HORIBA Group Green Procurement Guideline

The 8th edition

July 1st, 2017 HORIBA Ltd.

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Major Revisions to the 8th edition

Below we detail the main points of the revision. We ask for your cooperation in this matter.

- 1. We have changed the description of '5.4 Controlled substances' according to our introduction of chemSHERPA, have changed the list of regulations and have added the explanation about laws and regulations to the Appendix.
- 2. We have deleted the description of 'Submission of Data on Controlled Substances' from this document and have newly created 'HORIBAGroup Guidance on Reporting substances contained in products'.

Environmental Activities within the HORIBA Group

The HORIBA Group contributes to realizing "a life of content for all" by providing products that contribute to the Environment, Health, Safety and Energy, through continuous improvement of the IMS (Integrated Management System) of Quality, Environment, Health and Safety and Medical.

Corporate Philosophy

To constantly broaden our horizons to ensure a prosperous future for all

Promoting the protection of our Earth and coexistence with the natural environment

IMS Policy

- 1. At the HORIBA Group, we meet customer needs by providing first-class products and services in countries all around the world.
- We use our skills for the development of science and technology and for the conservation of health, energy, and the environment. At the same time, we comply with laws, regulations, and social norms, promote harmony with stakeholders, and actively contribute to society.
- 3. We value employees' mental and physical health and promote cheerful workplaces.
- 4. We carry out risk management, and through our products and services make every effort to achieve steady growth and business continuity in order to provide health, safety, and a sense of security to citizens of the community.
- 5. We formulate plans based on the HORIBA Group management policy to increase the enterprise value of our group and we continually work to improve them.

Chapter 1 Outline

1. Introduction

The HORIBA Group manufactures products for use throughout the world, and as a good corporate citizen we seek to reduce the environmental burden of these products throughout the entire product life cycle. To achieve that goal, it is essential to ensure that the parts and materials we use to manufacture our products have a low environmental burden. To this end, the HORIBA Group preferentially procures parts from suppliers that are playing a proactive role in their efforts to safeguard the environment.

This Green Procurement Guideline will be comprehensively revised in line with legislative changes and social trends.

2. Purpose

The aims of this Green Procurement Guideline are to: (1) clarify banned substances and controlled substances into chemical substances (with an environmental load) contained in parts, devices and materials used in the products the HORIBA Group produces and sells; (2) give notification of this to partner companies supplying, substances, materials, devices and parts; and, (3) improve the environmental quality of our products.

3. Scope

This Green Procurement Guideline applies to the procurement of all the parts, materials and products of the HORIBA Group.

3.1. Scope of products

- · Products the HORIBA Group designs, produces and sells
- Products the HORIBA Group entrusts a third party to design and produce, and sells
 under the HORIBA brand, and products the HORIBA Group purchases from other
 companies, and retrofits to sell as finished products.
- Products a third party entrusts to the HORIBA Group to design and produce. (except for the parts and materials specified by the third party)
- Packaging materials, including packing materials used for products and materials used for transportation packaging (pallets, shrink packaging and others).

3.2. Scope of parts and materials

The scope is the parts, materials and other goods used for the products indicated above in (3-1) Scope of products.

Semifinished products (functional units, modules and fabricated subassemblies such as board assemblies)

- Parts and subassemblies (electrical components, mechanical components, semiconductor devices, printed wiring boards, recordable media, packaging materials)
- Fasteners such as screws
- Accessories used with other devices (such as remote controls, mouses and AC adapters)
- Materials used in subsidiary materials (such as adhesive tapes, solders and adhesives)
- Printed documents (instruction manuals, warranty certificates and additional information about products, materials, parts and subassemblies)
- · Parts for repair
- Packaging materials used to protect parts during transportation by suppliers (except
 when a supplier collect such material for recycling, such as returnable packaging that
 leaves no environmental impact through direct contact with the parts.
- · Batteries (including rechargeable batteries and accumulators)

3.3. Exemptions

In a case where the HORIBA Group agrees by means of a written document to an exemption, such as a standard sample for analysis that contains banned substances, and where the procured drawing or specifications clarifies the exception, this shall be considered as an exemption to this Guideline.

4. Definition

4.1. Banned substances

Banned substances are specified as substances, as listed below, that have a possibility of being used in HORIBA Group products. The use of any of the substance on the list below is banned except for their exemptions, as described above in 3.3 Exemptions.

- Substances that are banned in their entirety from being contained in any product, or substances that exceed their maximum level of concentration as per the agreement and laws and regulations.
- Substances that are banned in their entirety from being contained in any product on a temporary basis as per the agreement and laws and regulations.
- Substances that are banned in their entirety from being contained in any product ahead
 of the period as stated in the agreement and laws and regulations as per voluntary
 HORIBA Group policy.
- Substances that are not used in accordance with the voluntary approach of the HORIBA Group.

4.2 . Reduced substances

Reduced substances are specified as substances, as listed below, that have a possibility of being used in HORIBA Group products. Reduced substances are established in order to clarify assignments for substitution and to consider designating them as banned substances in accord with regulatory trend.

- 1. Substances specifically considered being banned or limited in concentration by treaty or regulation.
- 2. Substances reduced by independent efforts in HORIBA Group products.

4.3. Controlled substances

Controlled substances are those that are deemed managed in context of their utilization and in consideration of health and safety, and their proper use. Controlled substances are not banned or limited per se, but they are substances that are subject to manage by usage data and concentration.

Packaging materials used by venders for transportation and protection are not subject to reporting as "controlled substances," except as legally required.

4.4. Contained in products

Contained in products refers to all cases where certain substances are contained in products, parts and materials. The following are examples.

- Substances contained intentionally.
- Substances contained as impurities.
- Substances used in the production process that remain in or attached to finished products, parts or materials. (For example, in cases where dies, jigs and mechanical equipment that come into direct contact with products during the production process have a possibility of contaminating the products, the point of contact with the products is to be regarded as subject to being banned.)

4.5. Known concentration

This provision applies to the fact that information from a raw material manufacturer that a declarable substance is contained has been provided or the data of inclusion has been confirmed in some way.

4.6 . Exemption

This provision applies to substances and uses that are excluded from laws and regulations, which have no alternative technology at present.

4.7. Intentional use

This provision applies to intentional use in producing products or parts, in cases where it is desirous to continue inclusion to provide specific characteristics, appearances and quality.

4.8. Impurities

The intended substances are those that cannot be removed technically during the process of refining industrial materials included in natural materials (natural impurities), or those that are generated during the process of synthetic reaction, but which cannot be removed.

4.9 Regulated value

This applies to the level of concentration that is to be guaranteed for the parts and materials delivered to the HORIBA Group and shipping products of the HORIBA Group, in cases where banned substances are contained not intentionally but as impurities.

4.10 Nonuse

This means that no banned substances are contained in excess of the control level, apart from exemptions.

4.11 Concentration

The concentration shall be calculated by using the mass of homogeneous materials as the denominator. Homogeneous materials mean those that cannot be decomposed mechanically to variant materials. The following are examples of homogeneous materials.

- · Chemical compounds, polymer alloys and metal alloys.
- Final formative substances depending on individual possible usage, applicable to raw materials such as paints, adhesives, inks, pastes, resin polymers, glass powders and ceramic powders. (E.g. Dried and hardened paints and adhesives, the post-molding state of resin polymers, glass and ceramics.)

Chapter 2 Green Procurement Policy

Our requirements regarding procured products with respect to our partner companies are listed below.

As required, the HORIBA Group may individually include several articles related to Green Procurement in the basic contract, memorandums, procurement specifications and other documents. In such a case, the individual specification takes precedence.

	The HORIBA Group requests a warranty stating that "banned	
Dogwinsmants	substances" are not contained, or are contained at a concentration of less	
Requirements for Procured	than the regulated value, in procured materials, except in cases where an	
Materials	exemption applies.	
Wiaterials	The HORIBA Group may request you to submit information as to	
	whether "controlled substances" are included in procured materials.	
	The HORIBA Group may request you to construct an environment	
Requirements to	management system and/or a system to control chemical substances in	
Partner Companies	products in factories and offices where products are developed,	
	manufactured and sold.	

5. Requirements for Procured Materials

5.1. Banned substances

The HORIBA Group has stipulated banned substances in line with domestic and international laws

As for the parts and materials delivered to the HORIBA Group, partner companies as suppliers shall guarantee that the concentration of any banned substances contained in materials, parts and subassemblies is less than control level as stipulated in the standards listed below. In a case where a grace period has been set before the usage of a substance is banned, a substitute is to be proposed based on the specified period and restrictive conditions.

We respectfully ask the following of you in order for you to be guaranteed as partner companies.

- 1. To acquire documents certifying the compliance of the parts and materials (Documents of compliance from material manufacturers)
- To acquire documents certifying the compliance of partner companies in cases where finishes and paint are used.

3. To focus on confirming whether there is a risk of any banned substance being present in the production process. (To be assayed, if necessary.)

5.2. Measures to be taken in a case where a banned substance is found in products in excess of the regulated values

Partner companies bear the responsibility to ascertain and guarantee the content and concentration of procured products. In a case where a banned substance is found in products in excess of the regulated value, the supplier of the product shall be requested to analysis the product, ascertain the reason for the banned substance being contained in the product, and reduce the level of the banned substance to below the stipulated threshold value.

5.3. Reduced Substances

Reduced substances are chemical substances that have high possibility to be under restriction in the future by domestic or international treaty or regulation, and stipulated in the HORIBA Group Reduced Chemical Substances Standard. The substances have possibility to move to HORIBA Group Banned Substances Standard.

5.4. Controlled Substances

Controlled substances are those that are listed under the following laws, regulations, industry rules and other such restrictions. They conform to the substances in the latest edition of "JAMP Declarable Substances" as stipulated by the Joint Article Management Promotion-consortium (JAMP) by 31st of December 2017, Declarable Substances of chemSHERPA² from 1st of January 2018, excluding the substances listed in this Green Procurement Guideline.

¹JAMP is a private-sector organization established September 2006 as an agent to promote cross-industrial activity, which holds that in order to improve multilateral industrial competitiveness, it is essential to create and familiarize members with a concrete mechanism with a view to managing, disclosing and communicating information regarding chemical substances contained in articles. (Head Office: Japan Environmental Management Association for Industry: JEMAI) URL: http://www.jamp-info.com/ (as of 2017/7)

² chemSHERPA is information communication system for sustinable supply chain management which is run by JEMAI, and is designed to control chemical substances contained in products properly.

Laws and Regulations	Remarks
Act on the Evaluation of Chemical Substances and Regulation of Their	
Manufacture, etc. [Class specified chemical substances]	
Industrial Safety and Health Act [Prohibition of Manufacturing, etc.]	
(by the end of 2017)	
Poisonous and Deleterious Substances Control Act [specified poisonous	
substances] (by the end of 2017)	
EU RoHS Directive	Banned
EU ELV Directive	substances
EU CLP Regulation (Classification, Labeling and Packaging of	stipulated in this
substances and mixtures) [Annex VI Table 3.2 CMR-Cat. 1,2] (by the	Guideline are
end of 2017)	excluded.
EU REACH Regulation [restricted substances Annex XVII]	
EU REACH Regulation [SVHC and Authorisations Annex XIV]	
GADSL	
US Toxic Substances Control Act : TSCA [Article 6 prohibited or	
restricted substances](from 2018)	
EU POPs Regulation[Annex I] (from 2018)	
IEC 62474 DB Declarable substance groups and declarable substances	
(from October 2017)	

6. Requirements of Partner Companies

Supplying partner companies should proactively operate environmentally friendly policies. The HORIBA Group evaluates a company by evaluating its Quality (Q), Cost (C), Delivery (D) and additional of Environment (E) as evaluation conditions for supplying parts and materials to the HORIBA Group.

Specifically, we ask partner companies to work toward the following.

(1) Operation of continuous environmental improvement through implementation of an environmental management system

It is desirable to acquire international standards such as ISO14001 and EMAS (EU Eco Management & Audit Scheme); and other third-party certifications such as KES (Kyoto, Environmental Management System Standard), EcoAction 21 (Environment Ministry) and Eco Stage.

(2) <u>Implementation of a management system of chemical substances in products</u>

It is desirable to work voluntarily based on "Management Guideline of Chemical Substances Contained in Product," published by JAMP, which summarizes the <u>points to be followed in managing chemical substances in products within an</u> organization, and related documents, in order to receive proper information on chemical substances throughout the supply chain.

(3) Reporting data of Controlled substances

It is desirable to report data of Controlled substances contained in parts and materials according to 'HORIBA Group Guidance on Reporting substances contained in products'.

Chapter 3 Supplementary Provisions

7. Related Documents for Green Procurement Guideline

The following documents are regarded as supplements to this Green Procurement Guideline.

7.1. Banned Chemical Substances Standard

Banned substances and detailed information as stipulated by this Green Procurement Guideline are specified.

7.2. Reduced Chemical Substances Standard

Reduced substances and detailed information as stipulated by this Green Procurement Guideline are specified.

7.3. Exemption List

Uses of banned substances exceptionally permitted are specified.

7.4. Guidance on Reporting substances contained in products

The method of reporting the data of Controlled substances is specified.

8. Communication to the Supply Chain

The cooperation of the entire supply chain is essential for compliance with this Guideline and supplementary provisions. We ask you to forward this Guideline to your suppliers and to give them training, if required.

9. Revision

This Green Procurement Guideline is subject to revision without prior notice. Revisions to the Green Procurement Guideline shall be posted on the website of the HORIBA Group.

Appendix **Explanations of specification standards**

1. Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. [Class I specified chemical substances]

These are substances specified by a legislative decree, based on the "Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc." enacted in 1973. They are persistent chemical substances containing high-accumulation and long-term toxicity. Permissions on production and import, restriction of use and import limitations of the products designated by legislative decrees are stipulated.

<Reference URL>

http://www.meti.go.jp/english/policy/mono_info_service/kagaku/chemical_substances/index.html

2. Industrial Safety and Health Act [Prohibition of Manufacturing, etc.]

These are substances specified by a legislative decree as posing a severe health risk to labor, based on Article 55 of the "Industrial Safety and Health Act" enacted in 1972. These substances are banned from being produced, imported, delivered, provided and used except for the purpose of experiments and research.

<Reference URL>

https://www.jniosh.go.jp/icpro/jicosh-old/english/law/IndustrialSafetyHealth_Law/index.htm

3. Poisonous and Deleterious Substances Control Act [specified poisonous substances]

These are substances specified by a legislative decree, Annex 3 and Annex 3 (10), based on the "Poisonous and Deleterious Substances Control Act" enacted in 1950.

They are evaluated by criteria, taking into consideration their acute toxicity and action on the skin and eyes. Stipulations are in force regarding the production, importation, use and delivery of specified poisonous substances.

< Reference URL > http://www.nihs.go.jp/law/dokugeki/edokugeki.html

4. EU RoHS Directive

This stipulates usage restrictions for specified hazardous substances included in EU-based electrical and electronic equipment as per a 2011 council directive of the European Parliament. Exemptions are also stipulated. ('RoHS' stands for Restriction of the use of certain hazardous substances in electrical and electronic equipment)

< Reference URLs> http://ec.europa.eu/environment/waste/rohs_eee/index_en.htm

5. EU ELV Directive

The reduction of wastes from end-of-life EU vehicles and their proper disposal are stipulated based on a 2000 council directive of the European Parliament.

< Reference URL> http://ec.europa.eu/environment/waste/elv_index.htm

6. CLP Regulation (Classification, Labeling and Packaging of substances and mixtures) [Annex VI Table 3.2 CMR-Cat. 1, 2]

Substances categorized as Category 1 or 2 of Carcinogens (C), Mutagenicity (M) and Reproductive toxicity (R) are listed, based on the "Annex to the Council Directive about Classification, Packaging and Labeling of Hazardous Substances (67/548/EEC)." Category 1 is for substances known as being offending substances to the human body, and Category 2 is for substances that are regarded as offending substances. These substances are regarded as meeting the conditions of substances subject to Authorisation according to the REACH regulations in Article 57. 67/548/EEC was incorporated in a CLP regulation (Classification, Labeling and Packaging of substances and mixtures) that came into effect on January 20, 2009. JAMP Declarable Substances Ver. 2.020 conforms to directive No. 31, which is the latest edition of 67/548/EEC.

< Reference URL> http://echa.europa.eu/information-on-chemicals/cl-inventory-database

7. REACH Regulation: restricted substances Annex XVII [Except CLP regulation Annex VI Table 3.2 CMR-Cat.1,2]

Conditions for marketing and usage (availability of use and usage by consumers etc.) is stipulated in the Annex to "Council Directive to and the Use of Dangerous Substances and Preparations (76/769/EEC)" established in 1976. These substances were replaced by Annex XVII (restricted substances) of the REACH regulations effective June 2009.

According to JAMP Declarable Substances Ver. 2.020, the part of 67/548/EEC Annex CMR-Cat1.2 was overlapped, thus the duplicated part is excluded from the scope of REACH Annex XVII. The list of JAMP Declarable Substances Ver. 2.020 reflects the amendment to 76/769/EEC up to the end of May 2009.

<Reference URL>

http://ec.europa.eu/environment/chemicals/reach/reach en.htm

 $\underline{http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/restrictions/list-of-restrictions}$

No. 170193

8. REACH Regulation: Substances Subject to Authorisation [SVHC]

These are substances subject to Authorisation (SVHC) as defined by the REACH regulation of Article 59, and they are selected from among substances containing the characteristics stipulated in the REACH regulation of Article 57.

In Article 57, various characteristics are listed such as C (Carcinogens), M (Mutagenicity) and R (Reproductive toxicity) in Categories 1 or 2, PBT (Persistent, Bioaccumulative, and Toxicity), and vPvB (very Persistent and very Bioaccumulative). Substances subject to Authorisation are assigned from SVHC. Once a substance is assigned as one subject to Authorisation, its production and use in the EU is banned unless it reauthorized.

With respect to SVHC, "An obligation to communicate the information in a case where SVHC is contained in a product" arises. It is estimated that about 1,500 substances will be announced officially as SVHC.

On October 28, 2008, 15 substances were announced as the first SVHC by ECHA (European Chemicals Agency). Therefore, in a case where a product is produced and used in the EU, and the product is imported into the EU, some obligations arise either directly or indirectly to not only the suppliers of chemical goods but also to the article's suppliers. One of the important obligations is "to communicate the substance's name and information for its safe use to the recipients of the article, in a case where more than 0.1% of SVHC is contained in the article."

<Reference URLs>

http://ec.europa.eu/environment/chemicals/reach/reach en.htm

http://echa.europa.eu/web/guest/regulations/reach/

[List of SVHC] http://echa.europa.eu/web/guest/candidate-list-table

[Authorisation and SVHC]

http://echa.europa.eu/web/guest/addressing-chemicals-of-concern/authorisation

[Obligation of SVHC]

http://echa.europa.eu/web/guest/candidate-list-obligations

No. 170193

9. GADSL

GADSL (Global Automotive Declarable Substance List) is an international integrated list of substances for the declaration of the substances contained in raw materials used in automobiles and auto parts by suppliers of automobiles, auto parts and chemicals in the European Union, the United States and Japan. The list is divided into two categories, one of which is substance P (subject to laws and regulations depending on the application and thresholds), and the other of which is substance D (requiring notification in the case where the content exceeds the threshold.). In a case where there is no legal threshold, this is defined as 0.1%. GADSL is generally revised every February, and it is reflected in JAMP declarable substances. The following URL posts notifications of GADSL file and its reference file. A working relation with IMDS, which is a database of automotive parts all over the world, has been considered.

<Reference URL> http://www.gadsl.org

10. US Toxic Substances Control Act: TSCA [Article 6 prohibited or restricted substances]

Toxic Substances Control Act is established in 1976, and restricts production, import, use and disposal of substances, mixtures, and articles which have the risks which harm human health and the environment. This is amended in 2016.

<Reference URL>

http://uscode.house.gov/view.xhtml?path=/prelim@title15/chapter53&edition=prelim

Article 6

https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/regulation-chemicals-under-sect ion-6a-toxic-substances

11. US POPs Regulation Annex I

This is EU regulation which restricts chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment.

<Reference URL>

[Outline]

http://ec.europa.eu/environment/chemicals/international_conventions/index_en.htm

[Regulation text]

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004R0850

12. IEC 62474 DB Declarable substance groups and declarable substances

IEC 62474 is one of international standard issued by International Electrotechnical Commission (IEC), and regulates the material declaration of products of the electrical and electronic industry. This specifies the list of declarable substances which is to be reported.

[IEC62474] http://std.iec.ch/iec62474/iec62474.nsf/welcome?openpage

[Declarable substances list] http://std.iec.ch/iec62474/iec62474.nsf/MainFrameset



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