

Guideline for Green Procurement

(For suppliers)

Nippon Electric Glass Co., Ltd.

Established (Jan. 1, 2006)

Revision 2 (May 29, 2015)

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1. Foreword (Environmental Initiatives)

The company considers environmental issues to be one of the most important management issues.

We established the Environmental Charter in 1992 and have been working to reduce the environmental impact of all of our business activities.

Since many suppliers are involved in our business activities, we cannot achieve our goal without our suppliers' cooperation: i.e. a unified environmental activity with cooperation of our suppliers is essential.

Thus, we have adopted "Green Procurement", which is the procuring of products with low environmental impact from companies which respect the conservation of the environment.

We also established "Guidelines for Green Procurement" on Jan 1st, 2006, stating matters which we would like to work together on with our suppliers.

Since 2006, the social environment has greatly changed and industries are required to do environmental management such as, not only the recycling of resources, but also preventing global warming and preserving biodiversity. As a result, the social environment surrounding our products had also greatly changed.

Following the European RoHS regulation, the REACH regulation was enacted. In addition, similar regulations are being implemented now in Southeast Asia, such as China and Korea.

In these situations, we can't promote the Green Procurement without your understanding.

We ask for your understanding of our environmental actions and your cooperation.

The Environmental Charter

Environmental Principles

The preservation of the global environment is the most important and indispensable factor for the prosperity of civilization and humanity in the 21st century.

Nippon Electric Glass Co., Ltd. will contribute to the progress of societies and civilization by creating high-tech glass and by supplying high-quality products.

Nippon Electric Glass Co., Ltd. will strive to develop and utilize its own technology to coexist with the local community, nature and the global environment.

Nippon Electric Glass Co., Ltd. will contribute to the preservation of the global environment and to the realization of a recycling-based society through the glass manufacturing business.

Action Plan

1. Restrain the generation of waste and thoroughly recycle waste that originates from the glass manufacturing business itself. Reduce the environmental impact by minimizing the emission of waste.
2. Reduce environmental impact by achieving conservation of resources and energy through the development and utilization of glass manufacturing technologies that attain the highest efficiency in the world.
3. Make every possible effort to prevent pollution according to standards that conform to the requirements of the 21st century and to coexist with the local community.
4. Make every possible effort to preserve the environment by honoring and observing all environmental legislation, regulations and agreements, and by enforcing our own even stricter standards.
5. Manage the handling and control of chemical substances with utmost care. In particular, make every possible effort to limit the use of hazardous chemical substances.
6. Set environmental objectives and targets, and then attain them through the environmental protection activities of every employee. Continually improve our environmental management system and our environmental protection performance.
7. Protect the environment by supporting the operation of our affiliated companies in relation to the environment, and coordinate our own and our affiliates' efforts to protect the global environment.

This charter will be communicated to all employees and affiliated companies, and it will be available to the public.

April 1, 2015 (6th edition)

Motoharu Matsumoto, President

2. Range of Application

This guideline covers all glass raw materials, sub materials, parts, packing materials (hereafter called “products”) purchased by us in principle. However, there will be cases in which specific requirements will be set by a particular division, department, or plant. In these cases, the specific requirements will have priority.

3. Requirements for suppliers

(A) Requirements

Whether a supplier, either manufacturer or distributor, is actively working for the conservation of the global environment or not, is one of important factors when choosing our suppliers. Therefore we will review the environmental activities taken by suppliers, and suppliers which satisfy the following conditions will be selected as “preferred suppliers”.

(1) Organizational structure for environmental conservation

Organizational structure for taking environmental conservation measures is established at plants and offices which manufacture or sell the product. (Refer to (1) of (B) for details)

(2) Measures for global environmental conservation

Measures for the conservation of the global environment are being performed. (Refer to (2) of (B) for details)

(3) Non-usage of prohibited substances in manufacturing processes

Prohibited substances specified by our company are not to be utilized in manufacturing processes. (Refer to (3) of (B) for details)

(4) Support for chemical substance content surveys

Suppliers shall reply to chemical substance content surveys regarding their products. (Refer to (4) of (B) and <4.Requirements for products> for details)

(B) Detailed Content

(1) Organizational structure for environmental conservation

We ask our suppliers to establish organizational structures that satisfy the following items for environmental conservation.

- ① Establishment of an environmental policy.
- ② Nomination of a person responsible for environment matters and establishment of organization for environment control.
- ③ Understanding and compliance with environment related laws and regulations.
- ④ Establishing and practicing objectives and plans for environmental conservation.
- ⑤ Control of chemical substances.
- ⑥ Implementation of environmental education for all employees.
- ⑦ Periodic confirmation of the compliance status and environmental activities.

(2) Measures for global environmental conservation

Endeavor to achieve the following items for “cyclical use of resources”, “prevention of global warming” and “biodiversity conservation”, in addition to conventional “environmental conservation”.

(2. 1) Environmental activity

- ① Implementation of environmental conservation measures (reduction of air pollution, water pollution, soil pollution, noise, vibration, etc.)
- ② Proper disposal and reduction of waste output

(2. 2) Cyclical use of resources

- ① Reduction of resource consumption
- ② Reduction of environmental impact by simplifying wrapping and packaging
- ③ Resources and energy conservation

The consumption of resources and energy used in production should be the minimum. Also, design products which consume the minimum energy and resources during distribution and usage.

- Minimize energy consumption during usage and standby
- Miniaturize and reduce weight
- Minimize the use of precious resources.

- ④ Product durability

Products should be designed to be usable for a long time. Machine design easy to be repaired and overhauled.

- ⑤ Recycle simplification of material and design.

Use materials that can be recycled easily. Products are designed to be easily broken down back into their separate raw materials. Also, products must be easy to disassemble, so that they can be recycled back into raw materials.

- ⑥ Effort to purchase in accordance with the green purchase law.

(2. 3) Prevention of Global warming

- ① Reduction and elimination of global warming substances
- ② Compliance with the CFC law
- ③ Understanding of the volume of energy use and CO₂ emission

(2. 4) Biodiversity conservation

- ① Procurement of raw materials with little impact on the ecosystem.

(3) Non-use of Prohibited substances in manufacturing processes

Control environment affecting substances in manufacturing processes according to classifications ① and ② below.

Regarding the specifications of environment affecting substances, see Table 1.

- ① Prohibited substances: Substances that are prohibited to use in manufacturing processes by law or regulation. In principle, we will not purchase from suppliers who use these substances in their manufacturing processes. *Coolants and fire extinguishing applications are exempted.
- ② Substances to be reduced: Substances for which their use is to be minimized or eliminated in the manufacturing process of products. Suppliers who use these substances in manufacturing processes are requested to make a strenuous effort to minimize their use as much as possible.

Table 1 Environment affecting substances used in manufacturing processes

Classification	No.	Substance name	Applicable laws and regulations
Prohibited substances	1	CFC (Chloro/fluoro/carbon)	Montreal Protocol Ozone layer protection law
	2	1.1.1 – Trichloroethane	
	3	Carbon tetrachloride	
	4	Halon	
	5	HBFC (Hydro/bromo/fluoro/carbon)	
	6	Bromomethane	
Substances to be reduced	7	HCFC (Hydro/chloro/fluoro/carbon)	Montreal Protocol* (Complete abolishment in 2020)
	8	Trichloroethane	Water pollution prevention law
	9	Tetrachloroethane	
	10	Methylene chloride	

* Regulation schedule for developed nations in the Montreal Protocol (Dec. 1998)

(4) An organizational cooperation in chemical substance content survey

Provide chemical substance content information about your products, status of environmental conservation activities, etc.

We may request you to provide information about the content of substance subject to the RoHS directive and REACH SVHC substances.

4. Requirements for products

(A) Requirements

We may ask suppliers to reduce the environmental impact of their product.

Do not use any substances which are prohibited by our voluntary regulation -“Banned Substances” (Table 2).

In principle we do not buy any products containing these substances (see (B) Details).

(B) Details

- Prohibited Substances:

- When prohibited substances are contained in glass raw materials, cullet, binders, coating materials, etc., allowable maximum volumes are determined in respective specifications.
- Allowable volume for parts which are sold together with our product, parts for packages, ink and paint are as shown in Table 2.
- Sub materials used in manufacturing processes, such as polishing agents, are exempt.

<Definition of “contained”>

Regardless of intention or not, “contained” is a situation in which a substance added to, is blended with, filled up, or adhere.

“Impurity” refers to substances in raw materials that cannot be technically removed during the industrial refining processes or in the synthetic reaction processes. If an impurity is found to change the characteristics of a fundamental material, it is considered being contained.

The maximum values for the prohibited substances are applicable to both “contained” and “impurities”.

Table2 Banned Substances

No.	Name of materials	Parts	Parts,Ink,paint which construct the packaging materials
1	Lead	less than 100ppm	Total concentration for 4species must be less than 100ppm. Concentration tolerance of cadmium for Plastics(including rubber)parts *1 must be less than 5ppm.
2	Mercury	less than 100ppm	
3	6 Valence chrome	less than 100ppm	
4	Cadmium	less than 5ppm	
5	PBB(polybrominated biphenyls)	less than 100ppm	
6	PBDE(polybrominated diphenyl ethers)	less than 100ppm	
7	Formaldehyde *2	less than 15ppm	
8	Azo dyes *Pigments	less than 30ppm as specific Amin.	
9	Asbestos	100ppm	
*1 Main plastic parts: toride, plastic bags, cushions,wrap,tray,reel,tape,sticks,magazine.			
*2 Woodworking product is subjected.			

5. Regarding Green Procurement

(1) Surveys by supplier

Concerning item 3, “Requirements for suppliers”, we may ask suppliers for the submission of a specific survey sheet.

(2) Product surveys

Concerning item 4, “Requirements for products” or “Specific requirements”, non-usage warranty may be asked for separately.

(3) We may ask for your cooperation with on-site audits and surveys. Surveys are periodically performed by us at your company site.

(4) We may ask for your cooperation with on-site audits and surveys performed by our customer after prior contact and agreements with your company.

(5) If you need to revise answers in the surveys after submitting them (if there are changes regarding raw materials, condition of production, location of production, facilities, etc.), please submit the revised survey sheets as soon as possible.

(6) If it is necessary to revise banned substances and other substances described in these guidelines, we will review from time to time.

(7) If necessary, we may ask you to insert specific provisions or arrangements regarding Green Procurement in the basic contract, memorandums, and purchase specifications. In these cases, specific provisions or arrangements will have priority.

(8) We will take necessary measures to protect the confidentiality of information provided by you.

Revision history		
Version	Enacted	
First	2006.1.1	Established for the purpose of green procurement.
2	2015.5.29	<ul style="list-style-type: none"> * After confirming the first edition of the environmental regulations and the product chemical substance regulations, we added 3 banned substances. * Added the request of offering information about substances subject to RoHS directive and REACH SVHC substances. * Added content about "Global warming" and "conservation of biological diversity" to customer request in addition to "cyclical use of resources".