

TAIYO, LTD.

Green Procurement Guideline

(Ver.2.1)



EQUIPMENT
FOR **GREEN**

Preface

Taiyo has aggressively addressed global environment-related issues based on the policy: “Global environmental protection is one of the top priority tasks given to mankind.”

We recognize it is indispensable to procure materials and components with less impact on the environment for the environmentally-friendly products. To this end, we have established “Taiyo Green Procurement Guidelines”.

In accordance with it, we intend to pursue the goal to manufacture environmentally-friendly products, which will lead to the global environmental protection.

Successful Green Procurement cannot be achieved without the active cooperation of our suppliers. We would like to ask for your support and cooperation.

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Environmental Policy

<Philosophy>

With acknowledgement that global environmental protection is the mission on the front given to mankind, we contribute to global environmental preservation and societies through all the business activities, products and services we provide.

<Policy>

We at Taiyo contribute to environmental preservation based on the following policy through our business of engineering, developing, manufacturing and supplying industrial machine and equipment.

1. Make endeavors to protect the natural environment and prevent environmental pollution by establishing environmental management system with sustained improvement.
2. Strive to protect the regional and global environment by complying environmental regulations and laws
3. Challenge to diminish the environmental impact through our business activities. Especially the following efforts are focused on:
 - 1) Minimize the environmental impact of our new developed products.
 - 2) Promote energy saving, recycling and resource saving.
 - 3) Prevent environmental pollution caused by chemical substances such as organic solvents.
4. Each division sets its own environmental objective and goal and work together to promote it as an environmental preservation activity.

We carry out and maintain the environmental policy and communicate it to the general public if required in addition to all the employees.

June 18, 2008
Kenji Kobuchi / TAIYO, LTD

2. Taiyo's Basic Approach to Green Procurement

1. Objective

We shall increase the purchase of materials less impact to the global environment, or shall carry out more "Green Procurement" to manufacture more environmentally-friendly products. We shall endeavor to move forward environmentally-responsible management in cooperation with highly environment-conscious suppliers.

2. Definition

We shall procure less-environmental burdened products, semi-finished products, parts, materials and services, etc. from suppliers who are active in environmental protection on the basis of recycling, resource saving and energy saving

3. Scope

1) Suppliers

Direct suppliers who supply the materials of the below 2) to Taiyo.

Indirect suppliers shall be given the instruction by the direct suppliers.

In case of a sales company, it should instruct its manufacturing suppliers.

2) Materials

All the materials which are consumed for product manufacturing by Taiyo.

a) Component, raw materials, auxiliary materials, and commercially available parts including purchased goods, subcontracted goods

b) Accessories of the products

c) Packing materials

d) Instruction manual

4. Implementation plan (supplier's commitment)

Taiyo requires suppliers to practice environmental protection activities and to supply less-environmental impact products as follows. For details, please see the appendix 1 and 2.

1) Environmental protection activities

a) ISO 14001 certification has been obtained or under preparation.

b) Green procurement has been practiced or under preparation.

c) The followings are done even ISO 14001 has not been obtained.

- The environmental policy of your company is set and the continuing effort to

improve the environment and comply with the law is pledged.

- The environmental goal is oriented and the organization with responsible person for it is set up.
- Emergency response system including assurance of traceability is established.
- ISO 9001 certification is obtained, or the quality of products can be guaranteed even ISO 9001 has not been obtained.

2) Materials with less environmental impact

a) Reduce the environmental burden

- Check if the material have decreased size and weight, longer product life, resource saving, energy saving.
- Check if the material is intended to be reduced, reused and recycled.

b) Reduce the environmental impact substance

- Check if the material doesn't contain prohibited substance settled by Taiyo
- Check if a chemical content data of managed substance settled by Taiyo is made.
- Check if the restriction substance stipulated by law is properly controlled.

3. Restriction Substances Management Rank Guidelines

1. Objective

The purpose of this guideline is to improve environmental quality of the products produced and sold by Taiyo by clarifying the hazardous chemical substances if contained in the components, materials, etc of Taiyo products, with intent to carry out the Taiyo environmental policy and reduce the environmental impact substance.

2. Definition of Management Rank

The terms used in the guidelines are based on the following definitions in 3 ranks:

1) Level 1 Prohibited Substances

- Substances whose use is prohibited by existing regulations in Japan.
- Substances whose use is independently prohibited by Taiyo (incl. regulations at home and overseas)
- Substances whose intentional use is prohibited by law must be promptly

abolished for use. In the case where unremovable substance is expected to be included as impurities without intention, an allowable value shall comply with its threshold.

2) Level 2 Prohibited Substances

- Substances other than Level 1 but becoming gradually prohibited with target dates set by a treaty or regulation.
- Substances whose use is independently prohibited by Taiyo (incl. regulations at home and overseas)
- Substances whose intentional use is prohibited by law shall be banned for use within the target dates and range. In the case where unremovable substance is expected to be included as impurities without intention, an allowable value shall comply with its threshold.

3) Managed Substances

- Intentional use of these substances is not restricted, but appropriate recycling or disposal methods must be considered.
- Actual intentional use of substance whose the content exceeds the regulated value must be recorded.(parts and q'ty)

3. Reference

The followings are main domestic and foreign laws we used when selecting prohibited substances.

(Laws in Japan)

- Industrial Safety and Health Law
- Existing and New Chemical Substances Law
- Toxic Substance and Violent Poison Control Law.
- Water Pollution Control Law
- Law Concerning Special Measures against Dioxins
- Law Concerning the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
- Law Concerning the Promotion of the Measures to Cope with Global Warming
- Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management
- Endocrine Disruptor

(Laws in foreign countries)

- EU Toxic Substances Control Act
- European Parliament & Council Directive on Packaging and Packaging Waste
- Germany: EU Chemicals Legislation
- Germany: Consumer Goods Ordinance
- Germany: Dioxin Ordinance
- Denmark: Formalin Act
- The Netherlands, Denmark: Chemical Substances Regulations
- EU: Restriction of the use of certain hazardous substances in electrical and electric equipment(RoHS)

4. Restriction substance

Attachment 4 shows the regulated substances specified by Taiyo.

5. Changes of restriction substance

Restriction substances may be revised according to legal revision at home and overseas.

4. Contact by division

Hydraulic 1 Group	: Kitaura	Hydraulic 2 Group	: Gotoh
Pneumatics Group	: Tanaka	SE Group	: Yamamoto
System Group	: Kamide	R&D Div	: Fujikawa
Purchasing Div.	: Nobu		:

5. Supplementary Clause

This guideline shall be revised when required due to changes in social situations.

Revision record

Version	Date	Details
Ver. 1.0	Aug 20, 2005	Enacted
Ver. 2.0	Dec 25, 2008	Environmental Policy ,Contact
Ver. 2.1	Jan 20, 2011	Contact

**<Attachment 1>
Guideline for Environmental Quality**

Category	Item	Requirement
1 Environmental Policy	1 Objective and target	Acknowledge Taiyo's restriction substances and set a definite objective and target. (Ex. Abolition or reduction)
	2 Responsibility and authority	Make clear the responsibility, authority and role of environmental quality.
	3 Organization	Implement abolition or reduction of Taiyo's restriction substance and maintain the environmental quality of product.
2 Information System	- Information Control	Establish the system which can widely and promptly distribute the latest information on the Taiyo's restriction substance to all the employees in a compar
3 Standard Conformity	- Standard Conformity	Maintain and conform to the Taiyo's standard and specification.
4 New Product, Modified Product	1 Analyzing data or ingredients list	Get the approval to use component/part Taiyo regulates with analysis data or ingredients list. - Product, semi-finished product, assembly: Ingredient Sheet by par (ex) Metal products, polymer products(resin, rubber etc) - Surface treatment: Analysis Sheet of Content (ex) Metal coating, painting - Raw material: Mill Sheet (ex) Materials for metal, nonferrous metal and polymer - Others: MSDS etc (ex) Sub materials (ex. grease, ink, plastic bag, tape, paper, etc.)
5 Supplier Control	1 Outsourcing	- Check if an outsourced supplier fully controls Taiyo's instruction.
	2 Supplier selection	- Select a supplier who has control system and can fully control Taiyo's restriction substance.
	3 Periodic survey	- Monitor suppliers once or more a year if they maintain the control system.
6 Nonconforming Products	1 Notice to Taiyo	- In the case of doubtful delivery of nonconforming products to Taiyo, provide Taiyo with the notice at once. (Environmental failure report)
	2 Prevention measure	- Take steps to prevent the contamination by nonconforming products in all the processes (ex. warehouse, manufacturing process, facilities) - Establish the system which can confirm the Taiyo regulated substance is not included in the delivery. .
7 Supplier Selection (Supplier ↔ Your company)	1 New supplier	- Select a new supplier who has control system and can fully control Taiyo's restriction substance.
	2 Specification	- Specify Taiyo's restriction substance in drawings and specification when ordering.
		- Confirm that Taiyo's restriction substances are not included in material and parts by analysis data and ingredient sheet..
8 Incoming Inspection (Supplier ↔ Your company)	1 Standard	- Establish a clear inspection standards to prove the delivered products don't include Taiyo's regulated substance (incl. recycled product inspection)
	2 Inspection	- Inspect the delivered products by lot. (with clear definition of "lot")
		- Check if the delivered products from suppliers are conforming products.
3 Record	- Maintain an inspection record for three years.	
9 Prevention	Prevention system of contamination, leakage, anti-pollution	- Establish the system to prevent Taiyo regulated substances contaminated through inspection to delivery.(also check facility, die casting and jig)
10 Inspection before Delivery	1 System to prevent prohibited substances	- Establish the system to confirm Taiyo restriction substances are not included in the product.
	2 Report on prohibited substance	- If nonconforming product is found before delivery, report the details to a person in charge of quality control and take a proper step for it.
	3 Delivery record	- Maintain a delivery inspection record for three years.
	4 Label	- Put a label on the package by lot to indicate that the products are conformed to Taiyo's requirement.
11 Inventory Control	Sort-out of nonconforming product	- Sort out nonconforming product which contain Taiyo restriction substances. Establish the system not to deliver nonconforming product.
12 Traceability by lot	1 Lot number	- Use Taiyo order number as a lot number for the easier traceability by lot.
	2 Lot number label	- Label with Taiyo's order number on the product (if impossible, on the packing/lot is OK)
	3 Lot number control	- Record raw material, process and lot of a product by Taiyo order number. (for prompt traceability)
	4 Shipping record	- Record the type, delivery date, quantity and order number when shipping a product.
- Give a clear indication of the used raw material by lot.		
13 Maintaining of data and record	1 Period	- Maintain the above required record for three years. (Analysis data for 3 yrs after the old edition)
	2 Record control	- Submit the analysis data or record to Taiyo without delay if required.

<Attachment 2>

Survey of Chemical Substance Contained in Parts/Materials

Parts/Material	Item	Target parts(material)/process	Possibility of substnace contained	Tools	Point	Remarks
Metal	Metal material/cutting, press work, screw, spring, die casting, lost wax, forging etc	Metal material (by material)	Lead (A2011, BC6 etc.) Cd (copper alloy etc.)	·MIL by material (not needed if provided material) ·Nonuse Certification ·Not use/purchase uncertain materials	·Use a MIL seat.	·Design change to be
		Surface treatment (Plating, painting, etc)	Sexivalent chrome(Zn chrome plating etc.)	·Content analysis ·Nonuse Certification		
Resin	Resin material Resin molding Resin finishing	Resin material (by grade and color)	Cd (colorant, stabilizer, pigments etc.) Lead (stabilizer, pigments, dyestuff, etc.)	·Ingredients label by material (incl. recycling) ·Nonuse Certification	·Main ingredients label by material ·Main ingredient name in remarks ·Carful survey with parts mfgd at uncertain site, ex. recycling goods)	"Main ingredients lable of Resin": Same manufacturer, grade, color, outsource cocloring will be included in the same ingredient.
		Contamination in process	Cd (colorant, stabilizer, pigments etc.)			
		Insert parts	Lead (A2011, BC6 etc.)	·MIL seat by material ·Nonuse Certification	·Same as metal section	
			Sexivalent chrome(Zn chrome plating etc.)	·Content analysis ·Nonuse Certification		
Rubber	Rubber material Rubber molding Rubber processing	Rubber material (by compound No)	Cd (colorant, stabilizer, pigments, etc.) Lead (stabilizer, pigments, dyestuff, etc.) Others	·Ingredients label by material (incl. recycling) ·Nonuse Certification	·Main ingredients label by material ·Main ingredient name in remarks ·Carful survey with parts mfgd at uncertain site, ex. recycling goods)	·Taiyo's consent is needed beforehand if compound % etc is changed.
		Contamination in process	Cd (colorant, stabilizer, pigments, etc.)			
		Insert parts	Lead (A2011, BC6, etc.)	·MIL seat by material ·Nonuse Certification	·Same as metal section	
			Sexivalent chrome(Zn chrome plating etc.)	·Content analysis ·Nonuse Certification		
Product Semi-product Assembly	Assembly, electric parts, electrical equipment, pressure gauge, guide, switch, etc	(whole parts) substrate, solder, lead wire, brazing, surface treatment, cable, paints, grease, ink, label, adhesive, screw etc	Cd (colorant, stabilizer, pigments, etc.) Lead (alu, copper, solder, and stabilizer, etc.) Sexivalent chrome(Zn chrome plating etc.) PVC (electric wire coating, rubber, etc.)	·Nonuse Certification	·Each part and sub-material to be surveyd and proved with nonuse certification as an assembly. ·Apply the same requirement for metal, resin, rubber, sub material.	
Sub material	(Indirect component) Label, cardboard, ink for stamp, wrapping bag, protection tape, grease, oil, cushion, twist tie, tape, adhesive.	Material and product	Cd (colorant, stabilizer, pigments, etc.) Lead (alu, copper, solder, stabilizer, etc.) Sexivalent chrome(Zn chrome plating etc.) PVC (electric wire coating, rubber, etc.)	·MSDS ·Ingredients lable ·Nonuse Certification ·Others	·If unconfirmed by MSDS, the substance may be asked for another surveyey.	

- Note) 1) Components, such as cutting oil, cleaning liquid, mold lubricants, which are assumed to be impurities in the process should be reduced.
2) Packaging materials etc. used for delivery to Taiyo are excluded.
3) Materials which are not specified in a drawing should be prohibited to use. If there are, apply for the design change and get the approval.

<Attachment 4>
Restriction Substances

0.1wt% = 1000ppm

Prohibited level 1: Intentional use is prohibited and an allowable value for non-intentional use shall comply with its threshold

Prohibited level 2: Aiming at abolition, intentional use is prohibited and an allowable value for non-intentional use shall comply with its threshold

Managed substance: Actual use should be recorded for the contents exceeds the regulated value and intentional use.

No.	Category	Substance	Application	Taiyo's criteria			Japanese laws												Overseas laws		JIG (Note 1)	
				Prohibited Level 1	Prohibited Level 2	Managed substance	Industrial Safety and Health Law	New Chemical Substances Law	Toxic and Violent Poison Law.	Water Pollution Control Law	Law against Dioxins	Law of the Ozone Layer Protection	Waste Disposal & Cleansing Law	BASEL convention	PRTR	Endocrine Disruptor	RoHS	Other than RoHS	Class A (Note 2)	Class B (Note 3)		
				To be banned at once	To be banned by the fixed date	Actual use & Q'ty should be recorded																
1	Metals & its Compounds	Cadmium and its compounds	Pigments, battery, electric material	○ Packing (*4)	○75ppm (*5)					○				○	○	○		○	○	○		
2	Metals & its Compounds	Hexavalent chromium compounds	Zn, Chromatin, plate, excl. metallic chrome	○ Packing (*4)	○1000ppm (*5)					○				○	○	○		○	○	○		
3	Metals & its Compounds	Lead and its compounds	Solder, paints, metallic additive	○ Packing (*4)	○1000ppm (*5)					○				○	○	○		○	○	○		
4	Metals & its Compounds	Mercury and its compounds	Fluorescent material, electric contact material, coloring pigments	○ Packing (*4)	○1000ppm (*5)				○	○				○	○	○		○	○	○		
5	Metals & its Compounds	Bis(tributyltin) oxide (TBTO)	Preservative, fungicidal paint, ship bottom paint	○0.1wt%							○						○		○	○		
6	Metals & its Compounds	Tributyltin(TBT) series	Preservative, fungicidal paint, ship bottom paint	○0.1wt%							○						○		○	○		
7	Metals & its Compounds	Triphenyltin(TPT) series	Preservative, fungicidal paint, ship bottom paint	○0.1wt%							○						○		○	○		
8	Metals & its Compounds	Antimony and its compounds	Pigments, paints, catalyst, solder,													○	○				○	
9	Metals & its Compounds	Arsenic and its compounds	Paints, coating,, dyestuff, fire retardant							○	○			○	○	○				○	○	
10	Metals & its Compounds	Inorganic cyanide									○	○		○	○	○						
11	Metals & its Compounds	Beryllium and its compounds	Ceramics, catalyst								○					○	○				○	
12	Metals & its Compounds	Bismuth and its compounds	Glass, solder, alloy																		○	
13	Metals & its Compounds	Nickel and its compounds	Pigments, paints, plating, electrode													○					○	
14	Metals & its Compounds	Selenium and its compounds	Pigments, paints, semiconductor material							○	○			○	○	○					○	
15	Brominated Flame Retardants	PBBs	Fire retardant for plastic for plastic and PWB etc.		○0.1wt% (*5)											○		○	○	○	○	

