

Green Procurement Standards  
for  
Parts and Materials  
6th Edition



March 2016

Furuno Electric Co., Ltd.

## Introduction

Human health and global environmental conservation are the world's common wishes.

Furuno Electric Co., Ltd. (hereinafter called “Furuno”) places the balance of the global environmental conservation and Furuno's business activities as one of our top management priorities, and sets its environmental philosophy as follows:

- Promote conservation of the global environment.
- Promote the formation of a recycling-oriented society.
- Promote the sustenance of biodiversity.
- Promote fostering a corporate culture which seeks to co-exist with environment and society

**"Protect Our Earth!  
Be a 21<sup>st</sup> Century Environmental Leader!  
Furuno Aims to Continue Manufacturing Eco-Friendly Products."**

Through our business activities we aim to bring the above motto to fruition. Our procurement requirements were previously based on quality (Q), cost (C), and delivery (D). We have added another factor, environment (E), to promote Green Procurement, and would like to evaluate our Suppliers' activities for environmental conservation. In other words, we want to procure parts, materials, supplies and facilities which have higher eco-friendly specifications. We are doing our best for "Green Procurement" to reduce harmful chemical substances in our production activities.

In recent years, the social interest in environmental issues has increased. This trend has led to the reinforcement and legislation of environmental regulations for manufactured products by worldwide control of chemical substance in products. These include the RoHS<sup>(\*1)</sup> (Restriction on Hazardous Substances) directive by EU (European Union), REACH<sup>(\*2)</sup> (Registration, Evaluation, Authorization and Restriction of Chemicals) regulation, and Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships for shipbuilding industries<sup>(\*3)</sup>. As a result, responsibilities on environmental issues and laws/regulations have greatly increased manufacturers' responsibility. We have reviewed our environment-related regulations and partially revised them accordingly.

We have revised our "Green Procurement Standards for Parts and Materials", and have implemented Green Procurement based on the chemical substances contained in the parts and materials that are contained in our products.

Consequently we hereby would ask all suppliers to read this revised Standard, and support our survey for eco-friendly products. Your understanding and cooperation will be highly appreciated.

(\*1) RoHS Directive

These are the abbreviations of directives, which regulate environmental measurements for the products, were enforced by EU on February 13, 2003.

RoHS Directive: A directive of the EU Parliament and the EU Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment.  
[2011/65/EU]

(\*2) REACH Regulation

REACH is an EU regulation on chemicals and their safe use. It deals with the Registration, Evaluation, Authorization and Restriction of Chemical substances. The law was entered into force in June, 2007.

(\*3) Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships

A treaty that is required to manage hazardous materials contained in the ship's structure and equipment, and it was adopted by IMO (International Maritime Organization) in May, 2009.

## Revision History

### 6<sup>th</sup> Edition in March 2016

- Edited Attachment 1 "Furuno's List of Environmentally Hazardous Chemical Substances" in accordance with the updated RoHS directive (EU) 2015/863.

### 5<sup>th</sup> Edition in October 2015

- Added BNST as prohibited substance  
BNST (Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene)  
By "Prohibition of Certain Toxic Substances Regulations,2012" of CANADA

### 4<sup>th</sup> Edition in February 2014

- RoHS Directive [2002/95/EC] → [2011/65/EU]
- Guidelines for the Management of Chemical Substances in Products Ver.2.0 → Ver.3.0

### 3<sup>rd</sup> Edition in February 2010

- Changed the research format to JGPSSI Ver.4.
- The list of declarable chemical substances shown in the Joint Industry Guide JIG-101 Ed2.0 is used.

### 2<sup>nd</sup> Edition in November 2008

- Changed the research format to JGPSSI Ver.3. Note that we may change the materials of investigation and format according to customer's demand.

### 1<sup>st</sup> Edition in July 2004

- We defined the chemical substances against environment which are classified into three categories, i.e., banned substances, restricted substances and controlled substances, to conform to the RoHS Directive for parts and materials.
- We asked our suppliers to submit non-inclusion warranty of the restricted substances (six substances banned by RoHS Directive) to comply with the RoHS Directive.
- The chemical substances to be surveyed were focused on 24 substance groups, referring to the survey subjected substances list issued by the Japanese Green Procurement Supply Survey Initiative (JGPSSI).
- We asked suppliers to set up a management system to control chemical substances contained in their products.

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## 1. Purpose

Furuno's "Green Procurement Standards for Parts and Materials" (hereinafter called the "Standards") shall be the Furuno's criteria to meet environmental regulations and to produce environmentally-friendly products.

The Standards stipulate "green procurement" that gives priority to procure parts and materials (hereinafter called "parts/materials") with less environmental impact.

## 2. Scope of Application

The Standards apply to all parts/materials that compose Furuno products. The Standards also apply to the packaging materials and sub-materials that protect Furuno products.

## 3. Requirements for Green Procurement

The requirements for green procurement are set out in two categories: 3.1 requirements from suppliers, and 3.2 requirements for your products we purchase.

Our policy is to give priority to the suppliers who satisfy the requirements provided in 3.1 and 3.2, and who willingly work towards green procurement.

### 3.1 Requirements from Suppliers

3.1.1 Compliance with environment-related laws and regulations ..... **Compulsory**

3.1.2 Cooperation in green procurement activities ..... **Compulsory**

3.1.3 Setup of a quality assurance management system for the chemical substances contained in the products ..... **Recommended**

Our suppliers are recommended to setup a quality assurance management system to enhance reliability of the data on the chemical substances contained in the goods.

3.1.4 Certifications of Environmental Management Systems ..... **Recommended**

Our suppliers are recommended to obtain certifications such as ISO 14001, or other equivalent body.

### 3.2 Requirements for your products we purchase

3.2.1 Survey of chemical substances contained in the products ..... **Compulsory**

For surveying chemical substances contained in the parts/materials, please reply to the research request issued separately.

3.2.2 Submittal of "Guidelines for the Management of Chemical Substances in Products (Ver.3.0) Check Sheet" ..... **Recommended**

Submittal of "Self-Declaration of Conformance Regarding Systems for Managing Chemical Substances in Products" ..... **Recommended**

The Self-Declaration of Conformance declares that the supplier sets up and carries out their own management system based on "Guidelines for the Management of Chemical Substances in Products". Please fill out and submit the "Guidelines for the Management of Chemical Substances in Products" in Appendix 2.

3.2.3 No chemical substances banned by Furuno shall be contained in the parts and/or materials ••••• **Compulsory**

Furuno has established a "List of Environmentally Hazardous Chemical Substances", composed of the three classifications shown below.

Banned substances: Chemical substances (group) banned immediately.

Controlled substances: Chemical substances (group) not to be banned, but content to be monitored in order to reduce use.

"Furuno's List of Environmentally Hazardous Chemical Substances" (Summary)

Classification	Chemical Substance (Group)	Banned Date
Banned substances (11 substance groups)	Asbestos Azo Colorants Polychlorinated Biphenyls (PCBs) Polychlorinated Terphenyls (PCTs) Polychlorinated Naphthalenes (Cl <sub>≥</sub> 3) Radioactive Substances Short-chained Chlorinated Paraffins Tributyltins (TBTs) and Triphenyltins (TPTs) Ozone-depleting Substances Tributyltin Oxide (TBTO) BNST(Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene)	Immediately
Reduced substances (10 substance groups)  <Substances prohibited by the RoHS directive>	Cadmium and its compounds Lead and its compounds Mercury and its compounds Hexavalent Chromium compounds Polybrominated Biphenyls (PBBs) Polybrominated Diphenyl Ethers (PBDEs) Bis(2-ethylhexyl) phthalate (DEHP) Butyl benzyl phthalate (BBP) Dibutyl phthalate (DBP) Diisobutyl phthalate (DIBP)	Immediately
Controlled substances (15 substance groups)	Beryllium Oxide (BeO)  Brominated flame retardant (other than PBB and PBDE, or HBCDD)  Diarsenic Pentoxide Diarsenic Trioxide  Fluorinated greenhouse gases (PFC,SF6,HFC)  Formaldehyde (FA)  Hexabromocyclododecane (HBCDD) and all major diastereomers  Nickel (Ni)  Perchlorate  Perfluorooctane sulfonate (PFOS)  Phenol,2-(2H-benzotriazole-2-yl)-4,6-bis(1,1-dimethylethyl)  Phthalic Ester (DINP DIDP DNOP)  Deca-Bromodiphenylether (Deca-BDE) (PBDE)  Polyvinyl Chloride (PVC) Tris (2-chloroethyl) phosphate (TCEP)	-



\* Refer to Attachment 1 for details.

\* Refer to our Website (<http://www.furuno.co.jp/corporate/procurement/activity.html>) for substance/category, and click “JIG-101 Ed 2.0” to see the “JIG Declarable Substance List” on page12-23.

In order to declare non-content of the banned substances, each homogeneous material composing parts/materials should meet the threshold level stipulated in Attachment 1.

Moreover, if it is not feasible on your end to eliminate the substances, notify us and discuss the issues with our person in charge.

Additionally, dependant on circumstances regarding certain types of equipment and/or departments, you may be requested to survey other materials in addition to those listed in Attachment 1.

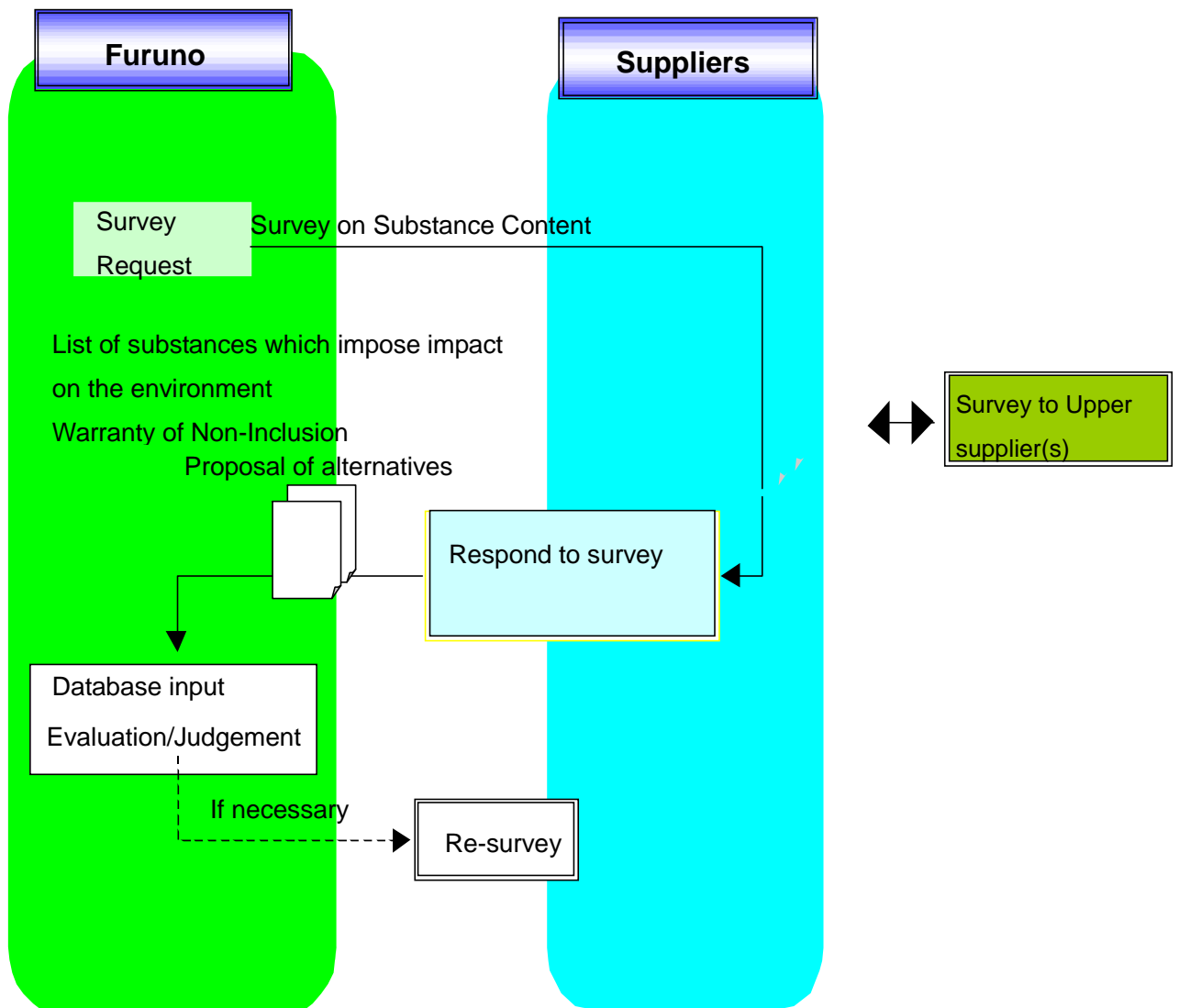
- 3.2.4 Propose alternatives, new parts and/or manufacturing process changes for the parts/materials containing the Reduced substances ..... **Compulsory**  
When reduced substance(s), i.e., RoHS Directive banned substance(s) is contained in the procured goods, we would like to have alternatives suggested.
- 3.2.5 Take measures to reduce the impact on the environment ..... **Recommended**  
Take measures to reduce the environmental hazard for the procured goods, Considering resource saving, energy saving, recyclability, etc.

#### 4. Outline of Operation of Green Procurement Survey on Parts and Materials

##### 4.1 Survey/Evaluation Flow of Green Procurement Survey

The following is a summary of our survey flow of parts/materials based on the requirements stated on the previous pages. We conduct two surveys, survey #1 "Survey of the Suppliers," and survey #2 "Survey of the Procured Goods."

As for #2 "Survey on the Procured Goods," we would like the Supplier to respond to us with the survey results. Based on the results, we will determine whether to conduct a re-survey. For the survey details and responding method, refer to Furuno's "Material Composition Survey and Response Manual (data format Ver.4.00 compliant)".



Survey/Evaluation Flow of Green Procurement Survey

#### 4.2 List of Documents to be submitted for Green Procurement Survey

No.	Submittal and file format
1	Respond to Furuno's survey on chemical substances content (Submit in JGP files)
2	“Self-Declaration of Conformance Regarding Systems for Managing Chemical Substances in Products” (Attachment 2)
3	List of Action Items & Check Sheet Guidelines for the Management of Chemical Substances in Products (Ver.3.00)
4	Proposal of alternative data (Submit the data as ECO data)

#### 5. Revision/Abolition of Current Documents

This “Green Procurement Standards” take the place of the "Outline of Chemical Substance" (established in October, 2000) and the "List of Containing Banned Substances". Note that the Standards are subject revision in accordance with social circumstances and laws/regulations.

For the latest information, visit our website at  
(<http://www.furuno.co.jp/corporate/procurement/activity.html>)

#### 6. Contact Us

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## Attachment 1

## Furuno's List of Environmentally Hazardous Chemical Substances

#	Chemical Substance Group	Classification	Threshold level
1	Asbestos	Banned	No intentional addition.
2	Azocolourants and azodyes which form certain aromatic amines *1	Banned	No intentional addition (For leather and textile products only.)
3	Polychlorinated biphenyls (PCBs)	Banned	No intentional addition.
4	Polychlorinated terphenyls (PCTs)	Banned	No intentional addition.
5	Polychlorinated naphthalenes (C1 ≥ 3)	Banned	No intentional addition.
6	Radioactive substances	Banned	No intentional addition.
7	Short chain chlorinated paraffins	Banned	No intentional addition.
8	Tributyltins (TBTs) & triphenyltins (TPTs)	Banned	No intentional addition.
9	Ozone-depleting substances	Banned	Class 1 ••• No intentional addition. Class 2 ••• HCFCs: 1000ppm
10	Tributyltin oxide (TBTO)	Banned	No intentional addition.
11	BNST *3	Banned	No intentional addition.
12	Cadmium and its compounds	Banned	No intentional addition or 100ppm.
13	Lead and its compounds	Banned	No intentional addition or 1000ppm.
14	Mercury and its compounds	Banned	No intentional addition or 1000ppm.
15	Hexavalent chromium compounds	Banned	No intentional addition or 1000ppm
16	Polybrominated biphenyls (PBBs)	Banned	No intentional addition or 1000ppm.
17	Polybrominated diphenyl ethers (PBDEs)	Banned	No intentional addition or 1000ppm.
18	Bis(2-ethylhexyl) phthalate (DEHP)	Banned	No intentional addition or 1000ppm
19	Butyl benzyl phthalate (BBP)	Banned	No intentional addition or 1000ppm
20	Dibutyl phthalate (DBP)	Banned	No intentional addition or 1000ppm
21	Diisobutyl phthalate (DIBP)	Banned	No intentional addition or 1000ppm
22	Beryllium Oxide (BeO)	Controlled	0.1% by weight (1,000ppm) of the product
23	Bromine flame retardant (other than PBB and PBDE, or HBCDD)	Controlled	0.1% by weight (1,000ppm) of the product
24	Diarsenic Pentoxide	Controlled	0.1% by weight (1,000ppm) of the product
25	Diarsenic Trioxide	Controlled	0.1% by weight (1,000ppm) of the product
26	Fluorinated greenhouse gases (PFC, SF6, HFC)	Controlled	Intentionally Added
27	Formaldehyde	Controlled	Intentionally Added
28	Hexabromocyclododecane(HBCDD) and all major diastereoisomers	Controlled	0.1% by weight (1,000ppm) of the product
29	Nickel *2	Controlled	Intentionally Added
30	Perchlorate	Controlled	0.0000006 % by weight (0.006 ppm) of the product
31	Perfluorooctane sulfonate (PFOS)	Controlled	Intentionally Added
32	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	Controlled	Intentionally Added
33	Phthalate (DINP DIDP DNOP)	Controlled	0.1 % by weight (1,000 ppm) of plasticized material
34	Deca-Bromodiphenylether (Deca-BDE) (PBDE)	Controlled	Intentionally Added
35	Polyvinyl Chloride	Controlled	0.1% by weight (1,000ppm) of the product
36	Tris (2-chloroethyl) phosphate (TCEP)	Controlled	0.1% by weight (1,000ppm) of the product

\*1 The subjected use regarding azo dyes/pigments that generate specific amines, is limited to the parts that contact human skins directly over a long period. (The specific amines are indicated in 76/769/EEC, the 19<sup>th</sup> Directive revision.)

\*2 Nickel must be reported in certain regulated applications where it is likely to result in prolonged skin exposure (e.g., an outer enclosure for a portable electronic product designed to be carried). Use of nickel or nickel contained in components and parts designed to be located inside the outer enclosure of a product need not be reported.

\*3 BNST (Benzenamine,N-phenyl-,reaction products with styrene and 2,4,4-trimethylpentene)  
BY regulation of Canada

## Self-Declaration of Conformance Regarding Systems for Managing Chemical Substances in Products

This document declares that we have systems for managing chemical substances in its products and that the systems are effectively functioning.

1. Issue Number:

2. Subject of declaration:

3. Issuing authority :

Company name :

Mailing Address :

4. The subject of the declaration above complies with requirements specified in the documentation below:

Document name: Guidelines for the Management of Chemical Substances in Products

Version no. : 3

Date of issue : February, 2013

Issuing authority: JAMP: Joint Article Management Promotion-consortium

5. Additional information:

Method of verification:

Other:

6. Place and date of issue:

Place :

Date of issue (DD/MM/YYYY) :

Date of revision (DD/MM/YYYY) :

7. Representative, department:

Person in charge :

Signature:

Department :

If you have any queries regarding this declaration, please contact the person shown below:

Name :

Department :

Telephone :

E-mail :