IBIDEN Group Green Procurement Guidelines

(Version 7)



October 1, 2022 IBIDEN IBIDEN Co., Ltd.

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[1] Introduction

Ibiden Group has established corporate philosophy "IBIDEN Way". We, all the IBIDEN Group employees, will work together for our philosophy; we respect humanity and nature, create new values together with customers and contribute to constant social advancement. We also work for environmental conservation in all of our business process, which is one of our shared values.

We would like to contribute to "Resource-cycling society". We will promote our Green Procurement for all the goods, including raw materials, parts, and office supplies in cooperation with our suppliers, and work for overall evaluation of environmental burden we make.

The purpose of Green Procurement is to reduce environmental burden from the products we manufacture by procuring products, parts, and materials that have less environmental burden from our suppliers. Activities throughout our supply chain are indispensable to prohibit use of hazardous substances restricted by laws, and to promote our business considering environmental burden and risk reduction. This cannot be achieved without cooperation from our suppliers.

We would greatly appreciate the understanding and cooperation from our suppliers in respect of our Green Procurement Policy for creating sustainable society with less environmental burden.

> October 1, 2022 Ibiden Co., Ltd. Safety & Health Division

[2] IBIDEN Group's Basic Policy for the Environment

Basic Policy

"We conduct the environmental load reduction activity with all concerned people under IBIDEN way. By doing so, we strive to solve environmental challenges through our business operation and, in our capacity as a company, aggressively promote improvements in the environment for the next generation, with the ultimate goal of creating harmony with the global environment and building an enriched society."

Environmental Policy

- 1. We will promote the development of technology that contributes to the building of a decarbonized society and the positive and effective use of clean energy.
- 2. We will work on minimizing the use of energy, water and other resources and reducing, reusing and recycling waste, with a view to creating a recycling-oriented society.
- 3. We will contribute to the conservation of the global environment, including biodiversity while giving due consideration to the environment during the entire course of the product life cycle, from R&D, procurement, production and transportation to after-use disposal.
- 4. We will comply with domestic and foreign environmental laws and regulations. We will set our own standards, thereby striving to advance our environmental management capabilities, such as the reduction of harmful chemical substance emissions.
- 5. We will operate an environmental management system to ensure that every employee acts with the understanding of our environmental policy and to make continued improvements to attain our environmental purposes and goals.
- 6. We will make this environmental policy public and push forward with our efforts in concert with our customers, suppliers and other stakeholders.



[3] Objective of the Guideline

The international trend today in the control of chemical substances is shifting more to the Precautionary Principle in assessing the risks of chemical substances, and control by supply chains of chemical substances contained in their products. Thus, it is becoming increasingly important for manufacturers to voluntarily control chemical substances in their products, and to timely provide proper information on such chemical substances.

Under such circumstances, Ibiden Group is promoting Green Procurement with the aim of lowering the environmental burden generated in our entire supply chain by properly controlling chemical substances and voluntarily reducing those having a high risk of causing harmful effects, thereby contributing to the protection of the global environment.

This Guideline has been prepared to clarify the Ibiden Group's basic idea concerning Green Procurement and requests to our suppliers.

We would greatly appreciate to our suppliers for their understanding the purpose of this Guideline, and their cooperation in (with) Ibiden Group's Green Procurement activities.

Term	Definition			
	A system of procurement of parts and materials with reduced			
	environmental burden from suppliers engaged in			
Green Procurement	environmental conservation in order to reduce			
	environmental burden associated with manufacturing			
	activities of IBIDEN and entire supply chain			
Chemical substances	Chemical elements or compounds			
	Materials that cannot be mechanically broken down into			
	different materials.			
	• Examples of homogeneous materials include individual			
Homogeneous materials	types of plastics, ceramics, glass(es), metal(s), plate(s),			
	paper, cardboard(s), resin(s), and coating(s),			
	• Examples of mechanical break-downs include unscrewing,			
	cutting, breaking, grinding, and polishing.			
	Substance deliberately utilized in the formulation of a			
Intentionally added	material or component where the continued presence of the			
Intentionally added	substance is desired in the final product to provide a specific			
	characteristic, appearance or quality			
	(1) Substances are intentionally added; or			
Contain	(2) From the information provided by raw material			
Contain	manufacturer, it is known that particular substances			
	(including impurities) are actually contained.			

[4] Definitions of Terms

The definitions of the terms used in this Guideline are as follows:

[5] Scope of IBIDEN Green Procurement Guidelines

The IBIDEN Green Procurement Guidelines apply to chemical substances, components, products, materials supplied to IBIDEN for products and the outsourced products as listed in the table below. This guidelines applies to the suppliers, business partners, who deliver their products, parts or materials to IBIDEN.

The procured products which are not included in the list (e.g. equipment, tools, and office supplies are not applicable, however, it should be noted that Green Procurement shall be applied if IBIDEN consider it necessary based on the IBIDEN's Standards. In such a case, IBIDEN may request the suppliers to submit the documents in accordance with Green Procurement Guidelines.

Item	Definition				
Device ments	Electrical device or parts mounted in Ibiden's products.				
Device, parts	(Chip capacitor, chip resister, pins, screws, etc)				
	Materials used in the production process and included in Ibiden's				
	products or have the possibility of being mixed into Ibiden's product as				
Direct materials	impurities				
	(Copper clad laminate, raw materials for plating, solder resist, SiC,				
	graphite, etc)				
Indirect materials	Materials used in our production processes, but not included in Ibiden's				
muneet materials	product.				
	(Detergents, chemical solutions, dry film, etc)				
Packaging	Materials used for packaging Ibiden's products for shipping				
materials	(Cardboards, aluminium packaging, tapes, trays, desiccant, labels, etc)				

[6] Chemical Substances Regulated by IBIDEN Group's Environmental Control

IBIDEN Group classify "chemical substances regulated by the IBIDEN Procurement Guidelines" in two separate categories, prohibited substances and controlled substances as follows:

(1) Prohibited Substances (Annex Table 1)

There chemical substances are prohibited or regulated for inclusion in supplied products. Under regulations inside and outside Japan, these chemical substances are basically prohibited for use in products. If chemical substances listed in separate Table 1 are intentionally included or more than the Maximum Allowable volume, IBIDEN Group will not purchase such products. (Exemption: Use of substances listed in Annex Table 3 or specified by IBIDEN or Specification)

2) Controlled Substances (Annex Table 2)

These substances whose actual use must be known, and appropriate management is required to reduce the use. If chemical substances listed in Table 2 are intentionally included or more than the control voume included, actual volume that is use must be known. IBIDEN Group will proactively reduce the amount of use and replace with substitutes to reduce an environmental burden

Note that even if the substance is not listed in the Prohibited Substances (Table 1) or Controlled Substances (Table 2), IBIDEN shall prioritize the regulation of suppliers and customer requirements.

[7] Requests to our Suppliers

With the support of our suppliers, IBIDEN will reinforce its endeavors to provide environmentally-conscious products. The below are the requests to our suppliers for the corporation in green procurement investigation. Please complete the documents (for details, see "8 Document We Request to Our Suppliers" and submit to IBIDEN.

1) Requests to our suppliers (Companies)

Establishment of Environmental Management System

We request our suppliers to establish and implement a system to continuously make improvements to reduce environmental burden. Specifically, we ask our suppliers to carry out the following activities:

- Environment Policy to be established by Top Management and reviewed regularly.
- Establish an organization to take control of environmental, and clarifies the responsibility and authority of each department.
- Establish a system to update latest environment-related regulations and comply with them.
- Clarify your business activities that may affect the environment, and provide measures to the ones with impacts to reduce their environmental burden.
- Establish a system to monitor the progress of their environmental burden reduction activities and to evaluate the results.
- Conduct an internal audit on environmental conservation efforts.
- Prepare the procedure for emergency such as process abnormalities or natural disasters, and conduct regular drills and revise procedure based on the result of the drills.
- Conduct training to all the employees for pollution control and environmental conservation.

Furthermore, we recommend our suppliers to acquire certification of the environmental management system by a third party (ISO 14001, etc.) to implement the above activities more effectively.

(2) Implementation of environmental conservation activities

We request our suppliers to implement following environmental conservation activities:

- Comply with all laws and regulations regarding pollution, such as air pollution, water contamination, noises, vibrations, and wastes, and also comply with company standards. If there is any non-compliance issue, correct immediately.
- Perform 3R activities (Reduce, Reuse, and Recycle)
- Perform activities for prevention of global warming
- Positively disclose environmental conservation progress to outsiders.
- Implement Green Procurement
- (3) Establishment of a system for controlling chemical substances contained in products It is necessary for all the suppliers involved in supply chain to control chemical substances in the products to enables information regarding chemical substances in the products to be communicated through out entire supply chain. We request our suppliers to establish and implement a system for controlling chemical substances contained in the products they deliver to us. For details, please see the activities below.
 (The following content is based on "Guidelings for the menagement of chemical substances

(The following content is based on "Guidelines for the management of chemical substances in products" prepared by Joint Article Management Promotion-consortium (JAMP).)

- Establish the company's own policy concerning control of chemical substances contained in products and have all the employees be familiar with the policy.
- Clarify the standards for controlling chemical substances contained in products, and the ranges to which the control standards apply (divisions/departments / business activities / process/ products, etc.).
- Set targets regarding control (ling) of chemical substances contained in products, and manage the progress of relevant activities.
- The results of activities must be reviewed by top managements and reflect in the targets of following year.
- Establish an organization for controlling chemical substances contained in products, and clarify responsibilities and authorities.
- Obtain information regarding chemical substances contained in purchased materials at the designing and developing stage, and check whether the chemical substances contained in (the developing) products being developed comply with the control

standards.

- When selecting suppliers, check their implementation status regarding control of chemical substances contained in the products.
- When receiving purchased materials, periodically check them whether they meet your chemical substance control standards.
- When handling prohibited substances or controlled substances restricted by Ibiden in a process/at a subcontractor, provide measures to prevent those substances from being misused or mixed from their production process of the products delivered to Ibiden.
- When a part or all of the production is outsourced to external contractors, check their control status of chemical substances contained in the products appropriately.
- There must be a check item regarding chemical substances in the products, and check sheet must be checked that all the check items are checked before shipment.
- Ensure traceability of products.
- Establish a rule for changes in chemical substances in products, as well as a system to ensure provision of information to the customers before actual changes have made.
- Establish a rule for producing non-conformance products. (Immediate response, investigation of the cause, recurrence prevention, customers reports, etc.)
- Perform education and training to all the employees regarding the control of chemical substances contained in products.
- Rules regarding chemical substances contained in products are documented. Establish a system of storing records, and to provide information on chemical substances contained in products upon requests from customers.
- By confirming management status of chemical substances in products with internal audit, provide corrective actions if there is any findings.

Please refer to JAMP "Guidelines for the management of chemical substances in products" before implementation of the above items.

- 2) Request on the delivered products
- Certificate of No-Use of Prohibited Chemical Substances and confirmation of contents of controlled substances.

We request our suppliers to certify that the substances prohibited by Ibiden (Annex Table 1) are not intentionally included in materials delivered to Ibiden (except for a few exceptions). If any amount is contained, please certify that concentration of the substances does NOT exceed the limit. Also we request our suppliers to certify that you confirm the contents of

controlled substances (Annex Table 2).

- (2) Positive disclosure of information on chemical substances contained in products For the chemical substances contained in the products delivered to IBIDEN, please positively disclose the composition information including names, content rates, amounts, etc. of such substances to IBIDEN. Especially in case any substances defined as prohibited/controlled substances by IBIDEN are contained in your products, you must file a report to IBIDEN regardless of whether such information is designated as company confidentiality or not, regardless of concentration degree (even if the concentration of chemical contained is lower than the maximum allowable concentration / controlled value).
- (3) Indication of compliance of IBIDEN Green Procurement Guideline Please indicate in the test report of the products delivered to IBIDEN that the chemical substances contained in the products comply with IBIDEN Green Procurement Guideline. Example: "Chemical substance in this product is complied with IBIDEN Green Procurement Guideline"

[8] Documents We Request Our Suppliers to Submit

We request our suppliers to submit necessary documents according to procurement items in the following table by category. It should be noted that we may ask for additional submission of documents including analysis reports due to our customer requirements.

Documents to be submitted Classification of products to be procured	Suppliers	Certificate of Chemical Substances Mgt in the products & materials (Form2)	chemSHERPA- CI or chemSHERPA- AI	SDS	Warranty of Non-Inclusion	Close Concentration Analysis
Device, parts			0	—	\bigtriangleup	\bigtriangleup
Direct material			0	0	\bigtriangleup	\bigtriangleup
Indirect materials	0	0	0	0	\bigtriangleup	\bigtriangleup
Packaging material			0	_	_	\bigtriangleup
Frequency of	(1) New business	(1) New product /	(1) New product /	(1) New	(1) New product	(1) New product
submission	IBIDEN (existing suppliers) (2) When changes	by IBIDEN (law amended) (2) When changes	by IBIDEN (law amended)	changes are made to	(2) When changes are made to descriptions	(2) When changes are made to descriptions

Investigation format for chemical substances included in products

 \odot (Circle): Documents need to be submitted, \triangle (Triangle): Documents to be submitted when requested by IBIDEN

1) Survey Sheet for Suppliers (Form 1)

We request our all new suppliers, as well as our existing suppliers where applicable, to complete the Survey Sheet and provide the information on the status of environmental management system, environmental activities and the current status of the management system on chemical substances in products. Please read the instructions carefully before completing the Survey Sheet. Please note that IBIDEN will follow-up the suppliers with evaluation result less than 80 points to verify that suppliers are continuously striving for improvement, and may audit to verify the EMS implementation status, initiatives for reducing environmental burden, and the management system on chemical substances in products.

2) Certificate of Chemical Substances Management In the products & materials (Form 2) "Certificate of Chemical Substances Management In the products & materials" is the format to be used to certify the management of chemical substances in product and that prohibited chemical substances that the concentration levels of chemical substances do not exceed legal limits and chemical substances in the products are known.

IBIDEN Procurement Policy prohibit the use of prohibited substances in principle. (Except for special use)

3) chemSHERPA-CI, chemSHERPA-AI

"chemSHERPA-CI" or "chemSHERPA-AI" is required for new product. "chemSHERPA-CI" and "chemSHERPA-AI" are managed by chemSHERPA to facilitate information exchange in a supply chain of chemical substances in products. (chemSHERPA-CI is for chemical product and chemSHERPA-AI is for article).

Please visit https://chemsherpa.net/english and download chemSHERPA-CI and chemSHERPA-AI.

4) Safety Data Sheet (SDS)

Safety Data Sheet (SDS) is required for the new product.

5) Parameter Sheet

Parameter Sheet is required for new product. (only for products purchased in Japan).

6) Concentration Analysis Report

When requested by IBIDEN, please submit "Concentration Analysis Report" to provide the results of precise analysis of the concentration level. (Please submit a Analysis Report provided by ISO/IEC 17025 Certified Body)

[9] When Changes Are Made to Descriptions

When there are any changes made in the documents submitted by suppliers due to changes in the specifications of the delivered products, please note that IBIDEN personnel in charge must be informed of the changes. The relevant documents (Form 1, Form 2, SDS and chemSHERPA-CI, chemSHERPA-AI, and Concentration Analysis Report) are required again for verification to determine if changes meet the IBIDEN's standard.

For any inquiries about this Guideline, please contact us at Safety & Health Division <u>TEL: +81-584-89-0802</u> E-mail: green_procurement@ibiden.com