

## Okamoto Glass Group Green Procurement Standard

Okamoto Glass Group ("Okamoto" hereafter) shall manage Substances of environmental concern in accordance with the regulated substances, Act on the Promotion of Procurement of Eco-Friendly Goods and Services (Green Purchasing Law) and customer's green procurement standards etc., to reduce environmental impact.

- (1) Control of substances that are contained or may be contaminated in Okamoto products.
- (2) Control of substances that may adhere in Okamoto products.
- (3) Control of substances that are delivered to customers as packaging materials of Okamoto products, etc.

### 1. Scope

All materials delivered to Okamoto.

Materials ; Raw materials, parts, and packaging materials that comprise Okamoto products. Materials used in the manufacturing process of the supplier or Okamoto and in direct contact with the products.

; Equipment parts and consumables materials

### 2. Classification

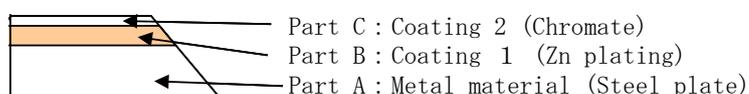
In general, all chemical substances on the market are referred to as Substances of environmental concern, but in this standard, "Substances of environmental concern" refer to substances regulated by the law and regulations in Japan or in the country where the end product is consumed, or by customer requirements.

Substances of environmental concern are broadly classified into three categories; Prohibited substances, Restricted substances and Controlled substances according to regulation or hazard.

Category	Substance
Prohibited substances	Substances whose intentional use or inclusion is prohibited according to laws and regulations in Japan or in the country where the end product is consumed, or customer requirements.
Unconditionally prohibited substances	Substances whose intentional use or inclusion is prohibited regardless of conditions or parts.
Conditionally prohibited substances Level 1	Substances whose intentional use or inclusion is prohibited under certain conditions or at certain parts, but for which an upper limit (threshold) is specified for inclusion as impurities.
Conditionally prohibited substances Level 2	Substances that are not designated as Level 1 among the substances whose intentional use or inclusion is prohibited under certain conditions or at certain parts.
Restricted substances	Substances that are obligated to be totally eliminated within a certain period of time according to the laws and regulations of the country where the final product is consumed or according to customer requirements.
Controlled substances	Substances for which content control is obligated by laws and regulations in the country of consumption or customer requirements in Japan or the country of end product consumption.

※ Parts : Homogeneous material with properties that cannot be further separated.

Example ; Zn plating



※ Impurity : Substances that cannot be completely removed or cannot be removed technically in the refining process of substances in their natural state, or substances generated in the synthesis process that cannot be completely removed with the current technical capabilities.

### 3. Classification Table of Substances of environmental concern

#### Prohibited substances

##### Unconditionally prohibited substances

No.	Substance (Group)
A001	Asbestos
A002	PCBs (Polychlorinated biphenyls)
A003	Polychlorinated naphthalene (3 or more chlorine atoms)
A004	Radioactive materials
A005	SCCP (Short-chain chlorinated paraffins) (C10-13)
A006	Tri-substituted organostannic compounds
A008	Ozone-depleting substances (Substances regulated by the Montreal Protocol)
A009	PFOS (Perfluorooctane sulfonic acid and its salts)
A010	Class I Specified Chemical Substances under the Act on the Regulation of Manufacture and Evaluation of Chemical Substances, etc.
A011	Substances prohibited by the Industrial Safety and Health Act
A012	Dimethyl fumarate

##### Conditionally prohibited substances Level 1

No.	Substance (Group)
B001	Cadmium and its compounds
B002	Lead and its compounds
B003	Mercury and its compounds
B004	Hexavalent chromium and its compounds
B005	PBB (Polybrominated biphenyls)
B006	PBDE (Polybrominated diphenyl ethers)

##### Conditionally prohibited substances Level 2

No.	Substance (Group)
B007	Azo compounds

#### Restricted substances

No substance at present

#### Controlled substances

No.	Substance (Group)
D001	Poisonous and Deleterious Substances Control Act Specified poisonous substance
D002	ESIS PBT (European Chemical Substances Information System)
D003	EU CLP Regulation ANNEX VI
D004	EU REACH Regulation ANNEX XVII
D005	EU REACH Regulation Candidate Substances for Authorization (SVHC)
D006	GADSL
D007	JIG 101
D008	JAMP controlled substances
D009	Polyvinyl chloride (PVC)
D010	Phthalates

D001 to D010 shall be substances excluding prohibited and restricted substances.

#### 4. Criteria of Substances of environmental concern

The control criteria shall be as follows;

- (1) Restricted substances, unconditionally prohibited substances  
There are no exemptions at all, and their use is prohibited.
- (2) Conditionally prohibited substances

B001 Cadmium and its compounds	
Threshold	100ppm
Analysis method	ICP, AAS etc.
Exemptions	<a href="#">Refer to 2011/534/EU</a> However, materials related to packaging materials shall be as follows; Cadmium, lead, mercury, and hexavalent chromium total less than 100 ppm.

B002 Lead and its compounds	
Threshold	1,000ppm 300ppm (resin, paint, ink, pigment only)
Analysis method	ICP, AAS etc.
Exemptions	<a href="#">Refer to 2011/534/EU</a> However, materials related to packaging materials shall be as follows; Cadmium, lead, mercury, and hexavalent chromium total less than 100 ppm.

B003 Mercury and its compounds	
Threshold	1,000ppm
Analysis method	ICP, AAS etc.
Exemptions	<a href="#">Refer to 2011/534/EU</a> However, materials related to packaging materials shall be as follows; Cadmium, lead, mercury, and hexavalent chromium total less than 100 ppm.

B004 Hexavalent chromium and its compounds	
Threshold	1,000ppm
Analysis method	Diphenylcarbazide method, etc.
Exemptions	<a href="#">Refer to 2011/534/EU</a> However, materials related to packaging materials shall be as follows; Cadmium, lead, mercury, and hexavalent chromium total less than 100 ppm.

B005 PBB (Polybrominated biphenyls)	
Threshold	1,000ppm
Analysis method	GC/MS etc.
Exemptions	None

B006 PBDE (Polybrominated diphenyl ethers)	
Threshold	1,000ppm
Analysis method	GC/MS etc.
Exemptions	None

B007 Azo compounds																																															
Threshold	None																																														
Analysis method	GC/MS etc.																																														
Prohibited parts	Parts that may come into direct and prolonged contact with the human body.																																														
Prohibited condition	Azo compounds that form specified amines																																														
<p>Specified amines are the following substances;</p> <table> <thead> <tr> <th>[CAS No.]</th> <th>[ Substance name ]</th> </tr> </thead> <tbody> <tr><td>92-67-1</td><td>4-Aminobiphenyl</td></tr> <tr><td>92-87-5</td><td>Benzidine</td></tr> <tr><td>95-69-2</td><td>4-Chloro-2-methylaniline</td></tr> <tr><td>91-59-8</td><td>2-Naphthylamine</td></tr> <tr><td>97-56-3</td><td>ortho-Aminoazotoluene</td></tr> <tr><td>99-55-8</td><td>5-Nitro-ortho-toluidine</td></tr> <tr><td>106-47-8</td><td>p-Chloroaniline</td></tr> <tr><td>615-05-4</td><td>2,4-Diaminoanisole</td></tr> <tr><td>101-77-9</td><td>4,4'-Methyldianiline</td></tr> <tr><td>91-94-1</td><td>3,3'-Dichlorobenzidine</td></tr> <tr><td>119-90-4</td><td>3,3'-Dimethoxybenzidine</td></tr> <tr><td>119-93-7</td><td>3,3'-Dimethylbenzidine</td></tr> <tr><td>838-88-0</td><td>4,4'-Diamino-3,3'-dimethyldiphenylmethane</td></tr> <tr><td>120-71-8</td><td>6-Methoxy-m-toluidine</td></tr> <tr><td>101-14-4</td><td>4,4'-Methylene-bis(2-chloroaniline)</td></tr> <tr><td>101-80-4</td><td>4,4'-Oxydianiline</td></tr> <tr><td>139-65-1</td><td>4,4'-Dianimodiphenylsulfide</td></tr> <tr><td>95-53-4</td><td>o-Toluidine</td></tr> <tr><td>95-80-7</td><td>4-Methyl-m-phenylenediamine</td></tr> <tr><td>137-17-7</td><td>2,4,5-Trimethylaniline</td></tr> <tr><td>90-04-0</td><td>o-Anisidine</td></tr> <tr><td>60-09-3</td><td>4-Aminoazobenzene</td></tr> </tbody> </table>		[CAS No.]	[ Substance name ]	92-67-1	4-Aminobiphenyl	92-87-5	Benzidine	95-69-2	4-Chloro-2-methylaniline	91-59-8	2-Naphthylamine	97-56-3	ortho-Aminoazotoluene	99-55-8	5-Nitro-ortho-toluidine	106-47-8	p-Chloroaniline	615-05-4	2,4-Diaminoanisole	101-77-9	4,4'-Methyldianiline	91-94-1	3,3'-Dichlorobenzidine	119-90-4	3,3'-Dimethoxybenzidine	119-93-7	3,3'-Dimethylbenzidine	838-88-0	4,4'-Diamino-3,3'-dimethyldiphenylmethane	120-71-8	6-Methoxy-m-toluidine	101-14-4	4,4'-Methylene-bis(2-chloroaniline)	101-80-4	4,4'-Oxydianiline	139-65-1	4,4'-Dianimodiphenylsulfide	95-53-4	o-Toluidine	95-80-7	4-Methyl-m-phenylenediamine	137-17-7	2,4,5-Trimethylaniline	90-04-0	o-Anisidine	60-09-3	4-Aminoazobenzene
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- ※ Analysis method  
 ICP : Inductively Coupled Plasma spectrometry  
 AAS : Atomic Absorption Spectroscopy  
 GC/MS : Gas chromatography/mass spectrometry

### (3) Controlled substances

There is no threshold, but substitution shall be considered and reduced to reduce environmental impact as much as possible.

## 5. Management

It is the supplier's responsibility to confirm the Substances of environmental concern and to provide information on their inclusion.

If there are no alternative substance of Substances of environmental concern, please consult with us in advance.

If there are alternative substances of Substances of environmental concern, preference will be given to those with less environmentally hazardous substances.

If Substances of environmental concern are used or contained, please report in advance the names of target materials (materials, consumable materials, etc.) and Substances of environmental concern and their content rates.

(Any format is acceptable, but AIS format is recommended.)

In the procurement and manufacturing process of Substances of environmental concern, please clarify and manage the related documents.

In case of any change in the above classification or concentration, please contact us and consult with us in advance.

Please contact the following department for consultation and questions regarding Substances of environmental concern.

Quality Assurance Dept. and Purchasing Management Sect. at the head office of Okamoto.