vibration, bad odor, etc.

In addition, in accordance with the U.S. Financial Regulatory Reform Act, we define "tantalum, tin, tungsten and gold (commonly known as 3TG)" as conflict minerals, and will conduct annual surveys and confirm that no minerals are contained in the Democratic Republic of Congo (DRC) or its neighboring countries that could be a source of funding for armed groups involved in human rights abuses and other injustices.

And as a result of the investigation, it is our policy not to use any minerals mined from smelters involved in these irregularities.

Therefore, please consider these points and procure materials from a smelter (Conflict Free Smelter / abbreviation: CFS) that is not related to conflict minerals.

6. About environmental management substances

(1) Types of environmental management substances

We classify environmental control substances into three categories as Prohibited substances, Controlled substances and Customer-requested controlled substances. Regarding the goods listed in the scope of application (Section 4), we will prioritize the purchase of those goods in which these substances are not used and those goods in which they are properly managed. For details of each substance, refer to the Annex "List of Designated Chemical Substances".

Table 1. Classification of environmentally controlled substances

Rank	Definition	Control level
Banned substances	Substances whose inclusion or use in products is prohibited or restricted by domestic and foreign laws and regulations, and are prohibited substances specified in the Annex and the list of designated chemical substances.	Prohibit immediate use. (However, it is permitted to contain the concentration below the allowable concentration and based on the exemption.)
Controlled substance	Substances that are expected to be prohibited or restricted by laws and regulations in the near future. Substances whose use is voluntarily restricted by the company and are controlled substances specified in the Annex and the List of Designated Chemical Substances.	Due to changes in the materials used and the development of alternative materials, the use will be prohibited in stages. If it is contained, grasp and manage the content.
Customer request Controlled substances	Substances regulated by customer requirements.	For products related to this requirement, use is restricted in accordance with the requirement.

(2) Definition of terms

• Containing:

The state in which the product contains environmental management substances (residual or adhered / transferred state).

*For example, in the manufacturing process, it is necessary to pay attention to the residue, adhesion, and migration of molds, jigs, tools, and machinery that comes into direct contact with the product. Includes those that are intentionally used (contained) and those that are contained as impurities.

*Intentionally used → Regardless of the content, it is considered to be contained.

Impurities → If the content exceeds the permissible concentration, it is considered to be contained.

• Non-containing :

The product does not contain environmental management substances.

Or, when an environmentally controlled substance is contained as an impurity, but the concentration is less than the allowable concentration.

• Intentional use :

Substances that are intentionally used to bring about a specific performance, appearance, etc. in products and whose inclusion is desired to continue in the future.

• Impurities :

Substances contained in natural materials that cannot be completely removed in the refining process, or items generated in the reaction process that are technically impossible to remove.

• Allowable concentration:

Concentration that is specified for each substance of environmental management substances and is allowed to be contained. Please note that the allowable concentration has a different denominator for each substance.

Intentional use prohibition . . . For substances for which the allowable concentration is stated, control impurities and reaction by-products at the concentration below the stated concentration.

For substances for which the allowable concentration is not stated, please contact us separately if the content is confirmed.

• Homogeneous material :

The smallest unit that cannot be separated by a mechanical method.

Example: Plating, alloy base materials, glass, etc.

Pertaining to labels, the adhesive, base material, and ink are homogeneous materials in each.

• ChemSHERPA:

Communication scheme for chemical substances contained in products developed at the initiative of the Ministry of Economy, Trade and Industry.

- ChemSHERPA-AI :

A format for disseminating information on products. The component information refers to the content rate (amount) of chemical substances contained in the product, part, or material, and the legal compliance judgment information determines whether the product contains the substances specified by specific laws, regulations, or industry standards.

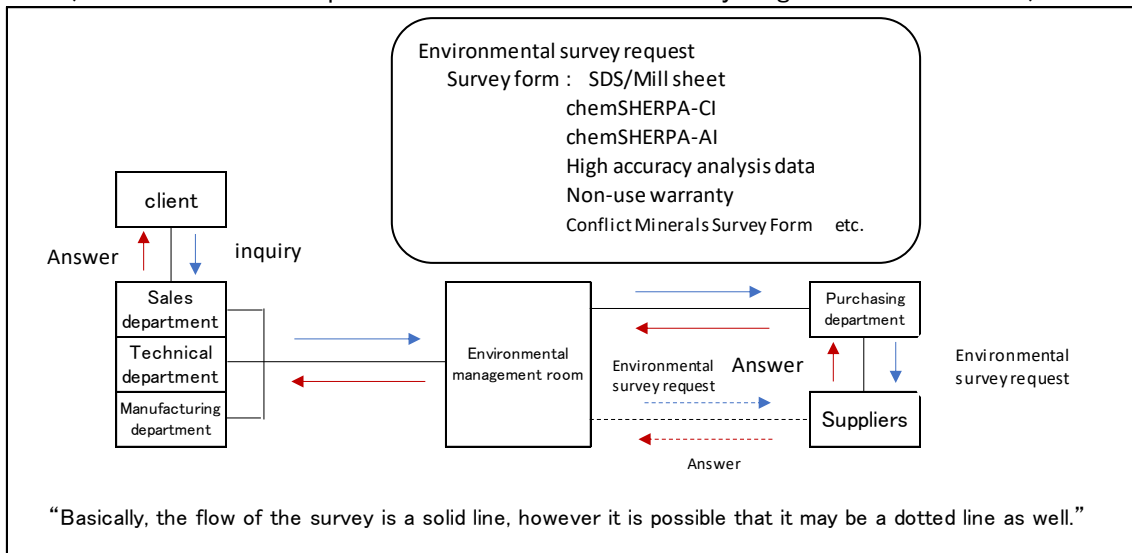
- ChemSHERPA-CI :

A format of chemical information flow. In it, composition information refers to the rate (amount) of chemical substances contained in a product, part, or material.

(3) Environmental management substance management system

(Blue arrow: Survey request route for environmentally controlled substances)

(Red arrow: Answer procedure for environmentally regulated substances)



At our company, here at the Environmental Management Division, in order to grasp the content status of environmentally controlled substances, we select a survey format and request a business partner to conduct a survey. We will check the survey results and send information to related departments as necessary. In addition, the survey results will be managed by the Environmental Management Division.

(4) Requests to business partners

① Management system for environmentally controlled substances

- We will evaluate the management system when starting a new transaction and on a regular basis. We will send you a survey form to confirm the management system, so please reply. In addition, we will conduct a visit survey of the office as necessary, so please respond.
- Please comply with laws and regulations regarding the delivered goods, and understand and manage the content of substances specified in the Annex "List of Designated Chemical Substances". Please check the latest version of "List of Designated Chemical Substances". Please check the latest version of the "Green Procurement Guidelines" on our website (<http://www.otowadenki.co.jp/>).

- Please implement identification management to prevent mixing and contamination of environmental management substances. Also, when using recycled raw materials, please check the ingredients and manage the manufacturing history of the product. When using closed recycled resin materials (resin materials that are reused by crushing defective resin molding products in-house or externally), please keep a history of the content of RoHS prohibited substances for each lot.
 - If it is found that the delivered goods contain prohibited substances or customer-required regulated substances, please contact our Purchasing Procurement Department immediately.
 - When changing the delivered goods, please apply to the Purchasing Procurement Department of our company in advance and confirm each other before making the change.
- ② Management of purchasers and production contractors (hereinafter referred to as secondary business partners)
- Regarding requests and information from our company, including this guideline, please be sure to communicate to secondary business partners, understand the management status, and give guidance as necessary.
- ③ Chemical substance content survey
- Please cooperate in providing information on the content of environmentally controlled substances specified in the "List of Designated Chemical Substances.
 - In regards to the materials and parts to be delivered to our company, since we will conduct survey on chemical substances contained in product by using chemSHERPA that have been developed and recommended by the Ministry of Economy, Trade and Industry (METI), and are managed by JAMP, please disclose and communicate any information related.
 - In regards to the materials or parts to be used in our products subject to the 10 substances regulated by the European RoHS, please submit a certificate of non-inclusion once a year for the "10 substances regulated by the European RoHS" so that we can periodically check compliance with the regulations. (Annex: Regarding RoHS10 substances in the list of specified chemical substances, regulatory compliance is not required unless required by drawings, delivery specifications, etc.)
 - Please submit the survey documents requested by us by the specified date.
- ④ Activities to grasp and reduce CO₂ and greenhouse gas emissions
- To prevent global warming, reducing CO₂ and greenhouse gas emissions has become an important issue. We would like to ask our business partners to promote understanding and reduction of CO₂ and greenhouse gas emissions associated with their business activities. If requested by us, please provide information on the promotion status.
- ⑤ Efforts to Conserve Biodiversity
- In recent years, the importance of biodiversity has increased, and companies are also required to take action. If requested by us, please provide information on the status of our efforts.

[Survey documents]

① Raw materials, auxiliary materials, solder, ink, etc.

Submission conditions	Classification	Document name	remarks
At the time of initial inquiry, change of laws and regulations, change of delivered goods, other requests	Information on the characteristics and handling of chemical products	SDS (MSDS)	Apply the latest laws and regulations
	Control substance content information	chemHERPA (CI)	Apply the latest version for component information, at least the components up to 90% by weight should be disclosed in CASNo.
			If you cannot present chemSHRPA-CI, please report the content of the substance specified by the relevant law in ppm.
	Legally prohibited substances Content analysis	High-precision analysis data (analysis report by high-precision analysis method such as ICP analysis and GC-MS)	ISO / IEC17025 (general requirements for the capacity of testing laboratories and calibration laboratories) A report issued by a certified analytical institution.
	Warranty	Non-inclusion certificate	
Conflict minerals	CFSI_CMRT Survey format	Apply the latest version of CMRT.	

(2) Molded products, electronic parts, etc.

Submission conditions	Classification	Document name	remarks
At the time of initial inquiry, change of laws and regulations, change of delivered goods, other requests	Control substance content information	chemHERPA (AI)	Apply the latest version for component information, at least the components up to 90% by weight should be disclosed in CASNo.
	Legally prohibited substances Content analysis	High-precision analysis data (analysis report by high-precision analysis method such as ICP analysis and GC-MS)	ISO / IEC17025 (general requirements for the capacity of testing laboratories and calibration laboratories) A report issued by a certified analytical institution.
	Warranty	Non-inclusion certificate	
	Conflict minerals	CFSI_CMRT Survey format	Apply the latest version of CMRT.

In addition, we may ask you to analyze and investigate the requirements of our customers.

[Necessary items for high-precision analysis data]

- (1) Analysis method: Please fill in the name of the analysis method or the official method.
- (2) Analyst name: Analyst manager name, analysis institution name
- (3) Analysis date: Please provide the analysis data within one year from the analysis date.
- (4) Analysis result: In the case of N.D., describe the lower limit of quantification.
- (5) Analysis flowchart: Please be sure to attach the flowchart.
- (6) Plating analysis: Please be sure to separate the plating film and the base material, and perform analysis for each homogeneous material.

7. Application start date

This guideline will be applied from April 20, 2022.

(* Except for those with a separate application start date in the Annex "List of Designated Chemical Substances")

8. Contact information

If you have any questions or inquiries regarding this guideline, please contact the following.

〒661-0976

5-6-20 Shioe, Amagasaki City, Hyogo
OTOWA ELECTRIC CO.,LTD. Environmental Management Division
TEL: +816-6429-3541
FAX: +816-6426-0535

〒661-0976

5-6-20 Shioe, Amagasaki City, Hyogo
OTOWA ELECTRIC CO.,LTD. Procurement Department
TEL: +816-6429-2375
FAX: +816-6429-2376

9. Revision history

0th Edition: Enacted March 21, 2008

1st Edition: Revised September 30, 2010

- Addition of chemical substance management and survey contents

2nd Edition: Revised March 10, 2011

- Definition of prohibited substances, addition of control level

3rd Edition: Revised July 1, 2013

- Added list of prohibited substances

4th Edition: Revised April 1, 2014

- Green Procurement Policy Added, Chemical Substance Management System Added, Deleted the list of prohibited substances
(Annex: Established List of Designated Chemical Substances)

5th Edition: Revised August 1, 2017

- Scope of application, policy review
- Added chemSHERPA and conflict minerals to survey documents
- Annex review

6th Edition: Revised July 22, 2019

- Review the classification and definition of environmentally controlled substances
- Review of survey documents, (Deleted JAMP MSDSplus / AIS)
- Review of Annex "List of Designated Chemical Substances"
 1. Banned substances
 - No.12, No.14 Allowable concentration change
 - No.27 Addition of substance name, change of allowable concentration
 - No.31 Red Rin, No.32 HFC, No.33 PFOA Added.
Removed reactants with benzeneamine, N-phenyl, styrene and 2,4,4 trimethylpentene (BNST)

7th Edition: Revised January 11, 2022

- Added to the main text, added definition of terms, added request to business partners, added chemical substance content survey, warranty title of survey documents change, change contact information for inquiries.
- Review of Annex "List of Designated Chemical Substances"
 1. Banned substances
 - No. 6, No. 12, No. 14 Allowable concentration change
 - No. 7, No. 8, No. 13, No. 14, No. 18, No. 19
 - No. 20, No. 26 Partially acceptable concentration deleted
 - No. 15 Addition of substance name
 - No. 32 Addition of allowable concentration
 - No. 33–No. 37 Addition of prohibited substances
 2. Controlled substance
 - Change of No. 1 and No. 2 allowable concentration

8th Edition: Revised April 20, 2022

- Changed the contact information for inquiries to the Environmental Management Division

Annex



List of designated chemical
substances

January 11, 2022
3rd edition

OTOWA ELECTRIC CO., LTD.
CERAON CO., LTD.

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OTOWA ELECTRIC CO.,LTD.

1. Banned substances ... Prohibit immediate use.

However, impurities below the allowable concentration and inclusions based on the exemption provisions of the European RoHS Directive is permitted.

* Unless otherwise specified, the permissible concentration is in homogeneous material units.

No.	Name of substance	Coverage	Allowable concentration	remarks
1	Cadmium/ Cadmium compound	All uses	Less than 100ppm	EU RoHS Directive
2	Hexavalent chromium compound	All uses	Less than 1,000ppm	EU RoHS Directive
3	Lead / Lead compounds	All uses	Less than 1,000ppm	EU RoHS Directive
4	Mercury / Mercury Compound	All uses	Less than 1,000ppm	EU RoHS Directive
5	Polybrominated biphenyls (PBBs)	All uses	Less than 1,000ppm	EU RoHS Directive
6	Polybrominated diphenyl ethers (PBDEs)	All uses	Less than 1,000ppm	EU RoHS Directive Including DecaBDE
7	Asbestos	All uses	Intentional use prohibition	
8	Azo dyes and pigments that form specific amines	Leather and textile products that may come into direct and long-term contact with the skin and oral cavity	Less than 30ppm	
9	Ozone depleting substances	All uses	Intentional use prohibition	
10	Polynaphthalene chloride (Chlorine number is 1 or more)	All uses	Intentional use prohibition	
11	Radioactive material	All uses	Intentional use prohibition	
12	Short chain chlorinated paraffins (10 to 13 carbon atoms)	All uses	Less than 1,500 ppm when intentionally prohibited and contained as an impurity in medium-chain chlorinated paraffin (MCCP, C14-17)	

No.	Name of substance	Coverage	Allowable concentration	remarks
13	Bis(tributyltin) Oxide (TBTO)	All uses	Less than 1,000ppm	
14	Polychlorinated biphenyls (PCBs)	All uses	Intentional use prohibition and less than 50ppm	
	Polychlorinated terphenyls (PCTs)	All uses	Less than 50ppm	
15	Perfluorooctane sulfonate (PFOS) and its salts	All uses	Intentional use prohibition and material: less than 1,000ppm Dispensing: less than 10ppm, Coating material :1 $\mu\text{g} / \text{m}^2$	Please contact us if it is contained as an impurity or reaction by-product in the dispensing and surface treatment section.
16	Specific benzotriazole	All uses	Intentional use prohibition	
17	3-substituted organotin compounds (TBTs, TPTs)	All uses	Intentional use prohibition and less than 1,000ppm	
18	Dimethyl fumarate (Dimethyl fumarate)	All uses	Less than 0.1ppm	
19	Formaldehyde	Composite wood products	Air concentration less than 0.1 ppm	
20	Phthalate Esters-I ① Bis 2-ethylhexyl phthalate (DEHP) ② Dibutyl phthalate (DBP) ③ Butylbenzyl phthalate (BBP) ④ Diisobutyl phthalate (DIBP)	All uses	Less than 1,000ppm	EU RoHS Directive
21	Hexabromocyclododecane (HBCD)	All uses	Intentional use prohibition and less than 1,000ppm	
22	Dibutyltin compounds (DBTs)	All uses	Less than 1,000ppm (Tin conversion)	

No.	Name of substance	Coverage	Allowable concentration	remarks
23	Diocetyl tin compounds (DOTs)	All uses	Less than 1,000ppm (Tin conversion)	
24	Fluorine greenhouse gas (PFC, SF6, HFC, HCFC)	All uses	Intentional use prohibition	
25	Cobalt chloride	Desiccant application	Intentional use prohibition	
26	Polycyclic aromatic hydrocarbons (PAH)	Rubber or plastic products that come into direct and long-term or short-term repeated contact with the skin or oral cavity	Less than 1ppm	
27	Chloride phosphoric ester system flame retardant ① Tris(2-chloroethyl) phosphate (TCEP) ② Tris(1,3-dichloro-2-propyl) Phosphate (TDCPP) ③ Tris (Chloropropyl) Phosphate (TCPP)	All uses	Less than 1,000ppm	
29	Arsenic trioxide, arsenic pentoxide	Applications for defoaming agents and clarifying agents for glass of liquid crystal panels	Less than 1,000ppm	
30	Polyvinyl chloride (PVC)	Cable ties, heat shrink tubing, insulation plates, labels, internal wiring in new products, packaging materials	Intentional use prohibition	
31	Red phosphorus	Resin flame retardant	Intentional use prohibition	

No.	Name of substance	Coverage	Allowable concentration	remarks
32	Perfluorooctanoic acid (PFOA), its salts and PFOA-related substances	All uses	Intentional use prohibition and <ul style="list-style-type: none"> • For PFOA (including salt): Less than 25ppb (0.025ppm) • In the case of a combination of one or more PFOA-related substances, the total concentration less than 1,000 ppb (1 ppm). 	
33	Decabromodiphenyl ether (decaBDE)	Molding	Intentional use prohibition	
34	2, 4, 6-tri-tert-butylphenol (2, 4, 6-TTBP)	Molding	Intentional use prohibition	
35	Hexachlorobutadiene (HCBd)	Molding	Intentional use prohibition	
36	Tris Phosphate (Isopropylphenyl) (PIP (3: 1))	Molding	Intentional use prohibition	
37	Pentachlorothiophenol (PCTP)	Molding	Less than 1,000ppm	

2. Controlled substances: The use is gradually prohibited due to changes in the materials used and the development of alternative materials.
If it is contained, grasp and manage the content.

No.	Name of substance	Coverage	Allowable concentration	remarks
1	Phthalate Esters-II ① Diisononyl phthalate ② Diisodecyl phthalate ③ Di-n-octyl phthalate	All uses	Less than 1,000ppm /product	
2	European REACH regulation Substances of Very High Concern (SVHC)	All uses	Less than 1,000ppm /product	

3. Customer-restricted substances

- Substances whose use is restricted by our customers.
- We restrict the use of applicable goods according to the request.
- If there are substances whose use is restricted other than prohibited substances and controlled substances, or if there are stricter requirements than the allowable concentration set by our company, customer requirements will be prioritized.
- When there is a customer-required regulated substances, we contact individually.