

# Green Procurement Guideline

(Revision 2)

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Orbray Co., Ltd.  
Orbray (Thailand) Co., Ltd.

## Introduction

The 21st century is called the age of the environment, and the aggressive efforts of the global environment preservation activities are required to all the companies increasingly.

Orbray Co., Ltd. (hereinafter; Orbray or our company) are promoting the environmental activities in whole the company under the environmental policy.

This guideline has been established to provide our products and services to be considered the environment aspect, and also, to promote the Green Procurement for using parts and materials.

This guideline is the basic idea of Orbray about “Green Procurement” and indicates the basic ideas how Orbray and our suppliers take actions together on environmental improvement from now on continuously.

In accordance with social circumstances and/or regulation change, this guideline may be revised accordingly. For our suppliers, please be understood our environmental activity and thank you very much for your cooperation.

Orbray Co., Ltd.  
Orbray (Thailand) Co., Ltd.

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## 1. Purpose

For the effective effort of deduction the environmental impact substances based on the environmental policy (the environmental activity) of Orbray, this procurement guideline has been prepared and promoted for procurement of parts and materials with fewer environmental impact substances, and also for procurement from suppliers with aggressive efforts in environmental preservation activities (hereinafter; Guideline)

## 2. Scope

This guideline is applied for such products as parts and materials including designing and outsourcings, and also subsidiary materials and packaging materials.

## 3. Terms and definitions

Terms and definitions of this guideline are as follows:

### (1) Product assessment

Throughout its design process, the assessment of the environmental impact of a product must be implemented on such as parts and materials, procurement, production, distribution, use, recycle and disposal steps.

When the design change is necessary, it must be assessed and implemented to reduce the environmental impact.

### (2) The parts and materials constituting the product, etc.

Sub materials, electronic components, machining parts, resin parts, press parts, bonding materials, soldering, glass, fiber core, wires, and other parts and materials including sub material, service parts and packaging, materials which are constituting the products of Orbray manufactured.

### (3) Contain

This is the situation when a substance is intentionally or unintentionally added, immixed or adhered to parts and materials constituting the products. Impurity is also a category of this.

### (4) Impurities

This is the situation when a substance is being contained in a natural materials and cannot be removed at all technically by the refinement process as to be industrial material and being occurred during the process of the synthetic reaction and cannot be removed at all technically.

### (5) Intentionally added (use)

It is added intentionally (used) in the event that continual containing is desired to bring specified characteristics, appearance, quality.

### (6) Homogenous material

One material that is entirely of uniform composition or a material composed of several materials that cannot be disassembled or separated into different materials by mechanical action (unscrewing, cutting, crushing, grinding, etc.).

### (7) RoHS Directive

#### 1) RoHS (2002/95/EC)

Chemical substance control regulation of EU (Enforcement: 1st July, 2006).

The regulation established which should not contain and no use any hazardous substances to the products. 6 substances are designated.

2) RoHS II (2011/65/EU) (EU/2015/863)

Directive EU/2015/863 being replaced Annex II of 2011/65/EU comes to public by the gazette; 4 substances of phthalic acid are added, and they become to totally 10 prohibited substances. (Date: 4/JUN/2015)

(8) REACH Regulation

Chemical substance regulation of the EU (1st June, 2007 in force). Comprehensive management system of chemical substance to register, assess, permit, restrict and control the chemical substance used in a molded, a mixture, and a single part appropriately. Information on harmful chemicals are disclosed, communicated and shared in the supply chain.

(9) Substances of Very High Concern (SVHC)

Those substances which make very high anxiety against person's health and environment such as carcinogenic, toxic substance, persistent, etc.

(10) PBT Substances

PBT (Persistent, Bioaccumulative, Toxic) substances are persistent, highly accumulative, and toxic substances.

(11) Exemption

Substances which are excluded by laws and regulations because there is no substitution (substance, material, technical matter) and no other use and component at this moment

#### 4. Orbray environment preservation activities

##### 4.1 Vision on environment and quality

Our company intends to further develop global businesses that are in harmony with the global environment and that will enable us to pass the bountiful Earth on to coming generations. We also endeavor to offer products of the highest quality to serve the needs of our society, and to raise customer satisfaction to 100%. Ensuring that the high quality of our products is compatible with environmental protection is of utmost importance to future of our business and our planet.

##### 4.2 Environmental activities

We grasp accurately that the above activities, products, and services have an environmental influence, establish the environmental objectives and targets within technological and economical possible scope, review periodically and plan for continuous improvement of the environmental preservation activities and to make an effort to prevent pollution.

On proceeding the environmental activity, we have consolidated in 2018 as Adamant Namiki Precision Jewel Co., Ltd. and have established and announced the environmental policy officially.

In 2023, we integrated Akita Adamant Co., Ltd. and established and announced our environmental policy as Orbray Co., Ltd.

## 5. Orbray green procurement

### 5.1 The concept of green procurement

Planning for the environmental impact reduction in products, Orbray works on the activity by partnership with the clients aiming at symbiosis with nature.

#### (1) Procurement from the suppliers promoting environment preservation activities

Regarding the green procurement, we give priority to the suppliers which promote more the environment preservation activity and which have acquisition of the ISO 14001 certification of external certification bodies, etc. when we purchase.

#### (2) Procurement of the less environmental impact products, sub-materials and packaging materials

We effort to select the less environmental impact goods when we purchase the products, and ant other production relating sub-materials and packaging materials.

### 5.2 Green procurement criteria

Regarding the green procurement, we follow the selection criteria for the suppliers and judge comprehensively in general considering both the supplier environment preservation activity and effect to the environmental impact of purchased products.

For your reference, the further judgement way may be differed among individual site of Orbray, please contact with the purchasing section of the site appropriately and cooperate us.

#### (1) Supplier selection criteria

Regarding the supplier selection, we evaluate quality (Q), cost (C), delivery (D), service (S) and evaluation of the supplier's aggressive effort for environmental preservation activity, and we precede the upper rank suppliers.

Operation procedures of this evaluation criteria are as follows:

- Please fill-in the supplier's questionnaire by yourself and summarize your grading points.
- Please submit the supplier's questionnaire to the purchaser in charge.
- Orbray's evaluated points will be added and evaluated comprehensively as "A", "B", "C" and "D".
- The comprehensive result will be informed you by the purchaser in charge.
- In the case that the comprehensive result becomes "A", "B" and "C", the transaction goes from the priority order of "A", "B" and "C".
- In the case that the comprehensive result becomes "D", its new order comes to stop until any corrective actions would make efforts. In a case, the transaction comes to the end.
- At the cases, the supplier's questionnaire is needed when the name changed or when the supplier is a new comer.

#### (2) Selection criteria on the procured products

When selecting the buying products, we adopt them not only consideration of quality (Q) and cost (C), but also how excellent for the environmental impact reduction.

- There is no substance specified in the environmental impact substance list (Chemical substances management guidelines) or going reduced those substances.
- Being planned to use recycle parts or resources, made an effort to reduce weight and size, and took into consideration product durability improvement than before.
- Taking into consideration of resource saving and energy saving.
- Being considered ease of disassembly, sorting and collecting in design.
- Same as the products, the packaging materials are also considered resource saving, recycling, reducing weight and no or reducing the environmental impact substance.
- Compliance with those chemical laws and regulations in inside and outside Of the country.
- Implementation the products assessment
- Providing or being able to provide environmental information to public related to products.

The total is accumulated a) The item of requisition the environmental ISO, etc. by the outer body (third party) , b) The item of environment preservation activity and c) The item of reduction of environmental impact and adding Orbray's evaluation result with the above accumulated total as follows:

| 《 Score 》                      | 《 Evaluation results 》 |
|--------------------------------|------------------------|
| ISO qualified or more than 101 | A                      |
| 80 ~ 100                       | B                      |
| 50 ~ 79                        | C                      |
| Not more than 49               | D                      |

## 6. Requests to our suppliers

Suppliers are required the following submission considering above.

(1) Survey on the presence and activities of third-party certification

- ISO 14001 qualification
- Eco-Action 21
- Green procurement activities

(2) Content survey of environmental impact substances contained in the products delivered:

To grab the environmental impact material names and volume which are delivered to Orbray, suppliers are required the submission such as the inclusion status reports (Safety Data Sheet, table of ingredient, chemical analysis data, inclusion survey, etc.)

Also, if it was necessary, suppliers are required to submit the status of any environmental impact substances in all the processing lines, as well.

(3) Conclusion of a memorandum of understanding on environmental impact reduction

Also, in case to ensure reduction of the environmental impact in the products delivered to Orbray, the suppliers are required to sign a

memorandum to accept cooperation for surveys (Table-2).

## 7. Regulating environmental impact substances

For the purpose of reduction and control, Orbray has categorized chemical substances into 2 types: “prohibited substance” and “controlled substances” since RoHS Directive issued considering any environmental risk.

Then, Orbray requires the suppliers to prohibit, reduce and control contained substances in the products being delivered to us. Regarding the environmental impact substances, please refer our “Chemical Substances Management Guideline”.

<http://www.orbray.com/>

Details of the environmental impact substance which Orbray specified are decided in conformity to RoHS Directive, REACH regulation, JAMP (Joint Article Management Promotion-consortium) and the customer’s environmental impact substance criteria.

For the detail information of the environmental impact substances in this guideline, please refer to following home pages, and for the detail information about RoHS Directive, REACH regulation, etc. are able to confirm “SME support portal site J-Net21”

- “JAMP : Joint Article Management Promotion-consortium”  
<https://chemsherpa.net/>
- “SME (Small and Medium Enterprise) support site J-Net21”  
<https://j-net21.smrj.go.jp/development/chemical/index.html>

### (1) “Prohibited substances”

The chemical substances which are regulated by the overseas “RoHS Directive And REACH regulation, etc.” and the domestic typical laws, which are severely influenced against human health or ecosystem “SVHC or Substances of Very High Concern”, and which are prohibited to use by Orbray.

Regarding these substances, they are required to no intentional use in the product, the sub-materials, the packaging materials, etc. of which Orbray purchases. Also, it is needed that the impurity content value is less than Orbray’s regulated value.

(Submission of chemical analysis data and contents information such as SDS are needed.)

In case that it exceeded the limited value or is considered any possibility of intentional use, please clarify and disclose the reasons of intentional use or the contents percentage.

### (2) “Controlled substances”

The one should be reduced as much as possible from the material, the parts, etc. which constitute Orbray products, and the one should be grabbed and controlled appropriately those contents percentage, areas and intentional use reasons (i.e. it is needed for characteristic stability and there is no substitution technically at present.)



## Annex-1 Environmental Impact Substances

### 【List of prohibited substances】

|    |  |    |  |
|----|--|----|--|
| 1  | Cadmium and its compounds  | 22 | Phthalic esters (DBP, BBP, DEHP, DIBP)   |
| 2  | Lead and its compounds   | 23 | Dimethyl fumarate (DMF)  |
| 3  | Mercury and its compounds  | 24 | Polycyclic aromatic hydrocarbon (PAH)  |
| 4  | Hexavalent chromium compounds  | 25 | Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain(C9-C14 PFCAs), their salts and C9-C14 PFCA related substances                           |
| 5  | Polybrominated Biphenyls (PBBs)  |    |  |
| 6  | Polybrominated Diphenylethers (PBDEs)  |    |  |
| 7  | Asbestos   | 26 | Hexabromocyclododecane (HBCDD)   |
| 8  | Ozone Depleting Substances including Fluorinated greenhouse gases (CFCs, HCFCs, HFCs, SF6, PFCs) | 27 | Tris(2-chloroethyl)phosphate   |
|    |  | 28 | Beryllium oxide  |
|    |  | 29 | Nickel and its Compounds   |
| 9  | Tin compounds(TBT・TPT・TBT0・DBTs・DOTs)  | 30 | Hexachlorobutadiene (HCBD)   |
| 10 | Specific azo compound  | 31 | Pentachlorothiophenol (PCTP)   |
| 11 | Mirex  | 32 | Phenol, isopropylated phosphate (3:1) (PIP (3:1))  |
| 12 | Shortchain Chlorinated Paraffins(C10-13)   |    |  |
| 13 | Polychlorinated Biphenyls (PCBs) and specific substitutes  | 33 | 2, 4, 6-tris(tert-butyl)phenol (2, 4, 6-TTBP)  |
|    |  | 34 | Hexachlorobenzene (HCB)  |
| 14 | Polychlorinated naphthalenes(PCN) (with 2 or more chlorine atom)                                 | 35 | Perfluorooctanoic acid (PFOA), its salts. and PFOA-related compounds   |
| 15 | Polychlorinated terphenyls (PCT)   | 36 | 1, 6, 7, 8, 9, 14, 15, 16, 17, 17, 18, 18-Dodecachloropentacyclo [12.2.1.16.9.02.13.05.10] octadeca-7, 15-diene ( “Dechlorane Plus” ™)                         |
| 16 | Formaldehyde   |    |  |
| 17 | Cobalt chloride  |    |  |
| 18 | Arsenic and its compounds  | 37 | Long-Chain Perfluoroalkyl Carboxylate (LCPFAC) Chemicals and Perfluoroalkyl sulfonic acid compounds  |
| 19 | Specific benzotriazole   |    |  |
| 20 | Perfluorooctane sulfonic acid (PFOS) and its derivatives   | 38 | Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms |
| 21 | Perfluorohexane sulfonic acid (PFHxS) including its salts and related substances                 |    |  |

### 【List of controlled substances】

|   |  |    |  |
|---|--|----|--|
| 1 | Perchlorates   | 7  | Perfluorohexane acids (PFHxA) including its salts and related substances |
| 2 | Radioactive substance  |    |  |
| 3 | Brominated flame retardants (other than PBBs, PBDEs, HBCDDs) | 8  | Per- and poly- fluoroalkyl substances (PFAS)                             |
| 4 | Polyvinyl chloride (PVC) and its compounds                   | 9  | 4, 4'-Isopropylidenediphenol (Bisphenol A; BPA)                          |
| 5 | Chlorinated flame retardants(CFR)                            |    |  |
| 6 | Medium-chain chlorinated paraffins (MCCP) C14~C17            | 10 | 4, 4'-sulphonyldiphenol (Bisphenol S; BPS)                               |

Note: In accordance with social circumstances and/or regulation change, “Prohibited substances” and “Controlled substances” of this guideline may be added and revised accordingly.

### (3) How to handle the recycling resin mold materials

Prohibition of use of the recycling resin mold materials

Reuse of exhausted products and waste materials is prohibited as the parts and materials for our products, and use of the parts and materials of the other products as recycling material as well.

However, if the value of them were LCL (Lower Control Level) definition of “Chemical Substances Management Guidelines”, it is acceptable.

In this case, please submit the analysis data of resin mold materials to be recycled. (For the details, please contact our purchasing section in charge.)

## 8. Dealing with “Conflict minerals”

The armed groups are doing a human rights violation in DRC Countries (the Democratic Republic of the Congo and its neighboring countries) in these days, and there is a possibility that some minerals like tantalum (Ta), tungsten (W), tin (Sn) and gold (Au) is their funding source, and those minerals are specified as “Conflict minerals” by the guideline of US-regulation and the international authority; OECD. As the whole supply chain, the place of origin investigation or due diligence which investigates whether those minerals are not included in a finished product are required.

Orbray carry out the social responsibility procurement about parts and materials to minimize the risk of investigation on the use of conflict minerals which comply to Conflict-free smelter program of Electronics industry established by EICC (Electric Industry Code of Conduct) so called Electric Industry’s CSR Alliance.

We require our suppliers to cooperate with us in our efforts to assure procurement of Non-conflict minerals when that investigation would be necessary.

Please visit the homepage of the international private organization supporting the enterprise which works on “Conflict minerals” and Documented format and manual are available to downloads from CFSI\* Website:

<http://www.conflictreesourcing.org>

\* CFSI: Conflict-Free Sourcing Initiative

Table-1 **【Green procurement investigation sheet for our suppliers】**

Please fill-in the block with thick line.

|               |  |                  |  |
|---------------|--|------------------|--|
| Supplier code |  | D/M/Y            |  |
| Supplier name |  | Mgr. name        |  |
| Address       |  | Person in charge |  |
| TEL           |  | E-mail           |  |
| FAX           |  |                  |  |

#1.Acquisition of the ISO 14001 certification (Please draw a circle (O) in the Check column YES/NO. If YES, fill-in the details.)

|  |           |                  |                    |
|--|-----------|------------------|--------------------|
| (1)ISO 14001 certification is already obtained.<br>Or, an equivalent certification has been established and maintained more than 3 years.  | YES<br>NO | Acquisition date | Certification body |
| (2) There is a plan to obtain ISO 14001 certification.<br>Or, an equivalent environmental management system is established and maintained. | YES<br>NO | Acquisition date | Certification body |
| (3)No plan to obtain ISO 14001 certification within 1 year.  | YES<br>NO | Reason:          |                    |

#2. Environmental preservation activities ( If above 1-(1) was YES, please disregard the followings.) YES: 5 points No: 0 point

| Item  | Descriptions for evaluation  | YES | NO | Point |
|---|--|-----|----|-------|
| 2-1 "Company philosophy" and "Company policy"         | ①"Company philosophy "about Company policy is exist.   | 5   | 0  |       |
|   | ②Setting the environmental policy and committing to ensure continuous improvement and prevention of pollution.                       | 5   | 0  |       |
|   | ③The company's environmental policy is committed to observing legal restrictions.  | 5   | 0  |       |
|   | ④Company environmental policy is known to all employees and available to any third party.  | 5   | 0  |       |
| 2-2 Plan and Organization                             | ⑤Have a goal/target for environmental protection.  | 5   | 0  |       |
|   | ⑥Have an implementation plan to achieve the goal/target.   | 5   | 0  |       |
|   | ⑦Assigning specific organizations/persons to carry out relevant responsibilities toward the goal/target.                             | 5   | 0  |       |
|   | ⑧Providing information of activity and its result related to environmental protection.   | 5   | 0  |       |
| 2-3 Environmental evaluation system                   | ⑨Reducing water pollution.   | 5   | 0  |       |
|   | ⑩Reducing water pollution.   | 5   | 0  |       |
|   | ⑪Reducing noise and vibration  | 5   | 0  |       |
|   | ⑫Treating waste properly and reducing the amount of waste disposal.  | 5   | 0  |       |
|   | ⑬Reducing energy consumption (electricity, gas, fuel, etc.).   | 5   | 0  |       |
|   | ⑭Observing not to use our company's prohibited substances  | 5   | 0  |       |
|   | ⑮Have a product assessment program   | 5   | 0  |       |
| 2-4 Provision of education, training, and information | ⑯Have a systematic plan for emergencies. (Accident, disaster, etc.)  | 5   | 0  |       |
|   | ⑰Have any internal environment audit program   | 5   | 0  |       |
|   | ⑱Implementing an environmental education program and enlightenment activity to all employees periodically.                           | 5   | 0  |       |
|   | ⑲Implementing training for personnel engaged in work that might significantly affect the environment. Have a list of such personnel. | 5   | 0  |       |
|   | ⑳Providing information related to your environmental protection.   | 5   | 0  |       |
| Total   |  |     |    |       |

#3. Reducing the environmental burden of delivered products

| Evaluation criteria  | YES | NO | Point |  |
|--|-----|----|-------|--|
| (1)No use of environmental impact substance defined in "Chemical Substances Management Guideline" (Annex1), or reducing these content.           | 5   | 0  |       |  |
| (2)Using recycled parts or resources, making an effort to reduce weight and size and taking into consideration product durability improvement    | 5   | 0  |       |  |
| (3)Taking into consideration resource saving and energy saving.  | 5   | 0  |       |  |
| (4)Taking into consideration ease of disassembly, sorting and collecting.  | 5   | 0  |       |  |
| (5)Packaging materials, resource conservation, recycling, reduction of the environmental impact substances are implemented same as the products. | 5   | 0  |       |  |
| (6)Complying with laws and regulations such as recycling and saving energy.  | 5   | 0  |       |  |
| (7)Conducting the products assessment  | 5   | 0  |       |  |
| (8)Providing environmental information related to products.  | 5   | 0  |       |  |
| Total  |     |    |       |  |

**\*Summary**

| Judgement | Total of #2 and #3              | Rating | Comments by Purchasing | Purchasing section |           |
|-----------|---------------------------------|--------|------------------------|--------------------|-----------|
|           | "YES" ISO matter or 101 or more | A      |                        | Approval           | Purchaser |
|           | 80~100                          | B      |                        |                    |           |
|           | 50~79                           | C      |                        |                    |           |
|           | 49 or less                      | D      |                        |                    |           |

Table-2 Memorandum of Green Procurement



Date (YYYY/MM/DD)

## Memorandum of Green Procurement

Company (Purchaser) : \_\_\_\_\_

Stamp

Company (Supplier): \_\_\_\_\_

Person in charge : \_\_\_\_\_ Signature

A purchaser " Orbray " and a supplier " the company " are promoting for reducing the environmental impact substances in the products and we make effort to the environmental activity aiming at coexistence with nature. Then, this memorandum is concluded to ensure reduction of the environmental impact substance in the delivered products from a supplier to a purchaser.

### 1. Green procurement investigation sheet, etc.

- 1) "Green procurement investigation sheet for our suppliers" for environmental protection activity is prepared and submitted.
  - 2) Investigation for content of the environmental impact substance in the components etc. (parts and materials, sub-materials or packing materials) is carried out.
  - 3) When it was judged necessary to know the situation of use and reduction of the environmental impact substances in all the production processes, on-site audit is conducted.
- \* The standard for the suppliers selection and the standard for the purchasing products selection are conducted based on "Green Procurement Guideline".

Please refer "Green Procurement Guideline", "Environmental Substances Management Guideline" and the other data for your reference (See URL below).

<https://orbray.com>

### 2. "Prohibited substance" and "Controlled substance"

- 1) Prohibited substances specified in the "Green Procurement Guideline" are cannot be used in all the delivery products (parts and materials, etc.) except that the products are permitted according to the exceptional measures or the current regulatory value is exceptionally accepted under the condition until accomplishment of the target year.
- 2) Controlled substances specified in the "Green Procurement Guideline" are not prohibited to use in the products (parts and materials, etc.), however, please check these chemical substances concerned and save and control its content for when a new laws is issued or a substance changes into a prohibit one by the future social situation change.

Table-3 Certificate of Non-Use of Prohibited Substance



Date (YYYY/MM/DD)

To: Orbray

### Certificate of Non-Use of Prohibited Substance

Company name : \_\_\_\_\_  
 Person Responsible : \_\_\_\_\_  
 Section in Charge : \_\_\_\_\_  
 Person in Charge : \_\_\_\_\_  
 E-mail : \_\_\_\_\_  
 Phone : \_\_\_\_\_  
 FAX : \_\_\_\_\_

Material or  
 Parts code :

We certify that the environment impact substances (or chemical substances prohibited) of Orbray as listed "The Environmental Substances Management Guideline" below are not used or contained (exceeding specified limits) in the components etc. (parts and materials, packaging or packing materials) that are delivered directly or through 3rd party to Orbray.

#### Orbray the environmental impact substances

【List of prohibited substances】

|    |  |    |  |
|----|--|----|--|
| 1  | Cadmium and its compounds  | 22 | Phthalic esters (DBP, BBP, DEHP, DIBP)   |
| 2  | Lead and its compounds   | 23 | Dimethyl fumarate (DMF)  |
| 3  | Mercury and its compounds  | 24 | Polycyclic aromatic hydrocarbon (PAH)  |
| 4  | Hexavalent chromium compounds  | 25 | Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain(C9-C14 PFCAs), their salts and C9-C14 PFCA related substances                           |
| 5  | Polybrominated Biphenyls (PBBs)  |    |  |
| 6  | Polybrominated Diphenylethers (PBDEs)  |    |  |
| 7  | Asbestos   | 26 | Hexabromocyclododecane (HBCDD)   |
| 8  | Ozone Depleting Substances including Fluorinated greenhouse gases (CFCs, HCFCs, HFCs, SF6, PFCs) | 27 | Tris(2-chloroethyl)phosphate   |
|    |  | 28 | Beryllium oxide  |
|    |  | 29 | Nickel and its Compounds   |
| 9  | Tin compounds (TBT · TPT · TBTO · DBTs · DOTs)   | 30 | Hexachlorobutadiene (HCBD)   |
| 10 | Specific azo compound  | 31 | Pentachlorothiophenol (PCTP)   |
| 11 | Mirex  | 32 | Phenol, isopropylated phosphate (3:1) (PIP (3:1))  |
| 12 | Shortchain Chlorinated Paraffins(C10-13)   | 33 | 2, 4, 6-tris(tert-butyl)phenol (2, 4, 6-TTBP)  |
| 13 | Polychlorinated Biphenyls (PCBs) and specific substitutes  | 34 | Hexachlorobenzene(HCB)   |
| 14 | Polychlorinated naphthalenes(PCN) (with 2 or more chlorine atom)                                 | 35 | Perfluorooctanoic acid (PFOA), its salts, and PFOA-related compounds   |
| 15 | Polychlorinated terphenyls (PCT)   | 36 | 1, 6, 7, 8, 9, 14, 15, 16, 17, 17, 18, 18-Dodecachloropentacyc [12. 2. 1. 16, 9. 02, 13. 05, 10] octadeca-7, 15-diene ( "Dechlorane Plus" <sup>TM</sup> )      |
| 16 | Formaldehyde   |    |  |
| 17 | Cobalt chloride  |    |  |
| 18 | Arsenic and its compounds  | 37 | Long-Chain Perfluoroalkyl Carboxylate (LCPFAC) Chemicals and Perfluoroalkyl sulfonic acid compounds  |
| 19 | Specific benzotriazole   |    |  |
| 20 | Perfluorooctane sulfonic acid (PFOS) and its derivatives   | 38 | Mineral oil aromatic hydrocarbons (MOAH) comprising from 1 to 7 aromatic rings Hydrocarbons saturated with mineral oil (MOSH) containing 16 to 35 carbon atoms |
| 21 | Perfluorohexane sulfonic acid (PFHxS) including its salts and related substances                 |    |  |

【List of controlled substances】

|   |  |    |  |
|---|--|----|--|
| 1 | Perchlorates   | 7  | Perfluorohexane acids (PFHxA) including its salts and related substances |
| 2 | Radioactive substance  | 8  | Per- and poly- fluoroalkyl substances (PFAS)                             |
| 3 | Brominated flame retardants (other than PBBs, PBDEs, HBCDDs) | 9  | 4, 4'-Isopropylidenediphenol (Bisphenol A; BPA)                          |
| 4 | Polyvinyl chloride (PVC) and its compounds                   |    |  |
| 5 | Chlorinated flame retardants(CFR)                            | 10 | 4, 4'-sulphonyldiphenol (Bisphenol S; BPS)                               |
| 6 | Medium-chain chlorinated paraffins (MCCP) C14~C17            |    |  |

Note: In accordance with social circumstances and/or regulation change, "Prohibited substances" and "Controlled substances" of this guideline may be added and revised accordingly.

## 9. Revision history

| Rev. No | Description  | Establishment   | Enforcement     |
|---------|--|-----------------|-----------------|
| 0       | First edition established by company name changed. Description of conflict minerals added.   | 22 / JAN / 2018 | 01 / FEB / 2018 |
| 1       | RoHS II ( 2011/65/EU ) ( EU2015/863 )<br>10 substances added. NPT apply this book also.  | 01 / APR / 2019 | 01 / MAY / 2019 |
| 1.2     | Change of company name and logo/addition of controlled substances<br>Revision of forms and other documents according to the above  | 06 / JAN / 2023 | 06 / JAN / 2023 |
| 2       | 3. Definition of terms (6) Homogeneous material was added.<br>Deleted major customers.<br>Updated Web-site address to access the information of the relevant organization.<br>Updated the list of environmentally hazardous substances in Appendix 1.<br>Updated environmental load substances in Table-3 "Certificate of Non-Use of Prohibited Substances". | 27 / OCT / 2023 | 27 / OCT / 2023 |