Rev.19 April. 30. 2024

Green Procurement Guidelines

NAKANISHI INC.

CONTENTS

Introduction

NAKANISHI INC. (hereinafter referred to “NSK”) promotes environmental activities based on our management policy of reducing the environmental impact of all our business activities, including research and development, manufacturing, sales, and service of ultra-high speed rotary equipment and realizing a healthy and prosperous society in harmony with nature.
NSK has established the Environmental Policy, and we are uniting our efforts to give consideration to the environment through all our products and activities in all business processes.
Based on this concept, we have clarified medium- to long-term targets and managed specific activity items and target values.
Among them, there is a wide range of issues that we must address, and we need to comprehensively assess the environmental impact of our products throughout their entire life cycle, from the “manufacturing” stage to the “use” stage, and then to the “reuse” and “return” stages as resources after the products have fulfilled their roles.
NSK promotes green procurement as one of our efforts at the “manufacturing” stage.
Green procurement refers to the procurement of products, parts, and materials with less environmental impact from suppliers who actively promote environmental conservation. In order to promote business activities that reduce the environmental impact and risks of hazardous chemical substances, it is necessary to carry out activities throughout the entire supply chain, and the cooperation of our business partners is essential.
We would like to ask our suppliers to understand and cooperate in green procurement for the creation of a sustainable society.

NAKANISHI INC.
Environmental Management System section,
General Administration Department

Purpose and Scope of Application

Purpose of Green Procurement

As various environmental issues such as global warming, resource depletion, and the destruction of ecosystems become more serious, demands and expectations for companies to reduce their environmental impact are increasing.
NSK contributes to the realization of a sustainable society by promoting manufacturing with the aim of reducing the environmental impact of our products throughout their life cycles through all business activities, including research and development, manufacturing, sales, and service.
As part of these activities, green procurement aims to procure products and services that have less environmental impact from suppliers who are actively engaged in environmental conservation activities, taking into account the proper use of chemical substances, conservation of ecosystems, energy conservation, resource conservation, and ease of recycling, decomposition, and disposal.

Scope of Green Procurement

This applies to the following delivered products.
・Products (finished and semi-finished products)
・Parts (electrical/electronic parts, mechanical parts, others)
・Materials (metals, resins, others)
・Subsidiary materials (adhesive, silicon, paint, ink, solder, others)
・Packaging materials, printed materials (trays, bags, cushioning materials, tapes, printing ink, others)
・Instruction manual (The instruction manual that is shipped with the product)

Requirements of Green Procurement

In order to promote green procurement, NSK asks all of our suppliers to understand green procurement and cooperate with the following two things.
・To actively engage in environmental conservation activities
・To deliver products and materials with reduced environmental impact to NSK

Specifically, please check the following “Requests to suppliers” and “Reduction of environmental impact and management of chemical substances in delivered products” .

Reduction of environmental impact and management of chemical substances in delivered products

Reduction of environmental impact

Regarding products delivered to NSK, please follow the items below to improve environmental performance. We would also like to ask our suppliers for the same consideration when procuring raw materials and parts.

・Reduction of CO2 emissions
・Reduction of industrial waste generation
・Proper use of chemical substances
・Provision of environmental information on products and materials

Information management of chemical substances

With the support of our suppliers, NSK delivers environmentallyfriendly products to society.
We would like to ask our suppliers in the upper stream of the supply chain to cooperate in the survey.
In consideration of customer requirements and laws and regulations related to medical devices, we divide the chemical substances to be controlled into two categories: “Prohibited Substances” and “Controlled Substances” to compile information on chemical substances contained in delivered products.

・Prohibited Substances: See Table 1,2,3,4
・Controlled Substances: See Table 5

In addition, we may ask our suppliers to understand and cooperate with the survey chemical substances used in the manufacturing, storage, and transportation phases until delivery, even if they are not finally contained in the delivered products.

Survey on chemical substance contained in products

NSK asks our suppliers for environmental considerations. Regarding chemical substances contained in products, we requires our supplier to guarantee the non-inclusion of chemical substances.
If non-inclusion of chemical substances in products is indicated as a condition of purchase specifications, we request our supplier to submit the “non-use warranty” in Table 6 and chemSHERPA (AI) sheet.
“Non-inclusion” refers to the case where it has been clarified by reasonable procedures that the chemical substance is not contained or is below a predetermined threshold value in the homogeneous material, regardless of “intentional addition” or “unintentional contamination of impurities” .

a) Materials and data to be submitted

With regard to the formats for managing chemical substances contained in products, NSK is working to respond flexibly to the formats widely adopted by industry, with the first priority on the usability of our suppliers.
At present, we use the following formats as the basis for input.

<Survey format>
chemSHERPA (AI) sheet, non-use warranty
* chemSHERPA : This is the format for transferring information on chemical substances contained in products provided by JAMP.
chemSHERPA (AI) is a survey format that deals with chemical substances contained in articles.
* Information such as SDS (Safety Data Sheet) and parts mass may be requested as necessary.

b) Non-use warranty

For “Prohibited Substances” in Table 1, please submit “Non-use Warranty” in Table 6 (distributed at the time of request for investigation).
In addition, please submit “Non-use Warranty” in Table 6, including information that can identify the product, such as the product name and product number, to be reported.

Guidelines for managing information on chemical substances contained in products

As the use of “Prohibited Substances” is basically banned by laws and regulations in Japan and abroad, it is necessary to guarantee “non-inclusion” from the viewpoint of legal compliance.
Regarding “Controlled Substances” , it is necessary to appropriately manage the content information regardless of whether or not the chemical substances are contained in products.

In the event of a change in the chemical substance content information

In the event of any new inclusion in the delivered products or any change in the reported contents of the delivered products for any reason, please contact us immediately.

Revision of Green Procurement Guidelines

These Guidelines may be revised as follows. In that case, we will promptly notify our suppliers by e-mail or in writing.

・Change in laws, regulations, or customer requirements
・For parts that have been reported once, our Purchasing Department will inform our suppliers of the content of each change in the event of any change in the “Prohibited Substances” or “Controlled Substances” due to the revision of the law.

Based on the content, please use the specified form to answer the status of inclusion.

Contact Information

NAKANISHI INC.
Environmental Management System section, General Administration Department
TEL 0289-64-3380

Table-1
Prohibited substances List

■ EU RoHS Directive

No	Chemical substances	Reference material	CAS No	Threshold level	Main relevant regulations
1	Cadmium and its compounds	(See Appendix 2-1) (See Appendix 3-1)	-	100ppm or less	RoHS directive (EU) REACH regulation Annex XVⅡ (EU)
2	Lead and its compounds	(See Appendix 2-2) (See Appendix 3-2)	-	1000ppm or less	RoHS directive (EU) REACH regulation Annex XVⅡ (EU)
3	Mercury and its compounds	(See Appendix 2-3) (See Appendix 3-3)	-	1000ppm or less	RoHS directive (EU)
4	Hexavalent chromium compounds	(See Appendix 2-4) (See Appendix 3-4)	-	1000ppm or less	RoHS directive (EU) REACH regulation Annex XVⅡ (EU)
5	Polybrominated biphenyls (PBBs)	(See Appendix 2-5) (See Appendix 3-5)	-	1000ppm or less	RoHS directive (EU) REACH regulation Annex XVⅡ (EU) Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
6	Polybrominated diphenyl ethers (PBDEs)	(See Appendix 2-5) (See Appendix 3-5)	-	1000ppm or less	RoHS directive (EU) Toxic Substances Control Act (TSCA) ※DecaBDE-decabromodiphenyl ether (DBDE) only
7	Bis (2-ethylhexyl) phthalate（DEHP）	(See Appendix 2-6) (See Appendix 3-6)	117-81-7	1000ppm or less	RoHS directive (EU) （Except for non-electrical and electronic equipment）
8	Butyl benzyl phthalate（BBP）	(See Appendix 2-6) (See Appendix 3-6)	85-68-7	1000ppm or less	RoHS directive (EU) （Except for non-electrical and electronic equipment）
9	Dibutyl phthalate（DBP）	(See Appendix 2-6) (See Appendix 3-6)	84-74-2	1000ppm or less	RoHS directive (EU) （Except for non-electrical and electronic equipment）
10	Diisobutyl phthalate（DIBP）	(See Appendix 2-6) (See Appendix 3-6)	84-69-5	1000ppm or less	RoHS directive (EU) （Except for non-electrical and electronic equipment）

■RoHS exemption

The RoHS Directive stipulates "exempted uses" that permit the inclusion of prohibited substances for use that cannot be technically substituted.
The revised RoHS Directive (2011/65/EU: RoHS2) has two types of lists: AnnexIII and AnnexIV.
Please check the latest lists and strictly observe that prohibited substances do not contain more than the allowable amount.

■ REACH regulation restriction

No	Chemical substances	Reference material	CAS No	Threshold level	Main relevant regulations
11	REACH規制 Annex XVⅡ（EU） Target chemical substance	(See Appendix 4)	-	Do not use if the conditions of the restriction are not met	REACH規制 Annex XVⅡ（EU）

■REACH regulation Annex XVII (EU)

From Article 67 of the REACH Regulation, substances contained in the preparations or articles of the substances whose restrictions are stipulated in Annex XVII cannot be manufactured, marketed or used unless the conditions of the restrictions are met.

■ Toxic Substances Control Act (TSCA) substances

No	Chemical substances	Reference material	CAS No	Threshold level	Main relevant regulations
12	Phenol, isopropylated phosphate (3:1)-(PIP)	(See Appendix 2-7) (See Appendix 3-7)	68937-41-7	Prohibition of use	Toxic Substances Control Act (TSCA)
13	DecaBDE – decabromodiphenyl ether（DBDE）	(See Appendix 2-5) (See Appendix 3-5)	1163-19-5	Prohibition of use	Toxic Substances Control Act (TSCA) RoHS directive (EU) Japan Chemical Examination Law/Type 1 specified chemical substances
14	Hexachlorobutadiene（HCBD）	(See Appendix 2-8) (See Appendix 3-8)	87-68-3	Prohibition of use	Toxic Substances Control Act (TSCA) Japan Chemical Examination Law/Type 1 specified chemical substances
15	Pentachlorothiophenol（PCTP）	(See Appendix 2-9) (See Appendix 3-9)	133-49-3	10000ppm or less	Toxic Substances Control Act (TSCA)
16	2,4,6-TTBP – 2,4,6-tris (tert- butyl) phenol（TTBP）	(See Appendix 2-10) (See Appendix 3-10)	732-26-3	3000ppm or less	Toxic Substances Control Act (TSCA) Japan Chemical Examination Law/Type 1 specified chemical substances

■ U. S. TSCA exclusions and exemptions

U.S Toxic Substances Control Act (TSCA) defines "Exclusions" that allow the activities of manufacture, import, export, process and commertially distribute products/molded products containing such PBT chemicals under certain conditions. If you would like to get the advantage of such exclusions, you should make sure that your products are out of the prohibited scope by referring to Section 6 of TSCA, requirements for specific chemical

■ Prohibited substances

No	Chemical substances	Chemical substances	CAS No	Threshold level	Main relevant regulations
17	Asbestos	(See Appendix 2-11) (See Appendix 3-11)	-	Intentional use is prohibited	REACH regulation Annex XVII (EU)
18	Tributyl Tin (TBT) and Triphenyl Tin (TPT)	(See Appendix 2-12) (See Appendix 3-12)	-	Intentional use is prohibited, however,1000ppm or less as tin	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU)
19	Dibutyltin (DBT) compounds Dioctyltin (DOT) compounds	(See Appendix 2-13 and 2-14) (See Appendix 3-13 and 3-14)	-	1000ppm or less as tin	REACH regulation Annex XVII (EU)
20	Bis(tributyltin)oxide (TBTO)	(See Appendix 2-15) (See Appendix 3-15)	56-35-9	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU)
21	Deca-BDE	(See Appendix 2-5) (See Appendix 3-5)	1163-19-5	Intentional use is prohibited	REACH regulation Annex XVII (EU)
22	Polychlorinated Biphenyls (PCBs)	(See Appendix 2-16) (See Appendix 3-16)	-	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU) Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
23	Polychlorinated Terphenyls(PCTs)	(See Appendix 2-17) (See Appendix 3-17)	61788-33-8	Intentional use is prohibited, however,50ppm or less as tin	REACH regulation Annex XVII (EU)
24	Polychlorinated naphthalenes (more than 2 chlorine atoms)	(See Appendix 2-18) (See Appendix 3-18)	-	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU) Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
25	Alkanes, C10-13, chloro	(See Appendix 2-19) (See Appendix 3-19)	-	Intentional use is prohibited, however,1000ppm or less as tin	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU) Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
26	Azocolourants and azodyes which form certain aromatic amines	(See Appendix 2-20) (See Appendix 3-20)	-	30ppm or less as textile / leather products	REACH regulation Annex XVII (EU)
27	Ozone Depleting Substances（Excluding HCFC）	(See Appendix 2-21) (See Appendix 3-21)	-	Intentional use is prohibited	Law concerning the Protection of the Ozone Layer Montreal Protocol on Substances that Deplete the Ozone Layer
28	Perfluorooctane sulfonates（PFOS)	(See Appendix 2-22) (See Appendix 3-22)	-	Intentional use is prohibited, however,1000ppm or less as tin	Japan Chemical Examination Law/Type 1 specified chemical substances Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
29	Perfluorooctanoic acid （PFOA)	(See Appendix 2-23) (See Appendix 3-23)	-	Intentional prohibition and 0.025ppm or less as PFOA and its salt Total concentration of PFOA-related substances 1 ppm or less	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation Annex XVII (EU) Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
30	Fluorinated greenhouse gases (PFC, SF6, HFC)	(See Appendix 2-24) (See Appendix 3-24)	-	Intentional use is prohibited	『EU regulation No 517/2014』
31	Hexachlorobenzene (HCB)	(See Appendix 2-25) (See Appendix 3-25)	-	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances REACH regulation (EU) Regulation on Classification, Labelling and Packaging of substances and ixtures Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
32	Redioactive substances	(See Appendix 2-26)	-	Intentional use is prohibited	『Act on Prevention of Radiation Hazards Due to Radioisotopes, etc.』
33	Specified benzotriazole	(See Appendix 2-27) (See Appendix 3-26)	3846-71-7	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances
34	Dimethyl fumarate (DMF)	(See Appendix 2-28) (See Appendix 3-27)	624-49-7	Intentional use is prohibited, however,0.1ppm or less as tin	REACH regulation Annex XVII (EU)
35	Formaldehyde	(See Appendix 2-29) (See Appendix 3-28)	50-00-0	75ppm of textile	Toxic Substances Control Act (TSCA) BGB I 1990/194: Formaldehyde Restriction §2, 12/2/1990
36	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs),their salts and C9-C14 PFCA-related substances	(See Appendix 2-31) (See Appendix 3-29)	-	Intentional prohibition and 0.025 ppm or less as PFCA and its salt Total concentration of PFCA-related substances 0.26ppm or less	REACH regulation Annex XVII (EU)
37	Perfluorohexane-1-sulponic acid and its salts (PFHxS)	(See Appendix 3-32) (See Appendix 3-30)	355-46-4	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021

■ Prohibited substances

No	Chemical substances	Chemical substances	CAS No	Threshold level	Main relevant regulations
38	Dechlorane plus	(See Appendix 3-33) (See Appendix 3-31)	13560-89-9 135821-74-8 135821-03-3	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021
39	UV-328	(See Appendix 2-34) (See Appendix 3-32)	25973-55-1	Intentional use is prohibited	Japan Chemical Examination Law/Type 1 specified chemical substances Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021

Table-2
Prohibited substances / substances List

■ EU RoHS Directive

Table 2- 1 **Rev.19 (1/6 page)**

Substance/Substance Group Name: Cadmium and its compounds	
Regulated items	
All applications excepy those in the exemptions shown below.（See Table 2-30 for packaging material) [Applications and use examples] Stabilizer/pigment/dye/paint/ink used for plastics (including rubber, film), phosphor, alloy, packsging materials,etc	
Exemption	- Uses in batteries[*1*2] (under the EU Battery Directive)

*1： Batteries:primary batteries ,accumulators (secondary batteries),and battery packs.

*2： Check the individual law or regulation, and take actions if necessary.

Table 2- 2

Substance/Substance Group Name: Lead and its compounds	
Regulated items[*1]	
All applications excepy those in the exemptions shown below.（See Table 2-30 for packaging material) [Applications and use examples] Paint, pigment, dye, inc, stabilizer in plastic (including rubber) material Solder coating on snd packaging material of component external slsctrode, lead terminal, etc	
Exemption	- Uses in batteries[*2*3] (under the EU Battery Directive)

*1： For products destined for in North America subject to the California Proposition 65 Settlement Agreement dated September 3,2002,if lead is intentionally added to the surface material covering the cord, or its lead content exceeds 300ppm (0.03%), a warning label is required.

*2： Batteries: primary battery, accumulators (secondary batteries), and battery packs.

*3： Check the individual law or regulation, and take actions if necessary.

Table 2- 3

Substance/Substance Group Name: Mercury and its compounds	
Regulated items	
All applications excepy those in the exemptions shown below.（See Table 2-30 for packaging material) [Applications and use examples] Pigment, dye, paint, ink, indicator such as hour meter, relay, switch, sensor where mercury is used for electrical contact, harmonizer in plastics, packaging material, etc.	
Exemption	- Uses in batteries[*1*2] excluding mercury batteries (under the EU Battery Directive)

*1： Batteries: primary battery, accumulators (secondary batteries), and battery packs.

*2： Check the individual law or regulation, and take actions if necessary.

Table 2- 4

Substance/Substance Group Name: Hexavalent chromium compounds	
Regulated items	
(1) Leather products snd leather components thet have contact with the skin. (2) Other than the above:All applications except those in the exemptions shown below.（See Table 2-30 for packaging material) [Applications and use examples] Rust-proof treatment, plastics, paint, pigment, ink, packaging materials, leather (e.g. exterior parts ofproducts, leather parts of carryung cases)etc.	
Exemption	- Uses in batteries[*1*2] (under the EU Battery Directive)

*1： Batteries: primary battery, accumulators (secondary batteries), and battery packs.

*2： Check the individual law or regulation, and take actions if necessary.

Table 2- 5

Substance/Substance Group Name: Specified Brominated Flame-retardant (PBB,PBDE) (All PBBs and PBDEs including Deca BDE (deca-bromo-diphenyl-ether))
Regulated items
All applications Products, components, snd devices covered under the EU RoHS Directive, must not contain the above substances sxceeding 1000ppm in total. As for PBDE, articles (e.g. materials for batteries*1*2, packaging materials, toys, and nursery items.) must not contain PBDE exceeding 500ppm in total.

*1： Batteries: primary battery, accumulators (secondary batteries), and battery packs.

*2： For batteries, refer to individual law snd regulation, snd take actions if necessary.

Table 2- 6

Substance/Substance Group Name: Four phthalates
— Bis (2-ethylhexyl) phthalate（DEHP*1）,Butyl benzyl phthalate（BBP）,Dibutyl phthalate（DBP）,Diisobutyl phthalate（DIBP）
Regulated items
Products, components, and devices covered under the EU RoHS Directives must not include 1,000ppm or more per one phthalate. Products covered under the EU REACH Annex XVII Restriction on phthalates (e.g. Materials for batteries*2, Packaging materials*3, and Toys & childcare articles) must not include the phthalates 1,000ppm or more in total of the four phthalates. [Applications and use examples] Plasticizer for rubber, elastomer, and resin (particularly polyvinyl chloride)
Additive for paint, ink, and adhesives

*1： DEHP is often called as DOP, particularly by material manufacturers; therefore, particular attention must be paid to the indication of 'DOP'.

*2： Batteries: primary battery, accumulators (secondary batteries), and battery packs.

*3： Note that the four phthalates in the packaging materials sre restricted in total concentration under EU REACH.

■ Toxic Substances Control Act (TSCA) substances

Table 2- 7

Substance/Substance Group Name: Phenol, isopropylated phosphate （PIP/PIP(3:1)）
Regulated items
Regulation of Specified Chemical Substances and Mixtures Based on Article 6 of the Hazardous Substances Control Law-All uses other than those shown in §751.407 [Applications and use examples] Among other uses, present as flame retardant and/or plasticizing agent in polyvinylchloride (PVC) plastics, polyurethanes, BPA epoxies, and some lubricants.

Table 2- 8

Substance/Substance Group Name: Hexachlorobutadiene （HCBD）
Regulated items
All applications [Applications and use examples] Not likely to be present. HCBD is usually an intermediate chemical found in the production of other substances, but might remain as a residue.

Table 2- 9

Substance/Substance Group Name: Pentachlorothiophenol （PCTP）
Regulated items
All applications [Applications and use examples] Among other uses, PCTP might be present in butadiene or isoprene rubbers.

Table 2- 10

Substance/Substance Group Name: 2,4,6-TTBP – 2,4,6-tris (tert- butyl) phenol （TTBP）
Regulated items
All applications [Applications and use examples] Present in some types of oils that might be used to lubricate components.

■ Prohibited substances

Table 2- 11 **Rev.19 (3/6 page)**

Substance/Substance Group Name: Asbestos
Regulated items
All applications
[Applications and use examples] Gasket (sealing material), insulator, filler, adrasive, pigment, paint, talc, thermal insulator.

Table 2- 12

Substance/Substance Group Name: Tributyl Tin (TBT) and Triphenyl Tin (TPT)
Regulated items
All applications
[Applications and use examples] paint、pigment、preservative、stabilizers.

Table 2- 13

Substance/Substance Group Name: Dibutyltin (DBT) compounds
Regulated items
All applications
[Applications and use examples] Preservative, antifungal, agent, paint, pigment, antifouling agent, foaming agent, solvent cleaner.

Table 2- 14

Substance/Substance Group Name: Dioctyltin (DOT) compounds
Regulated items
The following applications: — Textile articles intended to come into contact with the sikn.

Table 2- 15

Substance/Substance Group Name: Bis(tributyltin)oxide (TBTO))
Regulated items
All applications
[Applications and use examples] Preservative, antifungal agent, paint, pigment, antifouling agent, Foaming agent, solvent cleaner.

Table 2- 16

Substance/Substance Group Name: Polychlorinated Biphenyls (PCBs)
Regulated items
All applications
[Applications and use examples] Insulation oil, Iubricant oil, electric insulator, solvent, electrolyte, plasticizer, fire-retardant, flame retardant, coating agent for elestric wires and cables, dielectric sealant.

Table 2- 17

Substance/Substance Group Name: Polychlorinated terphenyls(PCTs)
Regulated items
All applications
[Applications and use examples] Insulation oil, Iubricant oil, electric insulator, solvent, electrolyte, plasticizer, fire-retardant, flame retardant, coating agent for elestric wires and cables, dielectric sealant.

Table 2- 18

Substance/Substance Group Name: Polychlorinated naphthalenes (more than 2 chlorine atoms)
Regulated items
All applications [Applications and use examples] Lubricant, paint, stabilizer (electric property, flame-proof property, water-proof property) insulator, flame retardant.

Table 2- 19

Substance/Substance Group Name: Alkanes, C10-13, chloro
Regulated items
All applications [Applications and use examples] Plasticizer for polyvinyl chloride (PVC), flame retardant.

Table 2- 20

Substance/Substance Group Name: Azocolourants and azodyes which form certain aromatic amines
Regulated items
The following applications: — Textiles and leather products that may have direct contact with human skin snd/or oral cavities for anextended period of time.

Table 2- 21

Substance/Substance Group Name: Ozone Depleting Substances
Regulated items
All applications

Table 2- 22

Substance/Substance Group Name: Perfluorooctane sulfonate (PFOS)
Regulated items
All applications

Table 2- 23

Substance/Substance Group Name: Perfluorooctanoic acid and its compounds
Regulated items
All applications other then those shown in the Exemptions below [Applications and use examples] Fluororesin/Fluor rubber, Fluororesin coating, and antireflection agent in semiconductor exposure process.

Table 2- 24

Substance/Substance Group Name: Fluorinated greenhouse gases (PFC, SF6, HFC)
Regulated items
Each product is restricted by PFC, SF6, HFC global warming potential (GWP) per use. [Applications and use examples] Extruded polystyrene form, Rigid polystyrene form, Polystyrene high pressure form spray, and pressure form sprey, and Polystyrene low pressure form spray which were manufactured using PFC, SF6, HFC.

Table 2- 25

Substance/Substance Group Name: Hexachlorobenzene （HCB）
Regulated items
All applications [Applications and use examples] Polyvinyl chloride plasticizer.

Table 2- 26

Substance/Substance Group Name: Redioactive substances
Regulated items
All applications

Table 2- 27

Substance/Substance Group Name: Specified benzotriazole
Regulated items
All applications

Table 2- 28

Substance/Substance Group Name: Dimethyl fumarate (DMF)
Regulated items
All applications [Applications and use examples] Moisture-proof agent, mold-proof agent.

Table 2- 29

Substance/Substance Group Name: Formaldehyde
Regulated items
Wood product and parts using materials such as particle boards and MDF (medium density fiberboard). — For formaldehydverordnung content in fiber, products sold in Europe subject to the Austria regulates (Austria - BGB I 1990/194:Formaldehydverordnung, regulated amount = 75ppm) must comply with this regulation.

Table 2- 30

Substance/Substance Group Name: Quadruple metal（Cadmium and lead and mercury and Hexavalent chromium）	
Regulated items	
All uses in packaging other than listed in the exempted items [Applications and use examples] Pigment, dye, paint, ink, packing material, adhesive agent, staple, label.	
Exemption	Case that reuse of the substance in a closed loop such as palettes is clearly stated.※1

*1： When a packaging material with a total content of four heavy metals exceeding 100ppm is reused in a closed loop confirm and handle each case individually since notification obligation etc. may be posed by the US Specified States Toxics in Packaging Regulation.

Table 2- 31

Substance/Substance Group Name: Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances（PFCA）
Regulated items
All applications other than those shown in the Exemptions below. [Applications and use examples] Fluororesin/Fluor rubber,Fluororesin coating, and antireflection abent in semiconductor exposure process.

Table 2- 32

Substance/Substance Group Name: perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds
Regulated items
All applications [Applications and use examples] Metal plating, abrasives and cleaning agents, coatings, impregnating/reinforcing materials, manufacturing of electronic appliances and semiconductors, etc.

Table 2- 33

Substance/Substance Group Name: Dechlorane plus	
Regulated items	
All applications excepy those in the exemptions shown below. [Applications and use examples] Flame retardants	
Exemption	When used as replacement parts for articles such as medical equipment and fixed industrial machinery

Substance/Substance Group Name: UV-328	
Regulated items	
All applications excepy those in the exemptions shown below. [Applications and use examples] UV absorber	
Exemption	When used as replacement parts for articles such as medical equipment and fixed industrial machinery

Table-3
Prohibited Substances / Substances CAS Number List

■ EU RoHS Directive Substance/Substance Group List

Table 3- 1

Substance/Substance Group Name: Cadmium and its compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	cadmium	Cd	7440-43-9
	Cadmium oxide	CdO	1306-19-0
	Cadmium sulfide	CdS	1306-23-6
	Cadmium chloride	CdCl2	10108-64-2
	Cadmium sulfate	CdSO4	10124-36-4
	Other cadmium compounds	—	—

Table 3- 2

Substance/Substance Group Name: Lead and its compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Lead	Pb	7439-92-1
	Lead carbonate	PbCO3	598-63-0
	Lead dioxide	PbO2	1309-60-0
	Trilead tetraoxide	Pb3O4	1314-41-6
	Lead(II) sulfide	PbS	1314-87-0
	Lead(Ⅱ) oxide	PbO	1317-36-8
	Lead(II) Carbonate Basic	2PbCO3.Pb(OH)2	1319-46-6
	Lead(II) carbonate basic	2PbCO3.Pb(OH)2	1344-36-1
	Lead(II) sulfate	PbSO4	7446-14-2
	Lead(II) phosphate	Pb3(PO4)2	7446-27-7
	Dilead chromate oxide	PbCrO4	7758-97-6
	lead(II) titanate	PbTiO3	12060-00-3
	Lead sulfate	PbXSO4	15739-80-7
	Lead sulfate tribasic	PbSO4.H2O	12202-17-4
	Lead stearate	Pb(C17H35COO)2	1072-35-1
	Dibasic lead stearate	2PbO・Pb(C17H35COO)2	56189-09-4
	Lead acetate	C4H6O4Pb / (CH3COO)2Pb	301-04-2
	Lead(II) acetate trihydrate	Pb(CH3COO)2 ・3H2O	6080-56-4
	Lead(II) Selenide	PbSe	12069-00-0
	Lead chromate molybdate sulfate; Molybdenum Red	—	12656-85-8
	C.I. Pigment Yellow 34	—	1344-37-2
	lead arsenate	Pb3(AsO4)2	3687-31-8
	Acidic lead arsenate	AsHO4Pb	7784-40-9
	Other lead compounds	—	—

Table 3- 3

Substance/Substance Group Name: Mercury and its compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	mercury	Hg	7439-97-6
	Mercury dichloride	HgCl2	7487-94-7
	Mercury(II) oxide	HgO	21908-53-2
	Mercury(II) Chloride	—	33631-63-9
	Mercury sulfate	HgSO4	7783-35-9
	Mercury(II) nitrate	HgN2O6 / Hg(NO3)2	10045-94-0
	Mercury(Ⅱ) sulfide	HgS	1344-48-5
	Other mercury compounds	—	—

Table 3- 4

Substance/Substance Group Name: Hexavalent chromium compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Sodium dichromate	Na2Cr2O7	10588-01-9
	Chromium oxide	CrO3	1333-82-0
	Calcium chromate	CaCrO4	13765-19-0
	Lead chromate	PbCrO4	7758-97-6
	Potassium dichromate	K2Cr2O7	7778-50-9
	Potassium chromate	K2CrO4	7789-00-6
	Barium chromate	BaCrO4	10294-40-3
	Sodium chromate	Na2CrO4	2146108
	Strontium chloriomate	SrCrO4	2151068
	Other hexavalent chromium compounds	—	—

Table 3- 5

Substance/Substance Group Name: Specified Brominated Flame-retardant (PBB,PBDE) (All PBBs and PBDEs including Deca BDE (deca-bromo-diphenyl-ether))			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	Polybrominated biphenyls（PBB）	C12HXBr(10-X)	—
		C12H9Br	2052-07-5
		C12H9Br	2113-57-7
		C12H9Br	92-66-0
		C12H8Br2	92-86-4
		C12H7Br3	59080-34-1
		C12H6Br4	40088-45-7
		C12H5Br5	56307-79-0
		C12H4Br6	59080-40-9
		C12H4Br6	36355-01-8
		C12H3Br7	35194-78-6
		C12H2Br8	61288-13-9
		C12HBr9	27753-52-2
		C12Br10	13654-09-6
	Substance name	Chemical Formula	CAS No.
	Polybrominated diphenyl ethers（PBDE）	C12HXBr(10-X)O	—
		C12Br10O	1163-19-5
		C12H2Br8O	32536-52-0
		C12H4Br6O	36483-60-0
		C12H5Br5O	32534-81-9
		C12H9BrO	101-55-3
		C12H8Br2O	2050-47-7
		C12H7Br3O	49690-94-0
		C12H6Br4O	40088-47-9
		C12H3Br7O	68928-80-3
		C12HBr9O	63936-56-1

Table 3- 6

Substance/Substance Group Name: Four phthalates			
— Bis (2-ethylhexyl) phthalate（DEHP*1）			
— Butyl benzyl phthalate（BBP）			
— Dibutyl phthalate（DBP）			
— Diisobutyl phthalate（DIBP）			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Dibutyl phthalate	C16H22O4	84-74-2
	Di (2-ethylhexyl) phthalate	C24H38O4	117-81-7
	Diisononyl phthalate	C24H38O4	28553-12-0
	Diisodecyl phthalate	C28H46O4	26761-40-0
	Butyl Benzyl phthalate	C19H20O4	85-68-7
	Di-n-octyl phthalate	C6H4（COO（CH2）7CH3）2	117-84-0
	Diisobutyl phthalate	(C6H4)(COOCH2CH(CH3)2)2	84-69-5
	Di-n-hexyl phthalate	C20H30O4	84-75-3

■ Toxic Substances Control Act (TSCA) substances

Table 3- 7

Substance/Substance Group Name: Phenol, isopropylated phosphate (3:1) - PIP / PIP (3:1)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Phenol, isopropylated phosphate	C27H33O4P	68937-41-7

Table 3- 8

Substance/Substance Group Name: Hexachlorobutadiene / HCBD			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Hexachlorobutadiene	C4Cl6 (260.76)	87-68-3

Table 3- 9

Substance/Substance Group Name: Pentachlorothiophenol / PCTP			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Pentachlorothiophenol	C6HCl5S	133-49-3

Table 3- 10

Substance/Substance Group Name: 2,4,6-TTBP – 2,4,6-tris (tert- butyl) phenol / TTBP			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	2,4,6-TTBP – 2,4,6-tris (tert- butyl) phenol	C18H30O (262.44)	732-26-3

■ Prohibited substances

Table 3- 11

Substance/Substance Group Name: Group Name: Asbestos			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Actinoid	—	77536-66-4
	Amosite	—	12172-73-5
	anthophyllite	—	77536-67-5
	Chrysotile	—	12001-29-5
	Crocidolite	—	12001-28-4
	Tremolite	—	77536-68-6
	Other asbestos	—	—

Table 3- 12

Substance/Substance Group Name: Tributyl Tin (TBT) and Triphenyl Tin (TPT)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Bis (Tributyltin) = Maleart	C2H2(COO)2((C4H9)3Sn)2	14275-57-1
	Tributyltin-chloride	(C4H9)3SnCl	1461-22-9
	A mixture of tributyltin-cyclopentane carboxylate and its analogs	(C4H9)3SnCO3C5H9	—
	Tributyltin = 1,2,3,4,4a, 4b, 5,6,10,10a-decahydro-7-isopropyl-1,Mixture of 4a-dimethyl-1-phenanthrene carboxylate and its analogs	—	—
	Other tributyltins (TBTs), triphenyltins (TPTs)	—	—

Table 3- 13

Substance/Substance Group Name: Dibutyltin (DBT) compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Dibutyltin Dichloride	C8H18Cl2Sn	683-18-1
	Dibutyltin Dilaurate	C32H64O4Sn	77-58-7
	Dibutyltin Maleate	C12H20O4Sn	78-04-6
	Dibutyltin oxide	C8H18OSn	818-08-6
	Dibutyltin Diacetate	C12H24O4Sn	1067-33-0
	Dibutyltin bis(2-ethylhexyl mercaptoacetate	C28H56O4S2Sn	10584-98-2
	Diisooctyl 2,2'-[(dibutylstannylene)bis(thio)]diacetate	C28H56O4S2Sn	25168-24-5

Table 3- 14

Substance/Substance Group Name: Dioctyltin (DOT) compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Dioctyltin oxide (DOTO)	C16H34OSn	870-08-6
	Dioctyltin dichloride（DOTC）	C16H34Cl2Sn	3542-36-7
	Dioctyl tin dilaurat（DOTL）	C40H80O4Sn	3648-18-8
	Dioctyl tinbis (2-ethylhexyl malate)	C40H72O8Sn	10039-33-5
	Dioctyltin bis (mercaptoacetic acid 2-ethylhexyl)（DOT(EHTG)）	C36H72O4S2Sn	15571-58-1
	Dioctyltin maleate（DOTM）	C20H36O4Sn	16091-18-2
	Diisooctyl 2,2'-[(dioctylstannylene)bis(thio)]diac（DOT(IOTG)）	C36H72O4S2Sn	26401-97-8
	Dioctyl tinbis (butylmalate)	C32H56O8Sn	29575-02-8
	Dioctyl tin bis (ethylmalate)	C28H48O8Sn	68109-88-6
	Dioctyl tinmercaptoacetic acid	C18H36O2SSn	15535-79-2
	Dioctyltin 3-mercaptopropionic acid	C19H38O2SSn	3033-29-2

Table 3- 15

Substance/Substance Group Name: Bis(tributyltin)oxide (TBTO))			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Metals compound	Bis(Tributyltin)oxide bis(Tributyltin)oxide	O(Sn(C4H9)3)2	56-35-9

Table 3- 16

Substance/Substance Group Name: Polychlorinated Biphenyls (PCBs)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	Monomethyl- tetrachloro-diphenyl methane (Ugilec 141)	C14H10Cl4	76253-60-6
	Monomethyl-dichloro-diphenylmethane（Ugilec 121、Ugilec 21）	—	81161-70-8
	Monomethyl-dibromo-diphenylmethane（DBBT）	—	99688-47-8
	Polychlorinated biphenyls	—	1336-36-3

Table 3- 17

Substance/Substance Group Name: Polychlorinated terphenyls(PCTs)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	PCT（Polychlorinated terphenyl）	—	61788-33-8

Table 3- 18

Substance/Substance Group Name: Polychlorinated naphthalenes（more than 2 chlorine atoms)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	1,2-dichloronaphthalene	C10H6Cl2	2050-69-3
	2,4-dichloronaphthalene	C10H6Cl2	2198-75-6
	1,4-dichloronaphthalene	C10H6Cl2	1825-31-6
	1,5-dichloronaphthalene	C10H6Cl2	1825-30-5
	1,6-dichloronaphthalene	C10H6Cl2	2050-72-8
	1,7-dichloronaphthalene	C10H6Cl2	2050-73-9
	1,8-dichloronaphthalene	C10H6Cl2	2050-74-0
	2,3-dichloronaphthalene	C10H6Cl2	2050-75-1
	2,6-dichloronaphthalene	C10H6Cl2	2065-70-5
	2,7-dichloronaphthalene	C10H6Cl2	2198-77-8
	dichloronaphthalene	C10H6Cl2	28699-88-9

Table 3- 19

Substance/Substance Group Name: Alkanes, C10-13, chloro			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	Undecane, 1,1,1,3,5,7,9,11,11-nonachloro	C11H15Cl9	18993-26-5
	Undecane, octachloro	C11H16Cl8	36312-81-9
	1,1,1,2-tetrachloroundecane	C11H20Cl4	63981-28-2
	Undecane, heptachloro	—	219697-10-6
	Undecane, nonachloro	—	219697-11-7
	Undecane, 1,2,10,11,?,?,?,?- octachloro	—	221174-07-8
	Undecane, decachloro	—	276673-33-7
	Undecane, 1,1,1,3,6,7,10,11- octachloro	—	601523-20-0
	Undecane, 1,1,1,3,9,11,11,11- octachloro	—	601523-25-5

Table 3- 20

Substance/Substance Group Name: Azocolourants and azodyes which form certain aromatic amines			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Halogenated organic compounds	4-aminobiphenyl	C12H11N	92-67-1
	Benzidine	C12H12N2	92-87-5
	4-Chloro-2-methylaniline	C7H8ClN	95-69-2
	2-Naphthylamine	C10H9N	91-59-8
	2-Aminoazotoluene	C14H15N3	97-56-3
	2-Methyl-5-nitroaniline	C7H8N2O2	99-55-8
	4-Chloroaniline	C6H6ClN	106-47-8
	4-Methoxy-m-phenylenediamine	C7H10N2O	615-05-4
	4,4'-Diaminodiphenylmethane	C13H14N2	101-77-9
	3,3'-Dichlorobenzidine	C12H10Cl2N2	91-94-1
	3,3'-Dimethoxybenzidine	C14H16N2O2	119-90-4
	3,3'-Dimethylbenzidine	C14H16N2	119-93-7
	4,4'-Diamino-3,3'-dimethyldiphenylmethane	C15H18N2	838-88-0
	2-Methoxy-5-methylaniline	C8H11NO	120-71-8
	4,4'-Methylenebis(2-chloroaniline)	C13H12Cl2N2	101-14-4
	4,4'-Diaminodiphenyl Ether	C12H12N2O	101-80-4
	4,4 ' -Diaminodiphenyl sulfide	C12H12N2S	139-65-1

Table 3- 21

Substance/Substance Group Name: Ozone Depleting Substances			
Class	Substance name	Chemical Formula	CAS No.
Montreal Protocol Annex A Class I	CFC-11	CFCl3	—
	CFC-12	CHF2Cl	—
	CFC-113	C2F3Cl3	—
	CFC-114	C2F4Cl2	—
	CFC-115	C2F5Cl	—
Class II	halon-1211	CF2BrCl	—
	halon-1301	CF3Br	—
	halon-2402	C2F4Br2	—
Montreal Protocol Annex B Class I	CFC-13	CF3Cl	—
	CFC-111	C2FCl5	—
	CFC-112	C2F2Cl4	—
	CFC-211	C3FCl7	—
	CFC-212	C3F2Cl6	—
	CFC-213	C3F3Cl5	—
	CFC-214	C3F4Cl4	—
	CFC-215	C3F5Cl3	—
	CFC-216	C3F6Cl2	—
	CFC-217	C3F7Cl	—
Class II	carbon tetrachloride	CCl4	—
Class III	1,1,1-trichloro- Methyl chloroform	C2H3Cl3	—

Table 3- 22

Substance/Substance Group Name: Perfluorooctane sulfonate (PFOS)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Pentadecafluorooctan sulfonic acid	C8HF17O3S	1763-23-1
	Potassium perfluorooctane-1- sulfonate	C8F17KO3S	2795-39-3
	Sodium perfluoro(octane-1-sulfonate	C8F17NaO3S	4021-47-0
	Lithium perfluorooctane sulfonate	C8F17LiO3S	29457-72-5
	Ammonium perfluorooctane sulfonate	C8H4F17NO3S	29081-56-9
	Tetraethylammonium perfluorooctane sulfonate	C12H12F17NO5S	70225-14-8
	Tetraethylammonium perfluorooctane sulfonate	C16H20F17NO3S	56773-42-3
	Didecyldimethylammonium perfluorooctane sulfonate	C30H48F17NO3S	251099-16-8

Table 3- 23

Substance/Substance Group Name: Perfluorooctanoic acid and its compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Pentadecafluorooctanoic Acid	C8HF15O2	335-67-1
	Ammonium Pentadecafluorooctanoate	C8H4F15NO2	3825-26-1
	Sodium pentadecafluorooctanoate	C8F15NaO2	335-95-5
	Potassium perfluorooctanoate	C8F15KO2	2395-00-8
	Silver(1+) pentadecafluorooctanoate	C8AgF15O2	335-93-3

Table 3- 24

Substance/Substance Group Name: Fluorinated greenhouse gases (PFC, SF6, HFC)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Carbon tetrafluoride	PFC-14	75-73-0
	Hexafluoroethane	PFC-116	76-16-4
	Propane, 1,1,1,2,2,3,3,3-octafluoro	PFC-218	76-19-7
	Decafluorobutane	PFC-31-10	355-25-9
	Dodecafluoro-n-pentane	PFC-41-12	678-26-2
	Tetradecafluorohexane	PFC-51-14	355-42-0
	Octafluorocyclobutane	PFC-C318	115-25-3
	Sulfur hexafluoride	SF6	2551-62-4
	Trifluoromethane	HFC-23	75-46-7
	Difluoromethane	HFC-32	75-10-5
	Methyl fluoride	HFC-41	593-53-3
	2H,3H-Decafluoropentane	HFC-43-10mee	138495-42-8
	Pentafluoroethane	HFC-125	354-33-6
	1,1,2,2-Tetrafluoroethane	HFC-134	359-35-3
	1,1,1,2-Tetrafluoroethane	HFC-134a	811-97-2
	1,1-Difluoroethane	HFC-152a	75-37-6
	1,1,2-Trifluoroethane	HFC-143	430-66-0
	1,1,1-Trifluoroethane	HFC-143a	420-46-2
	1,1,1,2,3,3,3-heptafluoropropane	HFC-227ea	431-89-0
	1,1,1,2,2,3-Hexafluoro-propane	HFC-236cb	677-56-5
	1,1,1,2,3,3- hexafluoropropane	HFC-236ea	431-63-0
	1,1,1,3,3,3-Hexafluoropropane	HFC-236fa	690-39-1
	1,1,2,2,3-Pentafluoropropane	HFC-245ca	679-86-7
	1,1,1,3,3-Pentafluoropropane	HFC-245fa	460-73-1
	1,1,1,3,3-Pentafluorobutane	HFC-365mfc	406-58-6
	1,2-Difluoroethane	HFC-152	624-72-6
	fluoroethane	HFC-161	353-36-6

Table 3- 25

Substance/Substance Group Name: Hexachlorobenzene （HCB）			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Hexachlorobenzene	C6Cl6	118-74-1

Table 3- 26

Substance/Substance Group Name: Specified benzotriazole			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	2-(2H-1,2,3-Benzotriazol-2-yl)-4,6-di-tert-butylphenol	C20H25N3O	3846-71-7

Table 3- 27

Substance/Substance Group Name: Dimethyl fumarate (DMF)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Dimethyl Fumarate	C6H8O4	624-49-7

Table 3- 28

Substance/Substance Group Name: Formaldehyde			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Formaldehyde	CH2O	50-00-0

Table 3- 29

Substance/Substance Group Name: Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs), their salts and C9-C14 PFCA-related substances			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Perfluorononan-1-oic acid	C9-PFCA	375-95-1
	Nonadecafluorodecanoic acid	C10-PFCA	335-76-2
	Henicosafluoroundecanoic acid	C11-PFCA	2058-94-8
	Tricosafluorododecanoic acid	C12-PFCA	307-55-1
	Pentacosafluorotridecanoic acid	C13-PFCA	72629-94-8
	Heptacosafluorotetradecanoic acid	C14-PFCA	376-06-7
	Heptacosafluorotetradecanoic acid	C14-PFCA	376-06-7
	Other C9-C14 PFCA-related substances	—	—

表 3- 30

Substance/Substance Group Name： perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	perfluorohexane sulfonic acid (PFHxS), its salts and PFHxS-related compounds	C6HF13O3S	355-46-4

表 3- 31

Substance/Substance Group Name： Dechlorane plus			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Dechlorane plus	C18H12CL12	13560-89-9
			135821-74-8
			135821-03-3

表 3- 32

Substance/Substance Group Name： UV-328			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	UV-328	C22H29N3O	25973-55-1

Table-4

List of prohibited substances / chemical substances (List of substances subject to REACH regulation restriction)

※From Article 67 of the REACH Regulation, substances contained in the preparations or articles of the substances whose restrictions are stipulated in Annex XVII cannot be manufactured, marketed or used unless the conditions of the restrictions are met.

Reference URL：https://echa.europa.eu/substances-restricted-under-reach

The following two items correspond to the restrictions of the REACH rule.

① When unacceptable risk is caused by manufacturing, launch or specific use

② When it is necessary to deal with these risks on the basis of the entire community

■ REACH regulation Annex XVII （Entry 1~76）

Rev.19 (1/3page)

Entry	Substance name	CAS No
1	Polychlorinated terphenyls (PCTs)	-
2	Chloroethene, (Vinyl chloride)	75-01-4
3	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive	-
4	Tris (2,3 dibromopropyl) phosphate	126-72-7
5	Benzene	71-43-2
6	Asbestos fibres	-
7	Tris(aziridinyl)phosphinoxide	545-55-1
8	Polybromobiphenyls, Polybrominatedbiphenyls (PBB)	59536-65-1
9	Soap bark powder (Quillaja saponaria) and its derivatives containing saponines	68990-67-0
	Powder of the roots of Helleborus viridis and Helleborus niger	-
	Powder of the roots of Veratrum album and Veratrum nigrum	-
	Benzidine and/or its derivatives	92-87-5
	o-Nitrobenzaldehyde	552-89-6
	Wood powder	-
10	Ammonium sulphide	12135-76-1
	Ammonium hydrogen sulphide	12124-99-1
	Ammonium polysulphide	9080-17-5
11	Volatile esters of bromoacetic acids	-
12	2-naphthylamine and its salts	91-59-8
13	Benzidine and its salts	92-87-5
14	4-Nitrobiphenyl	92-93-3
15	4-Aminobiphenyl xenylamine and its salts	92-67-1
16	Lead carbonates	-
17	Lead sulphates	-
18	Mercury compounds	-
18a	Mercury	7439-97-6
19	Arsenic compounds	-
20	Organostannic compounds	-
21	Di- μ -oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate C8H19BO3Sn (DBB)	75113-37-0
23	Cadmium and its compounds	-
24	Monomethyl-tetrachlorodiphenyl methane Trade name: Ugilec 141	76253-60-6
25	Monomethyl-dichloro-diphenyl methane Trade name: Ugilec 121, Ugilec 21	-
26	Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT	99688-47-8
27	Nickel and its compounds	-
28	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as carcinogen category 1A or 1B (Table 3.1) or carcinogen category 1 or 2 (Table 3.2) and listed as follows (See group members):	-
29	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as germ cell mutagen category 1A or 1B (Table 3.1) or mutagen category 1 or 2 (Table 3.2) and listed as follows (See group members):	-
30	Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as toxic to reproduction category 1A or 1B (Table 3.1) or toxic to reproduction category 1 or 2 (Table 3.2) and listed as follows (See group members):	-

■ **REACH regulation Annex XVII （Entry 1~76）**

Entry	Substance name	CAS No
31	Creosote; wash oil	8001-58-9
	Creosote oil; wash oil	61789-28-4
	Distillates (coal tar), naphthalene oils; naphthalene oil	84650-04-4
	Creosote oil, acenaphthene fraction; wash oil	90640-84-9
	Distillates (coal tar), upper; heavy anthracene oil	65996-91-0
	Anthracene oil	90640-80-5
	Tar acids, coal, crude; crude phenols	65996-85-2
	Creosote, wood	8021-39-4
	Low temperature tar oil, alkaline; extract residues (coal), low temperature coal tar alkaline	122384-78-5
32	Chloroform	67-66-3
34	1,1,2-Trichloroethane	79-00-5
35	1,1,2,2-Tetrachloroethane	79-34-5
36	1,1,1,2-Tetrachloroethane	630-20-6
37	Pentachloroethane	76-01-7
38	1,1-Dichloroethene	75-35-4
40	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2,substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not	-
41	Hexachloroethane	67-72-1
43	Azocolourants and Azodyes	-
45	Diphenylether, octabromo derivative C12H2Br8O	-
46	Nonylphenol C6H4(OH)C9H19	25154-52-3
46a	Nonylphenol ethoxylates (C2H4O)nC15H24O	-
47	Chromium VI compounds	-
48	Toluene	108-88-3
49	Trichlorobenzene	120-82-1
50	Polycyclic-aromatic hydrocarbons (PAH)	-
51	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7
	Dibutyl phthalate (DBP)	84-74-2
	Benzyl butyl phthalate (BBP)	85-68-7
	Diisobutyl phthalate (DIBP)	84-69-5
52	Di-isononyl phthalate (DINP)	28553-12-0 68515-48-0
	Di-isodecyl phthalate (DIDP)	26761-40-0 68515-49-1
	Di-n-octyl phthalate (DNOP)	117-84-0
54	2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3
55	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5
56	Methylenediphenyl diisocyanate (MDI) including the following specific isomers	26447-40-5
	4,4'-Methylenediphenyl diisocyanate	101-68-8
	2,4'-Methylenediphenyl diisocyanate	5873-54-1
	2,2'-Methylenediphenyl diisocyanate	2536-05-2
57	Cyclohexane	110-82-7
58	Ammonium nitrate (AN)	6484-52-2
59	Dichloromethane	75-09-2
60	Acrylamide	79-06-1
61	Dimethylfumarate (DMF)	624-49-7
62	Phenylmercury acetate	62-38-4
	Phenylmercury propionate	103-27-5
	Phenylmercury 2-ethylhexanoate	13302-00-6
	Phenylmercury octanoate	13864-38-5
	Phenylmercury neodecanoate	26545-49-3
63	Lead and its compounds	-
64	1,4-Dichlorobenzene	106-46-7
65	Inorganic ammonium salts	-

■ **REACH regulation Annex XVII （Entry 1~76)**

Entry	Substance name	CAS No
66	4,4'-isopropylidenediphenol Bisphenol A; BPA	80-05-7
68	C9-C14 linear and/or branched perfluorocarboxylic acids (C9-C14 PFCAs), their salts and C9-C14 PFCAs-related substances	-
69	Methanol	67-56-1
70	Octamethylcyclotetrasiloxane (D4) Decamethylcyclopentasiloxane (D5)	-
71	1-methyl-2-pyrrolidone	872-50-4
72	The following substances which are classified as carcinogenic, mutagenic or toxic for reproduction, category 1A or 1B (See group members)The substances listed in column 1 of the Table in Appendix 12	-
73	(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) silanetriolAny of its mono-, di- or tri-O-(alkyl) derivatives (TDFAs)	-
74	Diisocyanates　O=C=N-R-N=C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length	-
75	Substances in tattoo inks and permanent make up	-
76	N,N-dimethylformamide	68-12-2

Table-5

List of substances controlled for use / chemical substances (List of substances subject to REACH regulation , MDR , Latex)

■ REACH Regulation Candidate Substances of Very High Concern (SVHC) 30th

th	Substance name	CAS No
1	4,4'- Diaminodiphenylmethane(MDA)	101-77-9
	5-tert-butyl-2,4,6-trinitro-m-xylene(Musk xylene)	81-15-2
	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8
	Anthracene	120-12-7
	Benzyl butyl phthalate (BBP)	85-68-7
	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7
	Bis(tributyltin) oxide (TBTO)	56-35-9
	Cobalt dichloride	7646-79-9
	Diarsenic pentaoxide	1303-28-2
	Diarsenic trioxide	1327-53-3
	Dibutyl phthalate (DBP)	84-74-2
	Hexabromocyclododecane (HBCDD)	134237-52-8 134237-51-7 25637-99-4 3194-55-6 134237-50-6
	Lead hydrogen arsenate	7784-40-9
	Sodium dichromate	10588-01-9 7789-12-0
	Triethyl arsenate	15606-95-8
2	2,4-dinitrotoluene	121-14-2
	Anthracene oil	90640-80-5
	Anthracene oil, anthracene paste	90640-81-6
	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2
	Anthracene oil, anthracene paste, distn. lights	91995-17-4
	Anthracene oil, anthracene-low	90640-82-7
	Diisobutyl phthalate(DIBP)	84-69-5
	Lead chromate	7758-97-6
	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8
	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2
	Pitch, coal tar, high-temp.	65996-93-2
	Tris(2-chloroethyl) phosphate	115-96-8
	Acrylamide	79-06-1
3	Ammonium dichromate	7789-09-5
	Boric acid	11113-50-1 10043-35-3
	Disodium tetraborate, anhydrous	12179-04-3 1303-96-4 1330-43-4
	Potassium chromate	7789-00-6
	Potassium dichromate	7778-50-9
	Sodium chromate	7775-11-3
	Tetraboron disodium heptaoxide, hydrate	12267-73-1
	Trichloroethylene	79-01-6
4	2-ethoxyethanol	110-80-5
	2-methoxyethanol	109-86-4
	Acids generated from chromium trioxide and their oligomers. Group containing: Chromic acid, Dichromic acid, Dichromic acid, Oligomers of chromic acid and dichromic acid	7738-94-5 13530-68-2
	Chromium trioxide	1333-82-0
	Cobalt(II) carbonate	513-79-1
	Cobalt(II) diacetate	71-48-7
	Cobalt(II) dinitrate	10141-05-6
	Cobalt(II) sulphate	10124-43-3
5	1,2,3-trichloropropane	96-18-4
	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6
	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4
	1-Methyl-2-pyrrolidone (NMP)	872-50-4
	2-ethoxyethyl acetate	111-15-9
	Hydrazine	302-01-2 7803-57-8
	Strontium chromate	7789-06-2

■ REACH Regulation Candidate Substances of Very High Concern (SVHC) 30th

th	Substance name	CAS No
6	1,2-dichloroethane	107-06-2
	2,2'-dichloro-4,4'-methylenedianiline	101-14-4
	2-Methoxyaniline, o-Anisidine	90-04-0
	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9
	Aluminosilicate Refractory Ceramic Fibresare fibres	—
	Arsenic acid	7778-39-4
	Bis(2-methoxyethyl) ether	111-96-6
	Bis(2-methoxyethyl) phthalate	117-82-8
	Calcium arsenate	7778-44-1
	Dichromium tris(chromate)	24613-89-6
	Formaldehyde, oligomeric reaction products with aniline	25214-70-4
	Lead diazide, Lead azide	13424-46-9
	Lead dipicrate	6477-64-1
	Lead styphnate	15245-44-0
	N,N-dimethylacetamide	127-19-5
	Pentazinc chromate octahydroxide	49663-84-5
	Phenolphthalein	77-09-8
	Potassiumhydroxyoctaoxodizincatedichromate	11103-86-9
	Trilead diarsenate	3687-31-8
	Zirconia Aluminosilicate Refractory Ceramic Fibresare fibres	—
7	1,2-bis(2-methoxyethoxy)ethane(TEGDME,triglyme)	112-49-2
	1,2-dimethoxyethane,ethylene glycol dimethyl ether (EGDME)	110-71-4
	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9
	1,3,5-tris[(2S and 2R)-2,3-epoxypropyl]-1,3,5-triazine-2,4,6-(1H,3H,5H)-trione (β -TGIC)	59653-74-6
	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol(with ≧ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2))	561-41-1
	4,4'-bis(dimethylamino)benzophenone(Michler's ketone)	90-94-8
	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3) with ≧ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	548-62-9
	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Blue 26) with ≧ 0.1% of Michler's ketone (EC No. 202-027-5) or Michler's base (EC No. 202-959-2)	2580-56-5
	Diboron trioxide	1303-86-2
	Formamide	75-12-7
	Lead(II) bis(methanesulfonate)	17570-76-2
	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1
	α,α-Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)with ≧ 0.1% of Michler's ketone (EC No. 202-027-5) orMichler's base (EC No. 202-959-2)	6786-83-0
8	1,2-Benzenedicarboxylic acid, dipentyl ester, branched and linear	84777-06-0
	1,2-diethoxyethane	629-14-1
	1-bromopropane (n-propyl bromide)	106-94-5
	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2
	4,4'-methylenedi-o-toluidine	838-88-0
	4,4'-oxydianiline and its salts	101-80-4
	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylatedcovering well-defined substances and UVCB substances, polymers and homologues	—
	4-aminoazobenzene	60-09-3
	4-methyl-m-phenylenediamine	95-80-7
	4-Nonylphenol, branched and linearsubstances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	—
	6-methoxy-m-toluidine	120-71-8
	[Phthalato(2-)]dioxotrilead	69011-06-9
	Acetic acid, lead salt, basic	51404-69-4
	Biphenyl-4-ylamine	92-67-1
	Bis(pentabromophenyl) ether (decabromodiphenyl ether)	1163-19-5
	Cyclohexane-1,2-dicarboxylic anhydride all possible combinations of the cis- and trans-isomers cis-cyclohexane-1,2-dicarboxylic anhydride trans-cyclohexane-1,2-dicarboxylic anhydride	85-42-7 13149-00-3 14166-21-3
	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide)) (ADCA)	123-77-3
	Dibutyltin dichloride (DBTC)	683-18-1
	Diethyl sulphate	64-67-5
	Diisopentyl phthalate	605-50-5
	Dimethyl sulphate	77-78-1
	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7
	Dioxobis(stearato)trilead	12578-12-0

■ REACH Regulation Candidate Substances of Very High Concern (SVHC) 30th

th	Substance name	CAS No
8	Fatty acids, C16-18, lead salts	91031-62-8
	Furan	110-00-9
	Henicosafluoroundecanoic acid	2058-94-8
	Heptacosafluorotetradecanoic acid	376-06-7
	Hexahydromethylphthalic anhydride including cis- and trans- stereo isomeric forms and all possible combinations of the isomers Hexahydro-1-methylphthalic anhydride,Hexahydromethylphthalic anhydride Hexahydro-4-methylphthalic anhydride,Hexahydro-3-methylphthalic anhydride	48122-14-1 25550-51-0 19438-60-9 57110-29-9
	Lead bis(tetrafluoroborate)	13814-96-5
	Lead cyanamidate	20837-86-9
	Lead dinitrate	10099-74-8
	Lead monoxide (lead oxide)	1317-36-8
	Lead oxide sulfate	12036-76-9
	Lead titanium trioxide	12060-00-3
	Lead titanium zirconium oxide	12626-81-2
	Methoxyacetic acid	625-45-6
	Methyloxirane (Propylene oxide)	75-56-9
	N,N-dimethylformamide	68-12-2
	N-methylacetamide	79-16-3
	N-pentyl-isopentylphthalate	776297-69-9
	o-aminoazotoluene	97-56-3
	o-toluidine	95-53-4
	Orange lead (lead tetroxide)	1314-41-6
	Pentacosafluorotridecanoic acid	72629-94-8
	Pentalead tetraoxide sulphate	12065-90-6
	Pyrochlore, antimony lead yellow	8012-00-8
	Silicic acid (H2Si2O5), barium salt (1:1), lead-doped with lead (Pb) content above the applicable generic concentration limit for 'toxicity for reproduction' Repr. 1A (CLP) or category 1 (DSD), the substance is a member of the group entry of lead compounds, with index number 082-001-00-6 in Regulation (EC) No 1272/2008	68784-75-8
	Silicic acid, lead salt	11120-22-2
	Sulfurous acid, lead salt, dibasic	62229-08-7
	Tetraethyllead	78-00-2
	Tetralead trioxide sulphate	12202-17-4
	Tricosafluorododecanoic acid	307-55-1
	Trilead bis(carbonate) dihydroxide	1319-46-6
	Trilead dioxide phosphonate	12141-20-7
9	4-Nonylphenol, branched and linear, ethoxylated substances with a linear and/or branched alkyl chain with a carbon number of 9 covalently bound in position 4 to phenol, ethoxylated covering UVCB- and well-defined substances, polymers and homologues, which include any of the individual isomers and/or combinations thereof	—
	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1
	Cadmium	7440-43-9
	Cadmium oxide	1306-19-0
	Dipentyl phthalate (DPP)	131-18-0
	Pentadecafluorooctanoic acid (PFOA)	335-67-1
10	Cadmium sulphide	1306-23-6
	Dihexyl phthalate	84-75-3
	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0
	Disodium 4-amino-3-[[4'-[(2,4-diaminophenyl)azo][1,1'-biphenyl]-4-yl]azo] -5-hydroxy-6-(phenylazo)naphthalene-2,7-disulphonate (C.I. Direct Black 38)	1937-37-7
	Imidazolidine-2-thione (2-imidazoline-2-thiol)	96-45-7
	Lead di(acetate)	301-04-2
	Trixylyl phosphate	25155-23-1
11	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4
	Cadmium chloride	10108-64-2
	Sodium perborate, perboric acid, sodium salt	11138-47-9 15120-21-5
	Sodium peroxometaborate	7632-04-4
12	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1
	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7
	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1
	Cadmium fluoride	7790-79-6
	Cadmium sulphate	10124-36-4 31119-53-6

■ REACH Regulation Candidate Substances of Very High Concern (SVHC) 30th

th	Substance name	CAS No
12	Reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)	—
13	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters or mixed decyl and hexyl octyl diesters with ≧ 0.3% of dihexyl phthalate (EC No. 201-559-5)	68515-51-5 68648-93-1
	5-sec-butyl-2-(2,4-dimethylcyclohex-3-en-1-yl)-5-methyl-1,3-dioxane [1], 5-sec-butyl-2-(4,6-dimethylcyclohex-3-en-1-yl)-5-methyl-1, 3-dioxane [2]covering any of the individual stereoisomers of [1] and [2] or any combination thereof	—
14	1,3-propanesultone	1120-71-4
	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1
	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3
	Nitrobenzene	98-95-3
	Perfluorononan-1-oic-acid and its sodium and ammonium salts	375-95-1 21049-39-8 4149-60-4
15	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8
16	4,4'-isopropylidenediphenol(Bisphenol A ,BPA)	80-05-7
	4-heptylphenol, branched and linearsubstances with a linear and/or branched alkyl chain with a carbon number of 7 covalently bound predominantly in position 4 to phenol, covering also UVCB- and well-defined substances which include any of the individual isomers or a combination thereof	—
	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2 3830-45-3 3108-42-7
	p-(1,1-dimethylpropyl)phenol	80-46-6
17	Perfluorohexane-1-sulphonic acid and its salts (PFHxS)	—
18	Chrysene	218-01-9
	Benz[a]anthracene	56-55-3
	Cadmium nitrate	10325-94-7
	Cadmium hydroxide	21041-95-2
	Cadmium carbonate	513-78-0
	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"TM)[covering any of its individual anti- and syn-isomers or any combination thereof]	—
	Reaction products of 1,3,4-thiadiazolidine-2,5-dithione, formaldehyde and 4-heptylphenol, branched and linear (RP-HP) [with ≧0.1% w/w 4-heptylphenol, branched and linear]	—
19	Octamethylcyclotetrasiloxane (D4)	556-67-2
	Decamethylcyclopentasiloxane (D5)	541-02-6
	Dodecamethylcyclohexasiloxane (D6)	540-97-6
	Lead	7439-92-1
	Disodium octaborate	12008-41-2
	Benzo[ghi]perylene	191-24-2
	Terphenyl hydrogenated	61788-32-7
	Ethylenediamine	107-15-3
	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7
	Dicyclohexyl phthalate (DCHP)	84-61-7
20	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6
	Benzo[k]fluoranthene	207-08-9
	Fluoranthene	206-44-0
	Phenanthrene	85-01-8
	Pyrene	129-00-0
	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor)	15087-24-8
21	2-methoxyethyl acetate	110-49-6
	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with ≧ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	—
	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	—
	4-tert-butylphenol	98-54-4
22	Diisohexyl phthalate	71850-09-4
	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1
	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5
	Perfluorobutane sulfonic acid (PFBS) and its salts	—
23	1-vinylimidazole	1072-63-5
	2-methylimidazole	693-98-1
	Butyl 4-hydroxybenzoate	94-26-8
	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4
24	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8
	Dioctyltin dilaurate, stannane, dioctyl-, bis(coco acyloxy) derivs., and any other stannane, dioctyl-, bis(fatty acyloxy) derivs. wherein C12 is the predominant carbon number of the fatty acyloxy moiety	—

■ REACH Regulation Candidate Substances of Very High Concern (SVHC) 30th

th	Substance name	CAS No
25	2-(4-tert-butylbenzyl)propionaldehyde and its individual stereoisomers	—
	Orthoboric acid, sodium salt	13840-56-7
	2,2-bis(bromomethyl)propane1,3-diol (BMP); 2,2-dimethylpropan-1-ol, tribromo derivative/3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA); 2,3-dibromo-1-propanol (2,3-DBPA)	3296-90-0 36483-57-5 1522-92-5 96-13-9
	Glutaral	111-30-8
	Medium-chain chlorinated paraffins (MCCP) [UVCB substances consisting of more than or equal to 80% linear chloroalkanes with carbon chain lengths within the range from C14 to C17]	—
	Phenol, alkylation products (mainly in para position) with C12-rich branched or linear alkyl chains from oligomerisation, covering any individual isomers and/ or combinations thereof (PDDP)	—
	1,4-dioxane	123-91-1
	4,4'-(1-methylpropylidene)bisphenol; (bisphenol B)	77-40-7
26	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol (DBMC)	119-47-1
	tris(2-methoxyethoxy)vinylsilane	1067-53-4
	(±)-1,7,7-trimethyl-3-[(4-methylphenyl)methylene]bicyclo[2.2.1]heptan-2-one covering any of the individual isomers and/or combinations thereof (4-MBC)	—
	S-(tricyclo[5.2.1.0'2,6]deca-3-en-8(or 9)-yl) O-(isopropyl or isobutyl or 2-ethylhexyl) O-(isopropyl or isobutyl or 2-ethylhexyl) phosphorodithioate	255881-94-8
27	N-(hydroxymethyl)acrylamide	924-42-5
28	1,1'-[ethane-1,2-diylbisoxy]bis[2,4,6-tribromobenzene]	37853-59-1
	2,2',6,6'-tetrabromo-4,4'-isopropylidenediphenol	79-94-7
	4,4'-sulphonyldiphenol	80-09-1
	Barium diboron tetraoxide	13701-59-2
	Bis(2-ethylhexyl) tetrabromophthalate covering any of the individual isomers and/or combinations thereof	—
	Isobutyl 4-hydroxybenzoate	4247-02-3
	Melamine	108-78-1
	Perfluoroheptanoic acid and its salts	—
	reaction mass of 2,2,3,3,5,5,6,6-octafluoro-4-(1,1,1,2,3,3,3-heptafluoropropan-2-yl)morpholine and 2,2,3,3,5,5,6,6-octafluoro-4-(heptafluoropropyl)morpholine	—
29	bis(4-chlorophenyl) sulphone	80-07-9
	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	75980-60-8
30	2,4,6-tri-tert-butylphenol	732-26-3
	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol	3147-75-9
	2-(dimethylamino)-2-[(4-methylphenyl)methyl]-1-[4-(morpholin-4-yl)phenyl]butan-1-one	119344-86-4
	Bumetrizole	3896-11-5
	Oligomerisation and alkylation reaction products of 2-phenylpropene and phenol	—

■ MDR target substance

No.	Substance name	CAS No
1	Substances whose use is restricted in the Annex I 10.4 Chemicals section of the EU Medical Device Regulation (MDR). → CLP Regulation ((EC) 1272/2008 2008) ANNEX VI part 3 CMR Category 1A and 1B Substances. → Those listed in Article 59 of the REACH Regulation ((EC) 1907/2006 2006) on the list of candidate substances for authorization based on endocrine disruption to humans. → According to the mandate decree approved by the European Commission in accordance with the first subparagraph of Section 5 (3) of the Biocidal Product Regulations (BPRBPR).	—

■ Latex target substance

No.	Substance name	CAS No
1	Food Contact Recycled Plastic Materials and Articles Regulation →Listed in Annex I Plastic Food Contact Materials (FCM) permitted for use in the European Union under Regulation 10/2011/EU.	9006-04-6
2	Plastic Materials and Articles Regulation →listed in Annex I of Commission Regulation (EU) No 10/2011 on plastic materials and articles intended to come into contact with food.	

Table-6
To Nakanishi Inc.

Date :

Declaration of Non-Use of Prohibited Substances

・Nakanishi Product Number

☐RoHS Directive 2011/65/EU,(EU)2015/863 (Place a check if applicable.)

Signature :
Print Name :
Job Title :
Company Name :
Address :
Telephone No. :
Fax No. :

We hereby declare that all parts and products that we deliver to NSK use no prohibited substance, defined below, if any, below the threshold, or exempt in accordance with NSK Procurement Guidelines.

■ EU RoHS Directive

No	化学物質名	Chemical substances	CAS No	含有濃度の閾値[Threshold level]
1	カドミウム及びその化合物	Cadmium and its compounds	-	100ppm以下 (100ppm or less)
2	鉛およびその化合物	Lead and its compounds	-	1000ppm以下 (1000ppm or less)
3	水銀及びその化合物	Mercury and its compounds	-	1000ppm以下 (1000ppm or less)
4	六価クロム化合物	Hexavalent chromium compounds	-	1000ppm以下 (1000ppm or less)
5	ポリ臭化ビフェニール類 (PBB類)	Polybrominated biphenyls (PBBs)	-	1000ppm以下 (1000ppm or less)
6	ポリ臭化ジフェニルエーテル類 (PBDE類)	Polybrominated diphenyl ethers (PBDEs)	-	1000ppm以下 (1000ppm or less)
7	フタル酸-2-エチルヘキシル(DEHP)	Bis (2-ethylhexyl) phthalate	-	1000ppm以下 (1000ppm or less) ※電気/電子製品以外を除く (Except for non-electrical and electronic equipment)
8	フタル酸ブチルベンジル(BBP)	Butyl benzyl phthalate	-	1000ppm以下 (1000ppm or less) ※電気/電子製品以外を除く (Except for non-electrical and electronic equipment)
9	フタル酸ジブチル(DBP)	Dibutyl phthalate	-	1000ppm以下 (1000ppm or less) ※電気/電子製品以外を除く (Except for non-electrical and electronic equipment)
10	フタル酸ジイソブチル(DIBP)	Diisobutyl phthalate	-	1000ppm以下 (1000ppm or less) ※電気/電子製品以外を除く (Except for non-electrical and electronic equipment)

■RoHS exemption
The RoHS Directive stipulates "exempted uses" that permit the inclusion of prohibited substances for use that cannot be technically substituted.
The revised RoHS Directive (2011/65/EU: RoHS2) has two types of lists: AnnexIII and AnnexIV.
Please check the latest lists and strictly observe that prohibited substances do not contain more than the allowable amount.

■ REACH Regulation List of Restricted Substances

11	REACH規則 附属書XVII 対象化学物質	REACH Regulation Annex X VII Applicable chemical substances	-	制限の条件に合致しない場合には使用禁止 Prohibition if the restriction conditions are not met

■REACH regulation Annex XVII (EU)
From Article 67 of the REACH Regulation, substances contained in the preparations or articles of the substances whose restrictions are stipulated in Annex XVII cannot be manufactured, marketed or used unless the conditions of the restrictions are met.

■ Toxic Substances Control Act (TSCA) substances

12	りん酸トリス(イソプロピルフェニル (PIP/PIP(3:1))	Phenol,Isopropylated Phosphate (3:1) (PIP 3:1)	68937-41-7	使用禁止 (Prohibition of use)
13	DecaBDE-デカブロモジフェニルエーテル (DBDE)	Decabromodiphenyl (DBDE)	1163-19-5	使用禁止 (Prohibition of use)
14	ヘキサクロロブタジエン (HCBD)	Hexachlorobutadiene (HCBD)	87-68-3	使用禁止 (Prohibition of use)
15	ペンタクロロチオフェノール (PCTP)	Pentachlorothiophenol (PCTP)	133-49-3	10000ppm以下 (10000ppm or less)
16	2,4,6-トリス(tert-ブチル)フェノール (TTBP)	2,4,6-tris(tert-butyl)phenol (TTBP)	732-26-3	3000ppm以下 (3000ppm or less)

■U. S. TSCA exclusions and exemptions
U.S Toxic Substances Control Act (TSCA) defines "Exclusions" that allow the activities of manufacture, import, export, process and commertially distribute products/molded products containing such PBT chemicals under certain conditions. If you would like to get the advantage of such exclusions, you should make sure that your products are out of the prohibited scope by referring to Section 6 of TSCA, requirements for specific chemical substances and mixtures.

17	アスベスト類	Asbestos	-	意図的な使用禁止 (Intentional use is prohibited)
18	有機錫化合物:トリブチル錫類(TBT) トリフェニル錫類(TPT)	Tributyl Tin (TBT) and Triphenyl Tin (TPT)	-	意図的な使用禁止かつ、スズとして1000ppm以下 Intentional use is prohibited, however, 1000ppm or less as tin
19	ジブチルスズ化合物 (DBT類) ジオクチルスズ化合物 (DOT類)	Dibutyltin (DBT) compounds Dioctyltin (DOT) compounds	-	スズとして1000ppm以下 (1000ppm or less as tin)
20	有機錫化合物:酸化トリブチル錫類(TBTO)	Bis(tributyltin)oxide (TBTO)	56-35-9	意図的な使用禁止 (Intentional use is prohibited)
21	デカBDE	Deca-BDE	1163-19-5	意図的な使用禁止 (Intentional use is prohibited)
22	ポリ塩化ビフェニル類 (PCB類)	Polychlorinated Biphenyls (PCBs)	-	意図的な使用禁止 (Intentional use is prohibited)
23	ポリ塩化ターフェニル類 (PCT類)	Polychlorinated Terphenyls(PCTs)	61788-33-8	意図的な使用禁止かつ、50ppm以下 (Intentional use is prohibited, however,50ppm or less as tin)
24	ポリ塩化ナフタレン類 (塩素数が2以上)	Polychlorinated naphthalenes (more than 2 chlorine atoms)	-	意図的な使用禁止 (Intentional use is prohibited)
25	短鎖型塩化パラフィン	Alkanes, C10-13, chloro	-	意図的な使用禁止かつ、1000ppm以下 (Intentional use is prohibited, however,1000ppm or less as tin)
26	特定アミンを生成するアゾ染料・顔料	Azocolourants and azodyes which form certain aromatic amines	-	意図的な使用禁止かつ、30ppm以下 (Intentional use is prohibited, however,30ppm or less as tin)
27	オゾン層破壊物質 (HCFCを除く)	Ozone Depleting Substances	-	意図的な使用禁止 (Intentional use is prohibited)
28	PFOS(ﾊﾟｰﾌﾙｵﾛｵｸﾀﾝｽﾙﾎﾝ酸)	Perfluorooctane sulfonates	-	意図的な使用禁止かつ、1000ppm以下 (Intentional use is prohibited, however,1000ppm or less as tin)
29	PFOA(ﾍﾟﾙﾌﾙｵﾛｵｸﾀﾝ酸)	Perfluorooctanoic acid	-	意図的な使用禁止かつ、PFOA及びその塩として0.025ppm以下 PFOA関連物質の合計濃度1ppm以下 Intentional prohibition and 0.025ppm or less as PFOA and its salt Total concentration of PFOA-related substances 1 ppm or less
30	フッ素系温室効果ガス (HFC、PFC、SF6)	Fluorinated greenhouse gases (PFC, SF6, HFC)	-	意図的な使用禁止 (Intentional use is prohibited)
31	HCB(ﾍｷｻｸﾛﾛﾍﾞﾝｾﾞﾝ)	Hexachlorobenzene	-	意図的な使用禁止 (Intentional use is prohibited)
32	放射性物質	Redioactive substances	-	意図的な使用禁止 (Intentional use is prohibited)
33	特定ベンゾトリアゾール (第一種特定化学物質)	Specified benzotriazole	3846-71-7	意図的な使用禁止 (Intentional use is prohibited)
34	ジメチルフマレート (DMF)	Dimethyl fumarate	624-49-7	意図的な使用禁止かつ、0.1ppm以下 (Intentional use is prohibited, however,0.1ppm or less as tin)
35	ホルムアルデヒド	Formaldehyde	50-00-0	意図的な使用禁止かつ、75ppm以下 (Intentional use is prohibited, however,75ppm or less as tin)
36	C9-C14のペルフルオロカルボン酸とその塩およびC9-C14 PFCA 関連物質 (PFCA)	Perfluorocarboxylic acids containing 9 to 14 carbon atoms in the chain (C9-C14 PFCAs),their salts and C9-C14 PFCA-related substances (PFCA)	-	意図的な使用禁止かつ、PFCA及びその塩として0.025ppm以下 PFCA関連物質の合計濃度0.26ppm以下 Intentional prohibition and 0.025 ppm or less as PFCA and its salt Total concentration of PFCA-related substances 0.26ppm or less
37	ペルフルオロヘキサンスルホン酸 (PFHxS) と その塩およびPFHxS関連物質	Perfluorohexane sulfonic acid (PFHxS) and its salts and PFHxS related substances	355-46-4	意図的な使用禁止 Intentional use is prohibited
38	デクロランプラス	Dechlorane plus	13560-89-9 135821-74-8 135821-03-3	意図的な使用禁止 Intentional use is prohibited
39	UV-328	UV-328	25973-55-1	意図的な使用禁止 Intentional use is prohibited

Remarks: You can use the box below for your comments.

Nakanishi Inc. Confirmation Column				
			Valification	Confirmation
Judgment	RoHSa			
	RoHSb			
	RoHSc			
chemSHERPA information		Yes . No		