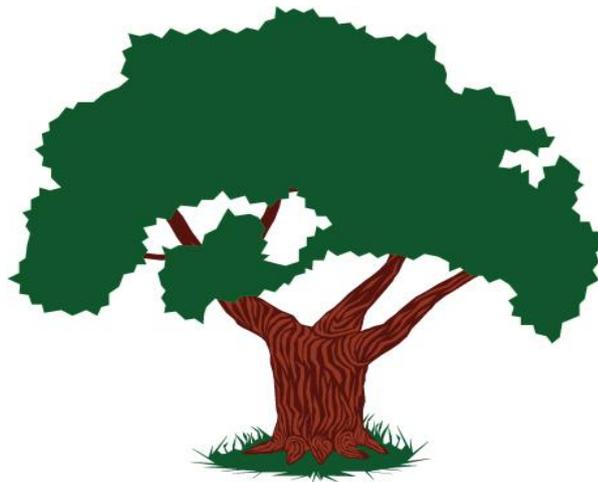


**OTH approach to green procurement**



# **Green Procurement Guideline**

**Version 11**

**ORBRAY (THAILAND) CO., LTD.**

## Introduction to OTH approach to green procurement

The 21st century is often referred to as the 'Century of the Environment' as many companies including Orbray (Thailand) Co., Ltd. have agreed to implement environmental preservation activities for the sake of future generations.

Our company is committed to the slogan "Sustainable development" and we place great importance on certification; we obtained our ISO14001 certificate in December 2000.

We give careful consideration to providing best-in-class product quality at reasonable prices, always taking into account the environmental aspect.

This guideline explains the basic concept of OTH's green procurement principles in order that our company and our suppliers can achieve continual improvement.

Should there be any change in circumstances or any change in applicable legal or other requirements, the Green Procurement Guideline will be revised, and suppliers are expected to submit the environmental documents.

We look forward to your cooperation as our green partners.

### Green procurement policy

In recognition of environmental conservation as one of the most important missions given to mankind and we have strived to be an environmentally friendly company.

Although the control of our internal system is important, we also recognize that our suppliers have an important role in minimizing the environmental burden throughout our product life cycle.

Orbray (Thailand) Co., Ltd. commits to procure the "Environmentally Preferable Products" by,

- Procure from suppliers who proactively promote the environmental protection.
- Procure materials and products that are environmental friendly and do not contain harmful substances.

OTH intends to fulfil the customer environmental requirement to gain their great satisfaction.

Mr. Yaguchi Yosuke  
Chief Operating Officer  
Date: 09-Jan-2023

## OTH Green procurement guideline

### 1. Purpose

The environmental policy of Orbray (Thailand) Co., Ltd. (OTH) commits to providing best-in-class products that are environmentally friendly and fully comply with international requirements for controlled chemical substances and environmental-related systems.

This document is established for green procurement activities in order to effectively minimize the use of environmental-related hazardous substances in materials/supplies based on the OTH environmental policy in terms of sustainable development.

This is also a guideline for procurement activities that provides criteria for purchasing components with the intention of selecting only those products that have low environmental impact and doing business with only those suppliers that have implemented environmental preservation activities.

### 2. Scope of application

This guideline is applicable to the suppliers that OTH are dealing with, who provide products e.g., parts, supplies, chemical products and packing materials to OTH.

### 3. Terms and definitions

- **RoHS:** Restriction of the use of certain hazardous substances in electrical and electronics equipment. (EU) Directive 2002/95/EC, Directive 2011/65/EU and Directive 2015/863
- **REACH:** Registration, Evaluation, Authorisation and Restriction of Chemicals (Regulation (EC) No 1272/2008)

### 4. OTH Environmental preservation activities

#### 4.1 Environmental principle

OTH applies unique, clean technology to prevent pollution and protect the global environment.

The activities are intended to enhance the overall performance of environment preservation and contribute to human health.

#### 4.2 Environmental activities

OTH has established an environmental objective and target consistent with its environmental policy, including the commitment to prevent pollution and strive for continual improvement.

Our activities are performed in a manner that respects nature, and we strive to protect and improve the global environment. The environmental objective and target is subjected to periodic review at which time all technological options and business requirements are taken into account.

In order to improve the effectiveness of our environmental performance, OTH has implemented an environmental management system (EMS) and obtained ISO14001 certification in the year 2000.

OTH's environmental policy is also made available to the public.

## 5. Basic concept of green procurement

OTH intends to minimize the hazardous substance content in our products, which requires the kind cooperation of our green partners. The following is a list of activities to help us reach our green procurement goal.

### 1) Procurement of components from suppliers who implement environmental preservation activities

Basically, our suppliers are required to conduct activities that demonstrate their commitment to environmental preservation.

OTH will consider whether or not a supplier has obtained ISO14001 certification by a certified body (CB), ensuring the effective implementation of an environmental management system. Suppliers certified by a CB will be given high priority during the procurement process.

### 2) Procurement of components, services and packing materials with low environmental impact

For all product components including packing materials used for the product or in a product process. OTH intends to use only those components that have low environmental impact or those that are specifically designed for the environment (*ecodesign*).

## 6. OTH Supplier requirements

OTH expects suppliers to cooperate by providing the environmental documents to us.

### 1) RoHS report, RoHS certificate

A document assuring RoHS compliance of the product provided to OTH.

### 2) Safety Data Sheet (SDS), Material composition list

A document showing the composition of materials and chemical products

### 3) Other documents depending on each product type

They are defined based on the requirement of each product type.

OTH is very proud to have such great support from all our suppliers.

Our green procurement activities contribute to environmental awareness and minimize the impact on the environment. Your cooperation and support makes it possible for us to provide the global market with environmentally friendly products of unsurpassed quality.

If the base raw material of a component or a process condition is changed, or if a chemical substance used in a component is changed, the supplier is required to submit the "Change application from supplier" so OTH could consider whether it is necessary for the supplier to resubmit the environmental documents again.

Thank you for your cooperation.

OTH chemical standard (1/2)		
Substance name	CAS No .	Standard / Threshold
<b>Cadmium and compounds</b>		
CADMIUM	7440-43-9	Material/Parts: 100 ppm
CADMIUM CHLORIDE	10108-64-2	Packaging/Packaging inks: Prohibited
CADMIUM CHROMATE	14312-00-6	
CADMIUM OXIDE	1306-19-0	* Exemption refers to RoHS directive.
CADMIUM SULFIDE	1306-23-6	
CADMIUM SULPHATE	10124-36-4	
<b>Hexavalent chromium and compound</b>		
CHROMIC ACID (CrO3)	1333-82-0	Material/Parts: 1,000 ppm
CHROMIUM VI (Cr6+)	18540-29-9	Packaging/Packaging inks: Prohibited
LEAD SULFOCHROMATE YELLOW; C.I. PIGMENT YELLOW 34	1344-37-2	
LEAD CHROMATE PIGMENTS	12656-85-8	* Exemption refers to RoHS directive.
SODIUM DICHROMATE	10588-01-9	
SODIUM DICHROMATE DIHYDRATE	7789-12-0	
<b>Mercury and compounds</b>		
MERCURIPHENYL NITRATE	55-68-5	Material/Parts: 1,000 ppm
MERCUROUS CHLORIDE	10112-91-1	Packaging/Packaging inks: Prohibited
MERCURY	7439-97-6	
MERCURY DI(ACETATE)	1600-27-7	* Exemption refers to RoHS directive.
MERCURY DICHLORIDE	7487-94-7	
MERCURY DINITRATE	10045-94-0	
MERCURY OXIDE	21908-53-2	
MERCURY(II) SULFATE	7783-35-9	
<b>Lead and compounds</b>		
LEAD	7439-92-1	Material/Parts: 1,000 ppm
LEAD (II) SULFATE	7446-14-2	Packaging/Packaging inks: Prohibited
LEAD ACETATE	301-04-2	
LEAD ARSENITE	10031-13-7	* Exemption refers to RoHS directive.
LEAD AZIDE	13424-46-9	
LEAD CARBONATE	598-63-0	
LEAD CHROMATE (VI)	7758-97-6	
LEAD HEXAFLUOROSILICATE (1:1)	25808-74-6	
LEAD METHANESULFONATE	17570-76-2	
LEAD MONOXIDE	1317-36-8	
LEAD NAPHTHENATE	61790-14-5	
LEAD NITRATE	10099-74-8	
LEAD PHOSPHATE	7446-27-7	
LEAD STYPHNATE	15245-44-0	
LEAD SUB-CARBONATE	1319-46-6	
LEAD SULFATE	15739-80-7	
LEAD TETRAETHYL	78-00-2	
LEAD TETRAMETHYL	75-74-1	

OTH chemical standard (2/2)		
Substance name	CAS No .	Standard / Threshold
<b>Polybrominated Biphenyls (PBBs) &amp; Polybrominated Diphenyl ethers (PBDEs)</b>		
2,2',4,4',5,5'-HEXABROMOBIPHENYL (PBB)	59080-40-9	All applications: 1,000 ppm  * Exemption refers to RoHS directive.
2-BROMOBIPHENYL (PBB)	2052-07-5	
3-BROMOBIPHENYL (PBB)	2113-57-7	
4-BROMOBIPHENYL (PBB)	92-66-0	
DECABROMOBIPHENYL (PBB)	13654-09-6	
HEXABROMOBIPHENYL (PBB)	36355-01-8	
P,P'-DIBROMOBIPHENYL (PBB)	92-86-4	
POLYBROMINATED BIPHENYL MIXTURE (PBB)	67774-32-7	
POLYBROMINATED BIPHENYLS (PBB)	59536-65-1	
TETRABROMOBIPHENYL (PBB)	40088-45-7	
4-BROMODIPHENYL ETHER (PBDE)	101-55-3	
DECABROMODIPHENYL ETHER (PBDE)	1163-19-5	
DIBROMODIPHENYL ETHER (PBDE)	2050-47-7	
HEPTABROMODIPHENYL ETHER (PBDE)	68928-80-3	
HEXABROMODIPHENYL ETHER (PBDE)	36483-60-0	
NONABROMODIPHENYL ETHER (PBDE)	63936-56-1	
OCTABROMODIPHENYL ETHER (PBDE)	32536-52-0	
PENTABROMODIPHENYL ETHER (PBDE)	32534-81-9	
TETRABROMODIPHENYL ETHER (PBDE)	40088-47-9	
TRIBROMODIPHENYL ETHER (PBDE)	49690-94-0	
<b>Phthalates</b>		
Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	All applications: 1,000 ppm  * Exemption refers to RoHS directive.
Benzyl butyl phthalate (BBP)	85-68-7	
Dibutyl phthalate (DBP)	84-74-2	
Diisobutyl phthalate (DIBP)	84-69-5	
<b>REACH Substances of Very High Concern (SVHC)</b>		
Refer to Candidate List of substances of very high concern for Authorisation <a href="https://echa.europa.eu/candidate-list-table">https://echa.europa.eu/candidate-list-table</a>		All applications: 1,000 ppm

## Changes history

No.	Changes detail	Edition date
<b>1. Version 1</b>	Established the system of green procurement at NPT and first issue of green procurement guideline.	<b>9-Feb-2007</b>
<b>2. Version 2</b>	<p>2.1 Arranged chemical substance list to be controlled by adjusting substance level to be in accordance with Namiki group includes,</p> <ul style="list-style-type: none"> <li>- Polyvinyl Chloride (PVC) from level 2 to level 1</li> <li>- Tributyl Tin Oxide(TBTO), Tributyl Tins (TBTs) &amp; Triphenyl Tins (TPTs), Polychlorinated Naphthalenes (Cl=&gt;3), Asbestos and Radioactive Substances from level 3 to level 1</li> <li>- Bismuth and Bismuth Compounds, Nickel and Nickel Compounds, Selenium and selenium Compounds and Magnesium from level 3 to level 2</li> </ul> <p>2.2 Changed the revision of environmental questionnaire concerning chemical substances to add column of CAS No., Abolition plan and Abolition schedule.</p>	<b>15-Feb-2007</b>
<b>3. Version 3</b>	<p>3.1 Added the mention of not to use the recycled resin in molding parts with the exemption.</p> <p>3.2 Added details for the supplier to stamp company seal on the questionnaire.</p>	<b>26-Oct-2007</b>
<b>4. Version 4</b>	<p>4.1 Arranged chemical substance list to be controlled by adding e.g. Aliphatic CHCs, Benzene, Carcinogens, mutagens&amp;reproductive toxins Cobalt, Endangered species of flora and fauna, Isocyanates, Nonyl Phenols &amp; Nonylphenol Ethoxylates, Perfluorooctane sulfonates (PFOSs) and Substances that may cause skin sensitization</p>	<b>27-Feb-2008</b>
<b>5. Version 5</b>	<p>5.1 Revised the NPT chemical standard.</p> <p>5.2 Added new substance; chlorine compound, PFOAs, REACH SVHC.</p> <p>5.3 Changed the revision of environmental questionnaire concerning chemical substances and the green procurement survey.</p>	<b>14-Feb-2009</b>
<b>6. Version 6</b>	<p>6.1 Updated the green procurement policy to approve by COO, NPT's top management</p>	<b>9-Mar-2010</b>
<b>7. Version 7</b>	<p>7.1 Revised the NPT chemical standard by changing the standards of Organic tins compound, Aliphatic CHCs, Asbestos and Azo colorant &amp; pigment, Formaldehyde, Arsenic and compounds, Nickel and compounds, PFOSs</p> <p>7.2 Changed the revision of environmental questionnaire concerning chemical substances</p>	<b>28-May-2012</b>
<b>8. Version 8</b>	<p>8.1 Changed NPT chemical substance standard to refer EU RoHS directives and REACH regulation.</p>	<b>5-Oct-2018</b>
<b>9. Version 9</b>	<p>9.1 Changed threshold level of REACH SVHC from prohibit to 1000 ppm to be in accordance with Regulation (EC) No 1907/2006.</p>	<b>1-Mar-2019</b>
<b>10. Version 10</b>	<p>10.1 Updated Green procurement policy.</p>	<b>23-Sep-2021</b>
<b>11. Version 11</b>	<p>11.1 Changed company name to Orbray (Thailand) Co., Ltd. or OTH</p>	<b>09-Jan-2023</b>

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