
Green Procurement Guidelines

(Ver.3.0, updated on October, 2023)

Proterial Group

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Introduction

As a producer of materials and positioned upstream in the industrial supply chain, Proterial Group sees its efforts to protect the natural environment as a key responsibility. Accordingly, we pursue our management efforts based on the action policy of contributing to society as a good corporate citizen. We also strive to protect the environment and to coexist in harmony with local communities.

With respect to the environmental repercussions of our products, we strive to expand our lineup of eco-friendly products through eco-design assessments. A key part of these efforts involves minimizing environmental impact at the stage of parts and materials purchases.

In particular, there is a strong and growing movement toward the increasingly stringent regulation of chemical substances. Countries and regions around the world are enacting standards governing harmful substances found in products. Examples include the Restriction of Hazardous Substances (RoHS) and End-of-Life Vehicles (ELV) directives in the European Union (EU).

In response, Proterial Group has revised its Green Procurement Guidelines to make its green procurement policies even more effective and to further promote the purchase of materials characterized by low environmental impact.

Based on these guidelines, our procurement sections will actively promote green procurement programs. This will require more than unilateral action on just our side. It will require comprehensive efforts undertaken in partnership with all our suppliers.

We ask for the cooperation and support of all our suppliers in complying with these guidelines.

1. Code of Conduct for Proterial Group and Environmental Activities

The corporate philosophy of the Proterial Group promotes our Mission: "Make the best quality available to everyone;"; Vision: "Leading sustainability by high performance;"; and Values: "Unflinching integrity" and "United by respect".

The "Proterial Group Codes of Conduct" provides support to the officers and employees in their decision making and stipulates the actions they should take to realize this corporate philosophy and to fulfill our social responsibilities.

The officers and employees of the Proterial Group pledge to fully understand and comply with the Proterial Group Codes of Conduct, and to always base their actions on the principle of integrity.

Selection of Proterial Group Codes of Conduct

1. A Company that Contributes to Society

- (1) We will contribute to resolving social issues by promoting innovative solutions, accelerating collaborative creation with partners and stakeholders, and further integrating social and environmental responsibility into our business activities.
- (2) We will strive to develop technologies that contribute to social development and use them with due consideration of their impact on society.

(3) We envision a decarbonized society, a resource-recycling society, and an ecosystem preservation society. To this end, we will endeavor to reduce CO2 emissions, use water and other resources efficiently, and minimize impacts on natural capital throughout our value chain.

(4) As a corporate citizen, we will make efforts to build rapport with communities and

Basic Policy on Environmental Protection for Proterial Group

Philosophy

Aiming to pass on the common assets of humankind in a sound state to future generations, the Proterial Group considers environmental issues as an important management priority, while striving to actively preserve global and local environments under the Proterial Group vision of "a high-performance material company that supports a sustainable society."

Slogan

With a deep awareness that environmental protection is a major issue for all of humanity, we will fulfill our social responsibilities by striving to establish a sustainable society in harmony with the environment, regarding it as one of the essential aspects of corporate activity.

We will contribute to society by developing highly reliable technologies and products in response to needs for environmental protection and consideration for limited natural resources.

Business Conduct Guidelines

1. Compliance with environmental laws and regulations, and prevention of pollution

We shall comply with international environmental regulations as well as the environmental laws and regulations of national and local governments and agreements. We shall establish voluntary standards where necessary to ensure compliance.

Also, we shall assess the possibility of environmental problems and strive to prevent pollution. In the unlikely event that an environmental problem arises, we shall take appropriate measures to minimize environmental impact.

2. Improving the function of the environmental management organization and enhancing supervisory function

We shall promote environmental conservation activities by establishing a group environmental management organization and operating system headed by the officer in charge of the environment, developing environment-related regulations, and setting targets for reducing environmental impact.

In addition, we shall confirm that environmental conservation activities are appropriate, reasonable and effective, and strive to continuously improve environmental management.

3. Promotion of global manufacturing while considering LCA (Life Cycle Assessment)

Aiming to reduce environmental impact at each stage of product research and development/design, production, distribution/sales, use, and disposal, etc., we shall promote global manufacturing focused on the following:

- (1) Environmentally friendly products
- (2) Prevention of global warming

- (3) Resource conservation/recycling and resource circulation
- (4) Management of chemical substances
- (5) Consideration of biodiversity conservation

4. Environmental Considerations at Overseas Offices

When manufacturing on a global basis, we shall strive to implement measures that can meet the needs of local communities, taking into consideration the impact on the local environment.

5. Education and training, and raising awareness

We shall look broadly at society and educate our employees about the importance of complying with environment-related laws and regulations and about environmental conservation to raise their awareness of the environment.

6. Information disclosure

We shall strive to disclose information about environmental conservation activities to stakeholders (interested parties) and actively communicate with them, and strive to strengthen mutual understanding and cooperative relationships.

Established on April 2010
Revised on December 2016
Revised on January 2023

2. Proterial Green Procurement Concepts

2.1 Purpose

The purpose of green procurement and a key Proterial Group action policy is to contribute to society as a good corporate citizen, to protect the environment, and to coexist in harmony with local communities through the environmentally sound development, design, and manufacture of products and the active promotion of green procurement, as described in these Guidelines.

2.2 Requests to our suppliers

The Proterial Group asks for suppliers' understanding and support of Proterial Group's Green Procurement, and for their cooperation in the following:

- Suppliers are requested to positively address environmental activities.
- Suppliers are requested to reduce the environmental burden of products delivered to the Proterial Group.

The details are as below.

(1) Items related to the environmental activities of suppliers

- (i) Suppliers are requested to make, implement, and manage an action plan for Environmental Management System (EMS).
- (ii) In the case that the Proterial Group conducts an audit for green procurement, suppliers are requested to fulfill the items specified in 4.2(1)(c) Items related to environmental protection activities (20 items).
- (iii) Suppliers are requested to construct a system that properly controls chemical substances included in their products.
- (iv) We believe that obtaining international environmental certifications, such as ISO14001 and EMAS, and Japanese environmental certifications, such as KES, Eco Stage, and Eco Action 21, is an effective measure for efficiently managing EMS. We therefore recommend that our suppliers obtain and maintain these environmental certifications.

(2) Items related to reducing the environmental burden reduction of delivered products

To reduce the environmental burden of delivered products, suppliers are requested to comply with 4.2(2)(a) Reducing the environmental burden of delivered products (12 items).

- EMS: Environmental Management System; promoting business while systematically considering environmental protection
- ISO14001: Composed of ISO registration bodies (International Organization for Standardization); an internationally recognized environmental certification system
- EMAS: Eco-Management Audit Scheme; environment management system of the EC (at that time) enforced in April 1995.
- KES: Environmental certification system in Japan for small to medium enterprises, promoted by a specified non-profit organization, KES Environment Agency
- Eco-Stage: Environmental certification system for small to medium enterprises, promoted by a limited-liability intermediate corporation, Eco Stage institute
- Eco-Action 21: Environmental certification system for small to medium enterprises, promoted by the Institute for Global Environment Strategies - Center for Sustainability

(3) Items related to management of information on chemical substances present in supplied products

In order to use the presence of chemical substances in supplied products for work such as information disclosure in supply chains, follow the instructions in Chapter 3 to report management and information on the presence of chemical substances.

And if there is an agreement in contract or specification between suppliers and us, please comply

with it.

3.Regulating chemical substances in suppliers' products

3.1 Chemical substances regulated by the Proterial Group

Proterial Group uses the “chemical substances regulated by the Proterial Group guidelines” to classify chemical substances contained in procured products into two separate categories, prohibited substances and controlled substances.

■Chemical substances regulated by the Proterial Group guidelines

Classification	Regulated substances	Main legal regulations
Level 1 - Prohibited substances	These chemical substances are prohibited for inclusion in supplied products. Under regulations inside and outside Japan, these chemical substances are basically prohibited for use in products (including packaging), but might be used in products supplied to the Proterial Group. For details, see Separate table 1 or Attached list 1.	See Separate table 1 or Attached list 1
Level 2 - Controlled substances	Under regulations inside and outside Japan, these are substances whose actual use must be known, and for which appropriate management is required, or controlled substances whose recycling and proper disposal must be considered. This also includes substance groups whose inclusion in supplied products might be restricted according to utility. For details, see Separate table 2 or Attached list 2.	See Separate table 2 or Attached list 2

Note that the regulation factors (such as substance groups, control levels, and threshold values) might vary depending on the operating division in the Proterial Group due to circumstances such as industry trends. Pay attention to the division's requested items, and check the items accordingly.

In addition, we might request an investigation of the chemical substances used in the production, storage, and transport stages before delivery (even if the substances are not included in the delivered product) with the objective of conserving supplies. Suppliers' cooperation is also requested.

3.2 Warranty of non-inclusion of chemical substances in procured products

In the Basic Agreement entered into when trading materials, the Proterial Group requests our suppliers to make certain considerations for the environment. Regarding chemical substances in their products, suppliers are requested to conduct quality control by warranting the non-inclusion of chemical substances in their products as necessary.

If non-inclusion of chemical substances in products is stated as a purchase specification requirement in the trade, documentations such as "Warranty of Non-Inclusion Concerning Banned Chemical Substances in Products" (Warranty of Non-Inclusion) must be submitted to the Proterial Group as a delivery specification requirement.

"Non-inclusion" indicates that the following is rationally proved regardless of whether inclusion of the substance is intentional:

- Certain chemical substances are not included, or they are included but at an amount less than the designated threshold value.

3.3 Guidelines for regulating information about chemical substances contained in products (prohibition and control)

When collecting information about chemical substances contained in products, choose the best way to do so from an economical and engineering standpoint.

Use of level 1 prohibited substances groups is basically prohibited according to regulations inside and outside Japan, so legally, their non-inclusion in products must be guaranteed.

For level 2 controlled substance groups, appropriate management of inclusion information is required regardless of whether the substances are included in the products. Suppliers are requested to file reports in all cases; even statements such as "There is no information available that shows inclusion of the chemical substances" are to be reported when appropriate.

3.4 Regarding changes in materials and manufacturing methods, and information about contained chemical substances

If any changes in materials, manufacturing methods, production location, major manufacturing equipment, persons in charge of manufacturing, etc. are to be made for procured products, suppliers are required to submit a notice about the details of the change and the scope of effect each time. In addition, for information on inclusion of chemical substances, submission of a notice is mandatory when a new inclusion is discovered, or when previously-reported inclusions have changed.

4. Requests to our suppliers for their cooperation in green procurement investigations

With the support of our suppliers, the Proterial Group will reinforce its endeavors to provide environmentally-conscious products. Our suppliers (in an upstream supply chain) are encouraged to cooperate with us in the investigation of their status.

4.1 Investigation overview

(1) Investigation categories

Investigations are to be conducted for each of the following categories:

- (i) The status of the supplier's environmental activities
- (ii) The status of reduction of the environmental burden of procured products
- (iii) Information about chemical substances included in procured products

(2) Method for replying to investigations

Suppliers are kindly requested to provide the Proterial Group with information by means of its web-based Green Procurement System (A Gree'Net).

Advance user registration is required to access A Gree'Net. Contact the procurement department to which you deliver your products, or the Environment Data System Center in Sustainability Promotion Division. For details about input operations, see the manual for the Green Procurement System (A Gree'Net) after log in to this system.

Green Procurement System (A Gree'Net) login screen:

<https://portal.ecsr-sys.ext.hitachi.co.jp/portal/static/html/index.htm>

(3) Investigation frequency

Suppliers are requested to review the following items periodically (once a year) and enter updated data into the Green Procurement System (A Gree'Net):

- (i) the status of their environmental activities
- (ii) the status of reducing the environmental burden of products delivered to Proterial Group.

Investigations related to (iii) information on chemical substances included in the products, will be requested when necessary. If applicable, enter your answers into the Green Procurement System (A Gree'Net).

4.2 Content of investigation

(1) The status of environmental activities of suppliers

Investigations of the following items will be made for each supplier (or each business place of a supplier):

(a) Items related to environmental certifications

■ Acquisition of the ISO 14001 certification or other external certifications approved by Proterial Group

- 1) Already obtained the ISO 14001 certification.

- 2) Already obtained another EMS certification.
- 3) Facilitating or have finalized a plan to acquire external certifications including ISO 14001.

(b) Items related to endeavors for Green Procurement

■ **Status of planning Green Procurement**

- 1) Implementing Green Procurement.
- 2) Planning to implement Green Procurement.

(c) Items related to environmental activities (20 items)

■ **Corporate philosophy and policy**

- 1) Have a corporate policy for environmental protection
- 2) Setting environmental guidelines to ensure continuous improvement in the prevention of global warming, the cyclical use of resources, and the preservation of the ecosystem.
- 3) The company's environmental policy is committed to observing legal restrictions.
- 4) Company environmental policy is known to all employees and available to any third party.

■ **Plan and organization**

- 5) Have a goal/target for environmental protection.
- 6) Assigning specific organizations/persons to carry out relevant responsibilities toward the goal/target.
- 7) Have an implementation plan to achieve the goal/target.

■ **Environment assessment/system**

Control and assess the following items in the manufacturing process to strive for improvement:

- 8) Reducing water pollution.
- 9) Reducing air pollution.
- 10) Reducing noise and vibration.
- 11) Treating waste properly and reducing the amount of waste disposal.
- 12) Reducing energy consumption (electricity, gas, fuel, etc.).
- 13) Purchasing raw materials to reduce environmental burdens.
- 14) Reducing the use and discharge of hazardous chemical substances.
- 15) Have a product assessment program.
- 16) Have a systematic plan for emergencies.
- 17) Have any internal environment audit program.

■ **Provision of education, training, and information**

- 18) Implementing an environmental education program.
- 19) Implementing training for personnel engaged in work that might significantly affect the environment. Have a list of such personnel.

20) Providing information related to environmental protection.

(d) Manufacturing process information

■ **Use or non-use of ozone-layer-depleting substances in the manufacturing process**

- 1) Used in the product manufacturing process.
- 2) Not used in the product manufacturing process.
- 3) Under survey.

(2) The status of reducing the environmental burden of procured products

(a) Reducing the environmental burden of delivered products (12 items)

Regarding products the Proterial Group procures from suppliers, suppliers are requested to comply with the items below. Suppliers are also requested to make the same considerations for raw materials and parts that they procure themselves.

■ **Resource saving**

- 1) Making an effort to reduce weight and size.
- 2) Using recycled parts or resources (recycled material content rate).
- 3) Taking into consideration product durability improvement.
- 4) Endeavoring to properly use water.

■ **Energy saving**

- 5) Taking into consideration energy saving during use/stand-by time (reduction rate of energy).

■ **Recycling**

- 6) Collecting and recycling products (recycling rate).
- 7) Using uniform and standardized materials.
- 8) Considering ease of disassembly and sorting.

■ **Packaging materials**

- 9) Reducing packaging materials and considering collection, reuse, and recycling.

■ **Provision of information**

- 10) Providing environmental information related to products.

■ **Preservation of ecosystems**

- 11) Endeavoring to reduce the burden on ecosystems
- 12) Endeavoring to properly use chemical substances.

(3) Information about chemical substances included in procured products

(a) Information about included chemical substances to be input into A Gree'Net.

In accordance with Attachments 1 and 2, enter the following information:

- (i) Basic product information
- (ii) Product composition information
- (iii) Information about inclusion or non-inclusion of regulated chemical substances
- (iv) Information about the submission or non-submission of a Warranty of Non-Inclusion

(b) Investigation format for chemical substances included in products

A Gree'Net provides flexible support for formats of controlling chemical substances included in products, that are widely adopted in the industrial world, primarily considering usability for suppliers.

The following formats

chemSHERPA-CI

chemSHERPA-AI

JAMA sheet

JAMP MSDSplus ※1 (2018/7~)

JAMP AIS ※1 (2018/7~)

JGPSSI survey response tool ※1

can be used to input information to A Gree'Net:

JAMP: Joint Article Management Promotion consortium: <http://www.jamp-info.com>

MSDSplus and AIS: Information transmission format for chemical substances provided by JAMP.

MSDSplus complements MSDS. AIS covers chemical substances that are included in molds.

chemSHERPA : A format for communicating information of chemical substances which JAMP provides. chemSHERPA-CI is for chemical substances contained in chemical goods, chemSHERPA-AI is for those contained in articles.

JGPSSI: Japan Green Procurement Survey Standardization Initiative

(already resolved by the shift to IEC62474)

JAMA : Japan Automobile Manufacturers Association, Inc.: <http://www.jama.or.jp/>

※ 1 : The latest law & regulation may not be included.

Appendix

List of the Proterial Group's Voluntarily Controlled Chemical Substances (for Procured Products)

Annex Table 1 (Level 1: Prohibited substances group list)

- Annex Table 1 shows each Level 1 (prohibited substances) substance or substance group, and its representative control value and relevant regulations.
- For details about other utility, control values, and relevant regulations that fall under this restriction, see Attached list 1.
- Any items in Annex Table 1 corresponding to those excluded from application according to the laws and regulations are excluded. However, you shall get the report of the reason for exclusion (e.g., RoHS exclusion code shown in Attached list 3-1 or 3-2).

Chemical substance		Legal limit	Main relevant regulations
1	Cadmium and its compounds #1	100ppm or less 100ppm or less (packaging materials) #5	RoHS directive (EU) Packaging directive (EU)
2	Hexavalent chromium compounds #1	1000ppm or less 100ppm or less (packaging materials) #5	RoHS directive (EU) Packaging directive (EU)
3	Lead and its compounds #1	1000ppm or less 100ppm or less (packaging materials) #5	RoHS directive (EU) Packaging directive (EU)
4	Mercury and its compounds #1	1000ppm or less 100ppm or less (packaging materials) #5	RoHS directive (EU) Packaging directive (EU)
5	Polybrominated biphenyls (PBBs)	1000ppm or less	RoHS directive (EU)
6	Polybrominated diphenyl ethers (PBDEs)	1000ppm or less Use is prohibited (DecaBDE) #6	RoHS directive (EU) TSCA PBT Regulation
7	Tri-substituted organostannic compounds #2 Tributyltin compounds (TBT) Triphenyltin compounds (TPT) Bis (tributyltin) oxide (TBTO), etc.	Intentional use is prohibited, however, 1000ppm or less as tin	Japan Chemical Examination Law/Type 1 specified substances REACH regulation (EU)
8	Polychlorinated biphenyls (PCBs)	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances POPs
9	Polychlorinated terphenyls#2 (PCTs)	Intentional use is prohibited	REACH regulation (EU)
10	Polychlorinated naphthalenes (with 1 or more chlorines)	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances EU POPs
11	Short-chain chlorinated paraffins #2#3	Intentional use is prohibited	POPs REACH regulation (EU)
12	Asbestos #2	Intentional use is prohibited, however, 1000ppm or less	REACH regulation (EU)
13	Ozone-layer-depleting substances (Class I) #4 For substances that apply, see Attached list 4.	Intentional use is prohibited	Montreal Protocol on Substances that Deplete the Ozone Layer
14	PFOS and its analogous compounds For substances that apply, see Attached list 5.	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances

			POPs
15	2-(2H-1,2,3-Benzotriazole-2-yl) - 4,6-di-tert-Butylphenol	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances
16	Hexachlorobenzene	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances
17	Dimethyl fumarate (DMF) #2	0.1ppm or less	REACH regulation (EU)
18	Hexabromocyclododecane (HBCD or HBCDD,	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified substances, POPs, EU REACH/SVHC
19	Bis (2-ethylhexyl) phthalate (DEHP)	1000ppm or less	RoHS directive (EU) Products or parts correspond to EU RoHS/Cat8&9: Translation to Level 1 in 18th January, 2021 REACH regulation (EU)
20	Benzyl butyl phthalate (BBP)	1000ppm or less	
21	Dibutylphthalate (DBP)	1000ppm or less	
22	Diisobutyl phthalate (DIBP)	1000ppm or less	
23	Perfluorooctanoic acid (PFOA) and its salts and PFOA-related compounds (For applicable substances, see Attached list 6&10)	Intentional use is prohibited, however, 25 ppb or less of PFOA including its salts, or 1000 ppb of one or a combination of PFOA-related compounds	POPs REACH regulation (EU) Japan Chemical Examination Law/Type 1 specified chemical substances
24	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances	Intentional use is prohibited, and less than 0.025 ppm of C9-C14 PFCAs including its salts, or 0.26 ppm of one or a combination of C9-C14 PFCA-related substances	REACH regulation (EU)
25	Perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	Intentional use is prohibited	POPs
26	Dechlorane Plus (DP)	Intentional use is prohibited	POPs
27	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	Intentional use is prohibited	POPs

#1: For metals, alloys are included.

#2: REACH/restriction substances whose utility and treatment is judged to satisfy all regulations.

#3: Applies to short-chain chlorinated paraffins of carbon chain length 10 through 13.

#4: Class I substances according to the Montreal Protocol on Substances that Deplete the Ozone Layer (ozone-depleting chemicals excluding HCFC).

#5: For packaging materials, the total of four substances must be 100ppm or less.

#6: Only for articles for the U.S. covered by TSCA PBT regulations

Annex Table 2 (Level 2: Controlled substances group list)

- For details about relevant laws, see attachment 2
- For substances that count as REACH/restricted substances, or for details, see Attached list 6, and for details about REACH/authorization substances or SVHC substances, see Attached list 7
- In order to use this for work such as information disclosure in supply chains, get information from the suppliers about the presence of the chemical substances below.

* URL of Attached list : http://www.proterial.com/e/csr/csr04_01.html

Chemical substance or substance group name		Note
1	Antimony and its compounds #7	
2	Arsenic and its compounds #7	
3	Beryllium and its compounds #7	
4	Nickel and its compounds #7	
5	Selenium and its compounds #7	
6	Un-specific brominated flame retardants #8	
7	Polyvinyl chlorides (PVCs) and its mixture, its copolymer	
8	Phthalate esters other than No.19 - No.22 of Separate table 1 List	
9	Ozone-layer-depleting substances (Class II: HCFC) #9	see Attached list 4
10	Radioactive substances	
11	Di-substituted organostannic compounds (DBT, DOT, etc.)	
12	Cobalt and its compounds #7	
13	Azodyes and azocolourants which form specific amines	see Attached list 8
14	Formaldehyde	
15	Benzene	
16	Fluorine-based greenhouse gases (HFC, PFC, SF6)	
17	Phenol, 2,4,6-tris(1,1-dimethylethyl) (2,4,6 TTBP)	
18	Isopropylphenyl phosphate (PIP(3:1))	
19	Pentachlorothiophenol (PCTP)	
20	Hexachlorobutadiene (HCBd)	
21	Per/polyfluoroalkyl compounds (PFAS)	
22	Decabromodiphenylethane (DBDPE)	
23	Polycyclic-aromatic hydrocarbons (PAHs) corresponding to REACH/restriction substance	see Attached list 6.
24	REACH/restriction substances	see Attached list 6.
25	REACH/authorization substances	see Attached list 7.
26	RECAH/SVHC	see Attached list 7.
27	JAMP declarable substances #10 (Including chemSHERPA#11)	

#7: For metals, alloys are included.

#8: Those other than PBBs and PBDEs listed in Separate table 1 (Prohibited).

#9: Class II substances according to the Montreal Protocol on Substances that Deplete the Ozone Layer.

#10: Declarable substances regulated by the Joint Article Management Promotion consortium (JAMP). For details, see the following document and list:

JAMP declarable substance handbook and JAMP declarable substance reference list (Latest version)

#11 : Declarable substances regulated by chemSHERPA

Attachment list

Attached list 1: List of details on utility/control values/reference laws relating to each level 1 (Prohibited) substance group

Attached list 2: List of details on utility/control values/reference laws relating to each level 2 (Managed) substance group

Attached list 3-1: RoHS directive/list of exemptions (Annex 3)

Attached list 3-2: RoHS directive/list of exemptions (Annex 4)

Attached list 4: Ozone-layer-depleting substances list

Attached list 5: PFOS and its analogous compounds list

Attached list 6: REACH/restriction substance list

Attached list 7: REACH/authorization substance/SVHC list

Attached list 8: Specific amine list

Attached list 9: Hexabromocyclododecane list

Attached list 10: List of Perfluorooctanoic acid (PFOA) and individual salts and esters of PFOA
(Home page for Attached lists: http://www.proterial.com/e/csr/csr04_01.html)

Annex Table 3 (Definitions of the denominator and numerator of the mass of Contained Chemical Substances)

Annex Table 3-1 (Survey of chemical substances included in materials, parts, half-finished and finished products)

	Unit of survey	Unit and definition of surveyed values	Policy of registering the surveyed values	
			Substance intentionally added	Substance potentially added unintentionally
Level 1 Prohibited substances group	RoHS: For each homogeneous material Not RoHS: For each supplied product or for each arbitrary class into which supplied products are divided	Unit: a) The mass of the denominator and the mass of the numerator or b) The mass and concentration of the denominator for each region that includes chemical substances Definition: The maximum value (theoretical or actual measured value)	To be obtained or examined regardless of the values.	To be obtained or examined if the substances can be included.
Level 2 Controlled substances group		Units: the mass of the specific substance included in the units of purchase or each hierarchical unit dividing the items into arbitrary levels. Classification: Average (a theoretical or actual value) or maximum (a theoretical or actual value)	To be obtained or examined if necessary regardless of the values.	To be obtained available value, if the substances are identified and the values are figured out.
Level 3	To be handled similarly to Levels 1 and 2 according to the management details.	To be handled similarly to Levels 1 and 2 according to the management details.	To be handled similarly to Levels 1 and 2 according to the management details.	To be handled similarly to Levels 1 and 2 according to the management details.

Annex Table 3-2. Definitions of the denominator of the homogeneous material

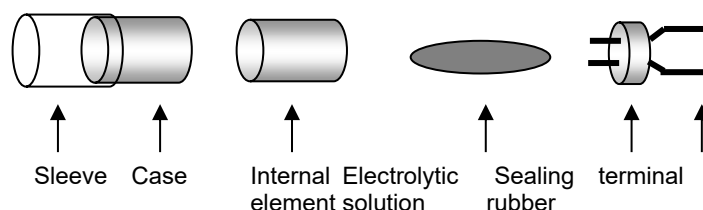
The following are homogeneous substances or homogeneous materials: Composites	Judgment criteria
Chemical compounds, polymer alloys, metallic alloys, etc.	Homogeneous materials
Paints, adhesives, ink, paste, and other raw materials	The stuff ultimately formed in an assumed method shall be homogeneous material. (e.g.: the post-drying and hardening status of paints and adhesives)
Materials that have undergone painting, printing, plating (chromate treatment) or other treatments	Each single layer shall be a homogeneous material. (When galvanization and chromate process is carried out, each of them shall be made of an individual.)

Annex Table 3-2. Definition of Chemical substances” refers to chemical elements or compounds

Chemical substances	Definition of a numerator
Metals and metallic compounds etc.	Mass of metallic elements
Substances other than metals and metallic compounds	Mass of the chemical substance

How to measure lead, hexavalent chromium, cadmium, mercury, PBBs, and PBDEs:

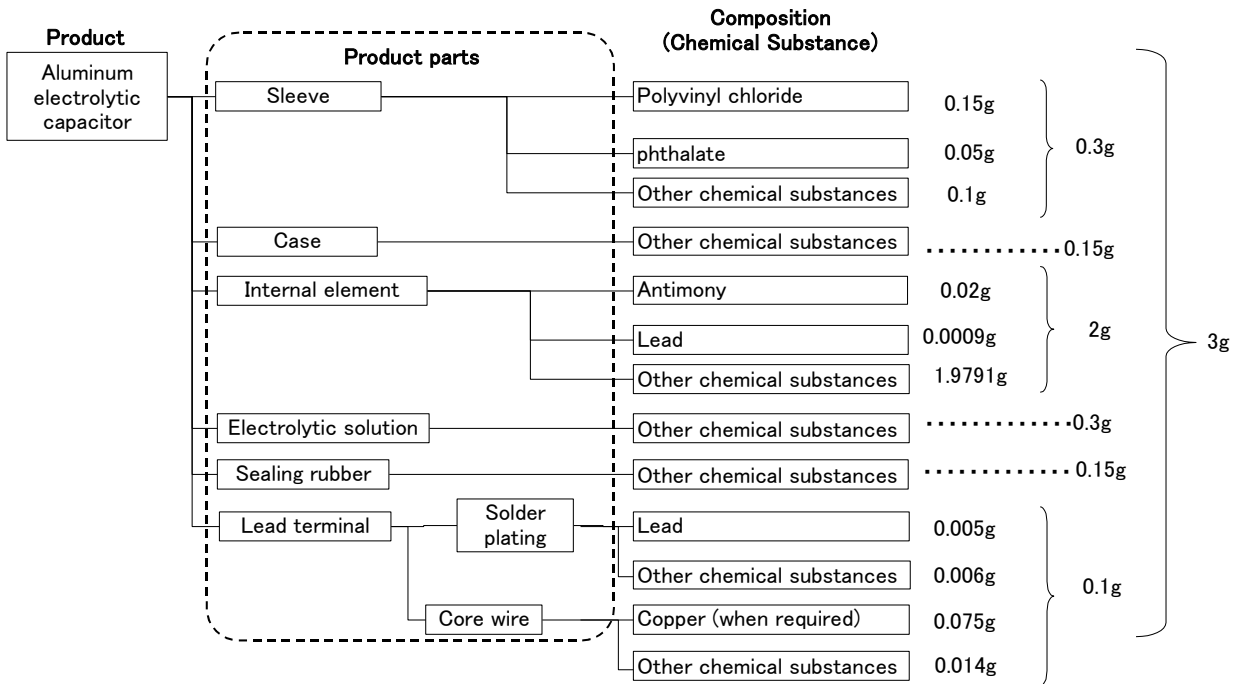
Aluminum electrolytic capacitor (weight: 3g)



Product: Aluminum electrolytic capacitor

Product parts		Composition (Chemical substance)			
Product parts	Mass /g	Chemical substance name	Use	CASNumber	Content/g
Sleeve (Outer tube)	0.3	Polyvinyl chloride		9002-86-2	0.15
		Phthalate	Plasticizer	117-81-7	0.05
		Other chemical substances		—	0.1
Case	0.15	Other chemical substances		—	0.15
Internal element	2	Antimony		7440-36-0	0.02
		Lead		7439-92-1	0.0009
		Other chemical substances		—	1.9791
Electrolytic solution	0.3	Other chemical substances		—	0.3
Sealing rubber	0.15	Other chemical substances		—	0.15
Lead terminal	0.011	Lead	Solder	7439-92-1	0.005
		Other chemical substances		—	0.006
Core wire	0.089	Copper (when required)		7440-50-8	0.075
		Other chemical substances		—	0.014

Attachment 2 (Measurement method)



Revision History

No.	Rev. Date	History of Revision
1	November,2021	Created 1 st edition of Hitachi Metals Group's Green Procurement Guidelines.
2	January, 2023	Change to "Proterial Group Green Procurement Guideline" due to company name change. Revision of controlled substance groups in Separate table 1 and Separate table 2
3	October, 2023	Revision of controlled substance groups in Separate table 1 and Separate table 2

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