

## **Green Procurement Guidelines**

**NAKANISHI INC.**



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# 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

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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

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With the support of our suppliers, NSK delivers environmentally friendly 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
- Controlled Substances: See Table 4

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

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NSK asks our suppliers for environmental considerations. Regarding chemical substances contained in products, we require 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 5 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 2, please submit “Non-use Warranty” in Table 5 (distributed at the time of request for investigation).

In addition, please submit “Non-use Warranty” in Table 5, 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

Rev.13 (1/2 page)

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)
2	Lead and its compounds	(See Appendix 2-2) (See Appendix 3-2)	-	1000ppm or less	RoHS directive (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)
5	Polybrominated biphenyls (PBBs)	(See Appendix 2-5) (See Appendix 3-5)	-	1000ppm or less	RoHS directive (EU)
6	Polybrominated diphenyl ethers (PBDEs)	(See Appendix 2-5) (See Appendix 3-5)	-	1000ppm or less	RoHS directive (EU)
7	Bis (2-ethylhexyl) phthalate	(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	(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	(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	(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.

■ Toxic Substances Control Act (TSCA) substances

No	化学物質名	参照	CAS No	含有濃度の閾値	参照法令
11	Phenol, isopropylated phosphate (3:1) - PIP / PIP (3:1)	(See Appendix 2-7) (See Appendix 3-7)	68937-41-7	Prohibition of use	「Toxic Substances Control Act (TSCA)」
12	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」
13	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」
14	Pentachlorothiophenol / PCTP	(See Appendix 2-9) (See Appendix 3-9)	133-49-3	1000ppm or less	「Toxic Substances Control Act (TSCA)」
15	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 commercially 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.

■ Prohibited substances

Rev.13 (2/2 page)

No	Chemical substances	Chemical substances	CAS No	Threshold level	Main relevant regulations
16	Asbestos	(See Appendix 2-7) (See Appendix 3-7)	-	「Intentional use is prohibited, however,1000ppm or less as tin」	「REACH regulation Annex XV II (EU)」
17	Tributyl Tin (TBT) and Triphenyl Tin (TPT)	(See Appendix 2-8) (See Appendix 3-8)	-	「Intentional use is prohibited, however,1000ppm or less as tin」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「REACH regulation Annex XV II (EU)」
18	Dibutyltin (DBT) compounds Diocetyl tin (DOT) compounds	(See Appendix 2-9 and 2-10) (See Appendix 3-9 and 3-10)	-	「1000ppm or less as tin」	「REACH regulation Annex XV II (EU)」
19	Bis(tributyltin)oxide (TBTO)	(See Appendix 2-11) (See Appendix 3-11)	56-35-9	「Intentional use is prohibited」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「REACH regulation Annex XV II (EU)」
20	Deca-BDE	(See Appendix 2-5) (See Appendix 3-5)	1163-19-5	Intentional use is prohibited	「REACH regulation Annex XV II (EU)」
21	Polychlorinated Biphenyls (PCBs)	(See Appendix 2-12) (See Appendix 3-12)	-	「Intentional use is prohibited」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「REACH regulation Annex XV II (EU)」 「Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021」
22	Polychlorinated Terphenyls(PCTs)	(See Appendix 2-13) (See Appendix 3-13)	61788-33-8	「Intentional use is prohibited, however,50ppm or less as tin」	「REACH regulation Annex XV II (EU)」
23	Polychlorinated naphthalenes (more than 2 chlorine atoms)	(See Appendix 2-14) (See Appendix 3-14)	-	「Intentional use is prohibited」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021」
24	Alkanes, C10-13, chloro	(See Appendix 2-15) (See Appendix 3-15)	-	「Intentional use is prohibited, however,1000ppm or less as tin」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「REACH regulation Annex XV II (EU)」 「Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021」
25	Azocolourants and azodyes which form certain aromatic amines	(See Appendix 2-16) (See Appendix 3-16)	-	「30ppm or less as textile / leather products」	「REACH regulation Annex XV II (EU)」
26	Ozone Depleting Substances	(See Appendix 2-17) (See Appendix 3-17)	-	「Intentional use is prohibited」	「Law concerning the Protection of the Ozone Layer」 「Montreal Protocol on Substances that Deplete the Ozone Layer」
27	Perfluorooctane sulfonates,	(See Appendix 2-18) (See Appendix 3-18)	-	「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」
28	Perfluorooctanoic acid	(See Appendix 2-19) (See Appendix 3-19)	-	「Intentional use is prohibited, however,1ppm or less as tin」	「Japan Chemical Examination Law/Type 1 specified chemical substances」 「REACH regulation Annex XV II (EU)」 「Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021」
29	Fluorinated greenhouse gases (PFC, SF6, HFC)	(See Appendix 2-20) (See Appendix 3-20)	-	「Intentional use is prohibited」	「EU regulation No 517/2014」
30	Hexachlorobenzene (HCB)	(See Appendix 2-21) (See Appendix 3-21)	-	「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 mixtures」 「Persistent Organic Pollutants (POPs) Regulation (EC) No.2019/1021」
31	Radioactive substances	(See Appendix 2-22)	-	「Intentional use is prohibited」	「Law Concerning Prevention from Radiation Hazards due to Radio-Isotopes, etc.」 「Law for the Regulation of Nuclear Source Material, Nuclear Fuel Material, and Reactors」 「Directive 2013/59/Euratom」
32	Specified benzotriazole	(See Appendix 2-23) (See Appendix 3-22)	3846-71-7	「Intentional use is prohibited」	「Japan Chemical Examination Law/Type 1 specified chemical substances」
33	Dimethyl fumarate (DMF)	(See Appendix 2-24) (See Appendix 3-23)	624-49-7	「0.1ppm or less as tin」	「REACH regulation Annex XV II (EU)」
34	Formaldehyde	(See Appendix 2-25) (See Appendix 3-24)	50-00-0	「75ppm of textile」	「BGB I 1990/194: Formaldehyde Restriction § 2, 12/2/1990」



## Table-2 Prohibited substances / substances List

### ■ EU RoHS Directive

Table 2- 1

Rev.13 (1/5 page)

Substance/Substance Group Name: Cadmium and its compounds	
Regulated items	
All applications except those in the exemptions shown below. (See Table 2-26 for packaging material)	
[Applications and use examples] Stabilizer/pigment/dye/paint/ink used for plastics (including rubber, film), phosphor, alloy, packaging materials, etc	
Exemption	- Uses in batteries as materials for batteries <sup>*1*2</sup> (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 <sup>*1</sup>	
All applications except those in the exemptions shown below. (See Table 2-26 for packaging material)	
[Applications and use examples] Paint, pigment, dye, ink, stabilizer in plastic (including rubber) material Solder coating on and packaging material of component external electrode, lead terminal, etc	
Exemption	- Uses in batteries <sup>*2*3</sup> (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 except those in the exemptions shown below. (See Table 2-26 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 <sup>*1*2</sup> 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 and leather components that have contact with the skin. (2) Other than the above: All applications except those in the exemptions shown below. (See Table 2-26 for packaging material)	
[Applications and use examples] Rust-proof treatment, plastics, paint, pigment, ink, packaging materials, leather (e.g. exterior parts of products, leather parts of carrying cases) etc.	
Exemption	- Uses in batteries <sup>*1*2</sup> (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

Rev.13 (2/5 page)

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, and devices covered under the EU RoHS Directive, must not contain the above substances exceeding 1000ppm in total. As for PBDE, articles (e.g. materials for batteries <sup>*1*</sup> , 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 and regulation, and take actions if necessary.

Table 2- 6

Substance/Substance Group Name: Four phthalates — Bis (2-ethylhexyl) phthalate (DEHP <sup>*1</sup> ) ,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 <sup>*2</sup> , Packaging materials <sup>*3</sup> , 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 are restricted in total concentration under EU REACH.

## ■ Toxic Substances Control Act (TSCA) substances

Table 2- 7

Substance/Substance Group Name: Phenol, isopropylated phosphate (3:1) - 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.13 (3/5 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 skin.

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, lubricant oil, electric insulator, solvent, electrolyte, plasticizer, fire-retardant, flame retardant, coating agent for electric 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, lubricant oil, electric insulator, solvent, electrolyte, plasticizer, fire-retardant, flame retardant, coating agent for electric wires and cables, dielectric sealant.

Table 2- 18

Rev.13 (4/5 page)

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 and/or oral cavities for an extended 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 than those shown in the Exemptions below
[Applications and use examples] Fluorescin/Fluor rubber, Fluorescin 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 foam, Rigid polystyrene foam, Polystyrene high pressure foam spray, and pressure foam spray, and Polystyrene low pressure foam 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

Rev.13 (5/5 page)

Substance/Substance Group Name: Radioactive 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 pallets is clearly stated. <sup>*1</sup>
*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-3 Prohibited Substances / Substances CAS Number List

#### ■ EU RoHS Directive

Table 3- 1

Rev.13 (1/7 page)

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	CdCl <sub>2</sub>	10108-64-2
	Cadmium sulfate	CdSO <sub>4</sub>	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	PbCO <sub>3</sub>	598-63-0
	Lead dioxide	PbO <sub>2</sub>	1309-60-0
	Trilead tetraoxide	Pb <sub>3</sub> O <sub>4</sub>	1314-41-6
	Lead(II) sulfide	PbS	1314-87-0
	Lead(II) oxide	PbO	1317-36-8
	Lead(II) Carbonate Basic	2PbCO <sub>3</sub> ·Pb(OH) <sub>2</sub>	1319-46-6
	Lead(II) carbonate basic	2PbCO <sub>3</sub> ·Pb(OH) <sub>2</sub>	1344-36-1
	Lead(II) sulfate	PbSO <sub>4</sub>	7446-14-2
	Lead(II) phosphate	Pb <sub>3</sub> (PO <sub>4</sub> ) <sub>2</sub>	7446-27-7
	Dilead chromate oxide	PbCrO <sub>4</sub>	7758-97-6
	lead(II) titanate	PbTiO <sub>3</sub>	12060-00-3
	Lead sulfate	PbXSO <sub>4</sub>	15739-80-7
	Lead sulfate tribasic	PbSO <sub>4</sub> ·H <sub>2</sub> O	12202-17-4
	Lead stearate	Pb(C <sub>17</sub> H <sub>35</sub> COO) <sub>2</sub>	1072-35-1
	Dibasic lead stearate	2PbO · Pb(C <sub>17</sub> H <sub>35</sub> COO) <sub>2</sub>	56189-09-4
	Lead acetate	C <sub>4</sub> H <sub>6</sub> O <sub>4</sub> Pb / (CH <sub>3</sub> COO) <sub>2</sub> Pb	301-04-2
	Lead(II) acetate trihydrate	Pb(CH <sub>3</sub> COO) <sub>2</sub> · 3H <sub>2</sub> O	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	Pb <sub>3</sub> (AsO <sub>4</sub> ) <sub>2</sub>	3687-31-8
	Acidic lead arsenate	AsHO <sub>4</sub> Pb	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	HgCl <sub>2</sub>	7487-94-7
	Mercury(II) oxide	HgO	21908-53-2
	Mercury(II) Chloride	—	33631-63-9
	Mercury sulfate	HgSO <sub>4</sub>	7783-35-9
	Mercury(II) nitrate	HgN <sub>2</sub> O <sub>6</sub> / Hg(NO <sub>3</sub> ) <sub>2</sub>	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	Na <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	10588-01-9
	Chromium oxide	CrO <sub>3</sub>	1333-82-0
	Calcium chromate	CaCrO <sub>4</sub>	13765-19-0
	Lead chromate	PbCrO <sub>4</sub>	7758-97-6
	Potassium dichromate	K <sub>2</sub> Cr <sub>2</sub> O <sub>7</sub>	7778-50-9
	Potassium chromate	K <sub>2</sub> CrO <sub>4</sub>	7789-00-6
	Barium chromate	BaCrO <sub>4</sub>	10294-40-3
	Sodium chromate	Na <sub>2</sub> CrO <sub>4</sub>	2146108
	Strontium chloriomate	SrCrO <sub>4</sub>	2151068
	Other hexavalent chromium compounds	—	—

Table 3- 5

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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
	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
Large classification	Substance name	Chemical Formula	CAS No.

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

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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

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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

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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	CFC13	—
	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	C2FC15	—
	CFC-112	C2F2Cl4	—
	CFC-211	C3FC17	—
	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

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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

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Substance/Substance Group Name: Hexachlorobenzene (HCB)			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Hexachlorobenzene	C <sub>6</sub> Cl <sub>6</sub>	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	C <sub>20</sub> H <sub>25</sub> N <sub>3</sub> O	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	C <sub>6</sub> H <sub>8</sub> O <sub>4</sub>	624-49-7

Table 3- 28

Substance/Substance Group Name: Formaldehyde			
CAS number list			
Large classification	Substance name	Chemical Formula	CAS No.
Other	Formaldehyde	CH <sub>2</sub> O	50-00-0

Table-4

## Controlled Substances List (REACH-regulated and MDR substances and other substances)

## ■ Candidate substances for authorization under REACH (SVHC) and MDR

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No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
1	Cadmium fluoride	7790-79-6	○	○	○
2	Cadmium sulphate	10124-36-4	○	○	○
		31119-53-6	○	○	—
3	2-benzotriazol-2-yl-4,6-di-tert-butylphenol (UV-320)	3846-71-7	○	—	—
4	2-(2H-benzotriazol-2-yl)-4,6-ditertpentylphenol (UV-328)	25973-55-1	○	—	—
5	2-ethylhexyl 10-ethyl-4,4-diethyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	○	○	○
6	reaction mass of 2-ethylhexyl 10-ethyl-4,4-diethyl-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)	—	○	—	—
7	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	○	○	○
8	Cadmium chloride	10108-64-2	○	○	○
9	Sodium perborate; perboric acid, sodium salt	—	○	○	○
10	Sodium peroxometaborate	7632-04-4	○	○	○
11	Cadmium sulphide	1306-23-6	○	○	○
12	Dihexyl phthalate	84-75-3	○	○	○
13	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	○	○	○
14	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	○	○	○
15	Imidazolidine-2-thione; 2-imidazoline-2-thiol	96-45-7	○	○	○
16	Lead di(acetate)	301-04-2	○	○	○
17	Triethyl phosphate	25155-23-1	○	○	○
18	Cadmium	7440-43-9	○	○	○
19	Ammonium pentadecafluorooctanoate (APFO)	3825-26-1	○	○	○
20	Pentadecafluorooctanoic acid (PFOA)	335-67-1	○	○	○
21	Dipentyl phthalate (DPP)	131-18-0	○	○	○
22	4-Nonylphenol, branched and linear, ethoxylated	—	○	—	—
23	Cadmium oxide	1306-19-0	○	○	○
24	Pyrochlore, antimony lead yellow	8012-00-8	○	○	—
25	6-methoxy-m-toluidine (p-cresidine)	120-71-8	○	○	○
26	Henicosafuoroundecanoic acid	2058-94-8	○	—	—
27	Hexahydromethylphthalic anhydride [1], Hexahydro-4-methylphthalic anhydride [2], Hexahydro-1-methylphthalic anhydride [3], Hexahydro-3-methylphthalic anhydride [4] [The individual isomers [2], [3] and [4] (including their cis- and trans- stereo isomeric f	25550-51-0	○	—	—
		19438-60-9	○	—	—
		48122-14-1	○	—	—
		57110-29-9	○	—	—
28	Cyclohexane-1,2-dicarboxylic anhydride [1], cis-cyclohexane-1,2-dicarboxylic anhydride [2], trans-cyclohexane-1,2-dicarboxylic anhydride [3] [The individual cis- [2] and trans- [3] isomer substances and all possible combinations of the cis- and trans-isom	85-42-7	○	—	—
		13149-00-3	○	—	—
		14166-21-3	○	—	—
29	Dibutyltin dichloride (DBTC)	683-18-1	○	○	○
30	Lead bis(tetrafluoroborate)	13814-96-5	○	○	—
31	Lead dinitrate	10099-74-8	○	○	—
32	Silicic acid, lead salt	11120-22-2	○	○	—
33	4-Aminoazobenzene	60-09-3	○	○	○
34	Lead titanium zirconium oxide	12626-81-2	○	○	—
35	Lead monoxide (lead oxide)	1317-36-8	○	○	—
36	o-Toluidine	95-53-4	○	○	○
37	3-ethyl-2-methyl-2-(3-methylbutyl)-1,3-oxazolidine	143860-04-2	○	○	○
38	Silicic acid (H <sub>2</sub> Si <sub>2</sub> O <sub>5</sub> ), barium salt (1:1), lead-doped	68784-75-8	○	○	—
39	Trilead bis(carbonate)dihydroxide	1319-46-6	○	○	—
40	Furan	110-00-9	○	○	○
41	N,N-dimethylformamide	68-12-2	○	○	○
42	4-(1,1,3,3-tetramethylbutyl)phenol, ethoxylated [covering well-defined substances and UVCB substances, polymers and homologues]	—	○	—	—
43	4-Nonylphenol, branched and linear [substances 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	—	○	—	—
44	4,4'-methylenedi-o-toluidine	838-88-0	○	○	○
45	Diethyl sulphate	64-67-5	○	○	○

No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
46	Dimethyl sulphate	77-78-1	○	○	○
47	Lead oxide sulfate	12036-76-9	○	○	—
48	Lead titanium trioxide	12060-00-3	○	○	—
49	Acetic acid, lead salt, basic	51404-69-4	○	○	—
50	[Phthalato(2-)]dioxotrilead	69011-06-9	○	○	—
51	Bis(pentabromophenyl) ether (decabromodiphenyl ether; DecaBDE)	1163-19-5	○	○	—
52	N-methylacetamide	79-16-3	○	○	○
53	Dinoseb (6-sec-butyl-2,4-dinitrophenol)	88-85-7	○	○	○
54	1,2-Diethoxyethane	629-14-1	○	○	○
55	Tetralead trioxide sulphate	12202-17-4	○	○	—
56	N-pentyl-isopentylphthalate	776297-69-9	○	—	—
57	Dioxobis(stearato)trilead	12578-12-0	○	○	—
58	Tetraethyllead	78-00-2	○	○	—
59	Pentalead tetraoxide sulphate	12065-90-6	○	○	—
60	Pentacosafuorotridecanoic acid	72629-94-8	○	—	—
61	Tricosafuorododecanoic acid	307-55-1	○	—	—
62	Heptacosafuorotetradecanoic acid	376-06-7	○	—	—
63	1-bromopropane (n-propyl bromide)	106-94-5	○	○	○
64	Methoxyacetic acid	625-45-6	○	○	○
65	4-methyl-m-phenylenediamine (toluene-2,4-diamine)	95-80-7	○	○	○
66	Methyloxirane (Propylene oxide)	75-56-9	○	○	○
67	Trilead dioxide phosphonate	12141-20-7	○	○	—
68	o-aminoazotoluene	97-56-3	○	○	○
69	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	○	○	○
70	4,4'-oxydianiline and its salts	101-80-4	○	○	○
71	Orange lead (lead tetroxide)	1314-41-6	○	○	—
72	Biphenyl-4-ylamine	92-67-1	○	○	○
73	Diisopentylphthalate	605-50-5	○	○	○
74	Fatty acids, C16-18, lead salts	91031-62-8	○	○	—
75	Diazene-1,2-dicarboxamide (C,C'-azodi(formamide))	123-77-3	○	—	—
76	Sulfurous acid, lead salt, dibasic	62229-08-7	○	○	—
77	Lead cyanamidate	20837-86-9	○	○	—
78	[4-[4,4'-bis(dimethylamino) benzhydrylidene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	○	○	○
79	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	○	○	○
80	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	○	○	○
81	4,4'-bis(dimethylamino)-4''-(methylamino)trityl alcohol	561-41-1	○	—	—
82	Lead(II) bis(methanesulfonate)	17570-76-2	○	○	○
83	1,2-dimethoxyethane; ethylene glycol dimethyl ether (EGDME)	110-71-4	○	○	○
84	Diboron trioxide	1303-86-2	○	○	○
85	α , α -Bis[4-(dimethylamino)phenyl]-4 (phenylamino)naphthalene-1-methanol (C.I. Solvent Blue 4)	6786-83-0	○	—	—
86	1,3,5-Tris(oxiran-2-ylmethyl)-1,3,5-triazinane-2,4,6-trione (TGIC)	2451-62-9	○	○	○
87	4,4'-bis(dimethylamino)benzophenone (Michler's ketone)	90-94-8	○	○	○
88	N,N,N',N'-tetramethyl-4,4'-methylenedianiline (Michler's base)	101-61-1	○	○	○
89	[4-[[4-anilino-1-naphthyl][4-(dimethylamino)phenyl]methylene]cyclohexa-2,5-dien-1-ylidene]dimethylammonium chloride (C.I. Basic Blue 26)	2580-56-5	○	—	—
90	Formamide	75-12-7	○	○	○
91	4-(1,1,3,3-tetramethylbutyl)phenol	140-66-9	○	—	—
92	N,N-dimethylacetamide	127-19-5	○	○	○
93	Phenolphthalein	77-09-8	○	○	○
94	Lead diazide, Lead azide	13424-46-9	○	○	○
95	Lead dipicrate	6477-64-1	○	○	—
96	Calcium arsenate	7778-44-1	○	○	—
97	1,2-dichloroethane	107-06-2	○	○	○
98	Dichromium tris(chromate)	24613-89-6	○	○	○
99	2-Methoxyaniline; o-Anisidine	90-04-0	○	○	○
100	Pentazinc chromate octahydroxide	49663-84-5	○	○	—

No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
101	Arsenic acid	7778-39-4	○	○	—
102	Potassium hydroxyoctaoxodizincatedichromate	11103-86-9	○	○	—
103	Formaldehyde, oligomeric reaction products with aniline	25214-70-4	○	—	—
104	Lead styphnate	15245-44-0	○	○	○
105	Trilead diarsenate	3687-31-8	○	○	—
106	Zirconia Aluminosilicate Refractory Ceramic Fibres	—	○	—	—
107	Aluminosilicate Refractory Ceramic Fibres	—	○	—	—
108	Bis(2-methoxyethyl) phthalate	117-82-8	○	○	○
109	Bis(2-methoxyethyl) ether	111-96-6	○	○	○
110	2,2'-dichloro-4,4'-methylenedianiline	101-14-4	○	○	○
111	Cobalt dichloride	7646-79-9	○	○	○
112	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich	71888-89-6	○	○	○
113	Strontium chromate	7789-06-2	○	○	○
114	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	○	○	○
115	1-Methyl-2-pyrrolidone	872-50-4	○	○	○
116	1,2,3-Trichloropropane	96-18-4	○	○	○
117	2-Ethoxyethyl acetate	111-15-9	○	○	○
118	Hydrazine	302-01-2	○	○	○
		7803-57-8	○	—	—
119	Cobalt(II) diacetate	71-48-7	○	○	○
120	Cobalt(II) sulphate	10124-43-3	○	○	○
121	2-Ethoxyethanol	110-80-5	○	○	○
122	2-Methoxyethanol	109-86-4	○	○	○
123	Chromium trioxide	1333-82-0	○	○	○
124	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	○	○	—
125	Cobalt(II) carbonate	513-79-1	○	○	○
126	Cobalt(II) dinitrate	10141-05-6	○	○	○
127	Trichloroethylene	79-01-6	○	○	○
128	Potassium dichromate	7778-50-9	○	○	○
129	Tetraboron disodium heptaoxide, hydrate	12267-73-1	○	○	○
130	Ammonium dichromate	7789-09-5	○	○	○
131	Boric acid	10043-35-3	○	○	○
		11113-50-1	○	○	○
132	Sodium chromate	7775-11-3	○	○	○
133	Disodium tetraborate, anhydrous	1303-96-4	○	○	○
		1330-43-4	○	○	○
		12179-04-3	○	○	○
134	Potassium chromate	7789-00-6	○	○	○
135	Acrylamide	79-06-1	○	○	○
136	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	○	○	○
137	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	○	○	○
138	Anthracene oil	90640-80-5	○	○	○
139	2,4-Dinitrotoluene	121-14-2	○	○	○
140	Anthracene oil, anthracene paste, anthracene fraction	91995-15-2	○	○	○
141	Anthracene oil, anthracene-low	90640-82-7	○	○	○
142	Tris(2-chloroethyl)phosphate	115-96-8	○	○	○
143	Diisobutyl phthalate	84-69-5	○	○	○
144	Lead chromate	7758-97-6	○	○	○
145	Anthracene oil, anthracene paste	90640-81-6	○	○	○
146	Pitch, coal tar, high temp.	65996-93-2	○	○	○
147	Anthracene oil, anthracene paste, distn. lights	91995-17-4	○	○	○
148	Lead hydrogen arsenate	7784-40-9	○	○	○
149	Benzyl butyl phthalate (BBP)	85-68-7	○	○	○
150	Bis (2-ethylhexyl)phthalate (DEHP)	117-81-7	○	○	○
151	5-tert-butyl-2,4,6-trinitro-m-xylene (musk xylene)	81-15-2	○	—	—
152	Bis(tributyltin)oxide (TBTO)	56-35-9	○	○	—
153	Diarsenic trioxide	1327-53-3	○	○	○
154	Sodium dichromate	7789-12-0	○	○	—
		10588-01-9	○	○	○
155	Triethyl arsenate	15606-95-8	○	○	○

No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
156	Diarsenic pentaoxide	1303-28-2	○	○	○
157	Dibutyl phthalate (DBP)	84-74-2	○	○	○
158	4,4'- Diaminodiphenylmethane (MDA)	101-77-9	○	○	○
159	Alkanes, C10-13, chloro (Short Chain Chlorinated Paraffins)	85535-84-8	○	—	—
160	Anthracene	120-12-7	○	—	—
161	Hexabromocyclododecane (HBCDD) and all major diastereoisomers identified: Alpha-hexabromocyclododecane Beta-hexabromocyclododecane Gamma-hexabromocyclododecane	25637-99-4	○	—	—
		3194-55-6	○	—	—
		134237-50-6	○	—	—
		134237-51-7	○	—	—
		134237-52-8	○	—	—
162	1,2-benzenedicarboxylic acid, di-C6-10-alkyl esters; 1,2-benzenedicarboxylic acid, mixed decyl and hexyl and octyl diesters with ? 0.3% of dihexyl phthalate	271-094-0	○	—	—
		272-013-1	○	—	—
163	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]	—	○	—	—
164	Nitrobenzene	98-95-3	○	○	○
165	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	○	—	—
166	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	○	—	—
167	1,3-propanesultone	1120-71-4	○	○	○
168	Perfluorononan-1-oic acid(2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9-heptafluorononanoic acidand its sodium and ammonium salts	375-95-1	○	○	○
		21049-39-8	○	○	○
		4149-60-4	○	○	○
169	Benzo[def]chrysene (Benzo[a]pyrene)	50-32-8	○	○	○
170	4,4'-isopropylidenediphenol (bisphenol A)	80-05-7	○	○	○
171	4-Heptylphenol, branched and linear [substances 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	—	○	—	—
172	Nonadecafluorodecanoic acid (PFDA) and its sodium and ammonium salts	335-76-2	○	○	○
		3830-45-3	○	○	○
		3108-42-7	○	○	○
173	p-(1,1-dimethylpropyl)phenol	80-46-6	○	—	—
174	Perfluorohexane-1-sulphonic acid and its salts	355-46-4	○	—	—
175	Chrysene	218-01-9	○	○	○
		1719-03-5	○	—	—
176	Benz[a]anthracene	56-55-3	○	○	○
		1718-53-2	○	—	—
177	Cadmium nitrate	10325-94-7	○	○	○
178	Cadmium hydroxide	21041-95-2	○	○	○
179	Cadmium carbonate	513-78-0	○	○	○
180	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]	—	○	—	—
181	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	—	○	—	—
182	Octamethylcyclotetrasiloxane (D4)	556-67-2	○	—	—
183	Decamethylcyclopentasiloxane (D5)	541-02-6	○	○	—
184	Dodecamethylcyclohexasiloxane (D6)	540-97-6	○	—	—
185	Lead	7439-92-1	○	○	○
186	Disodium octaborate	12008-41-2	○	○	○
187	Benzo[ghi]perylene	191-24-2	○	—	—
188	Terphenyl hydrogenated	61788-32-7	○	—	—
189	Ethylenediamine	107-15-3	○	—	—
190	Benzene-1,2,4-tricarboxylic acid 1,2 anhydride (trimellitic anhydride) (TMA)	552-30-7	○	—	—
191	Dicyclohexyl phthalate (DCHP)	84-61-7	○	○	○
192	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	○	○	○
193	Benzo[k]fluoranthene	207-08-9	○	○	○
194	Fluoranthene	206-44-0	○	—	—
195	Phenanthrene	85-01-8	○	—	—



No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
196	Pyrene	129-00-0	○	—	—
197	1,7,7-trimethyl-3-(phenylmethylene)bicyclo[2.2.1]heptan-2-one (3-benzylidene camphor)	15087-24-8	○	—	—
198	2-methoxyethyl acetate	110-49-6	○	○	○
199	Tris(4-nonylphenyl, branched and linear) phosphite (TNPP) with $\geq$ 0.1% w/w of 4-nonylphenol, branched and linear (4-NP)	—	○	—	—
200	2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propionic acid, its salts and its acyl halides (covering any of their individual isomers and combinations thereof)	—	○	—	—
201	4-tert-butylphenol	98-54-4	○	—	—
202	Diisohexyl phthalate	71850-09-4	○	—	○
203	2-benzyl-2-dimethylamino-4'-morpholinobutyrophenone	119313-12-1	○	—	○
204	2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one	71868-10-5	○	○	○
205	Perfluorobutane sulfonic acid (PFBS) and its salts	—	○	—	—
206	1-vinylimidazole	1072-63-5	○	—	○
207	2-methylimidazole	693-98-1	○	—	○
208	Butyl 4-hydroxybenzoate	94-26-8	○	—	○
209	Dibutylbis(pentane-2,4-dionato-O,O')tin	22673-19-4	○	○	○
210	bis(2-(2-methoxyethoxy)ethyl) ether	143-24-8	○	—	—
211	Diocetyl tin dilaurate	—	○	—	—
212	Polychlorinated terphenyls (PCTs)	—	—	○	—
213	Chloroethene, (Vinyl chloride)	75-01-4	—	○	○
214	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories	—	—	○	—
215	Tris (2,3 dibromopropyl) phosphate	126-72-7	—	○	—
216	Benzene	71-43-2	—	○	○
217	Asbestos fibres	—	—	○	—
218	Tris(aziridinyl)phosphin oxide	545-55-1	—	○	—
219	Polybromobiphenyls, Polybrominatedbiphenyls (PBB)	59536-65-1	—	○	—
220	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	—	—	○	—
221	Ammonium sulphide	12135-76-1	—	○	—
	Ammonium hydrogen sulphide	12124-99-1	—	○	—
	Ammonium polysulphide	9080-17-5	—	○	—
222	Volatile esters of bromoacetic acids	—	—	○	—
223	2-naphthylamine and its salts	91-59-8	—	○	○
224	Benzidine and its salts	92-87-5	—	○	○
225	4-Nitrobiphenyl	92-93-3	—	○	○
227	Lead carbonates	—	—	○	—
228	Lead sulphates	—	—	○	—
229	Mercury compounds	—	—	○	—
230	Mercury	7439-97-6	—	○	○
231	Arsenic compounds	—	—	○	—
232	Organostannic compounds	—	—	○	—
233	Di- $\mu$ -oxo-di-n-butylstanniohydroxyborane / Dibutyltin hydrogen borate C8H19B03Sn (DBB)	75113-37-0	—	○	○
234	Pentachlorophenol and its salts and esters	—	—	○	—
235	Cadmium and its compounds	—	—	○	—
236	Monomethyl-tetrachlorodiphenyl methane Trade name: Ugilec 141	76253-60-6	—	○	—
237	Monomethyl-dichloro-diphenyl methane Trade name: Ugilec 121, Ugilec 21	—	—	○	—
238	Monomethyl-dibromo-diphenyl methane bromobenzylbromotoluene, mixture of isomers Trade name: DBBT	99688-47-8	—	○	—
239	Nickel and its compounds	—	—	○	—
240	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):	—	—	○	—

No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
241	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):	—	—	○	—
242	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):	—	—	○	—
243	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	—	○	○
244	Chloroform	67-66-3	—	○	—
245	1,1,2-Trichloroethane	79-00-5	—	○	—
246	1,1,2,2-Tetrachloroethane	79-34-5	—	○	—
247	1,1,1,2-Tetrachloroethane	630-20-6	—	○	—
248	Pentachloroethane	76-01-7	—	○	—
249	1,1-Dichloroethene	75-35-4	—	○	—
250	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	—	—	○	—
251	Hexachloroethane	67-72-1	—	○	—
252	Azocolourants and Azodyes	—	—	○	—
253	Diphenylether, octabromo derivative C12H2Br8O	—	—	○	—
254	Nonylphenol C6H4(OH)C9H19	25154-52-3	—	○	—
255	Nonylphenol ethoxylates (C2H4O)nC15H24O	—	—	○	—
256	Chromium VI compounds	—	—	○	—
257	Toluene	108-88-3	—	○	—
258	Trichlorobenzene	120-82-1	—	○	—
259	Polycyclic-aromatic hydrocarbons (PAH)	—	—	○	—
260	The following phthalates (or other CAS and EC numbers covering the substance) (See group members)	—	—	○	—
	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	—	○	—
261	2-(2-methoxyethoxy)ethanol (DEGME)	111-77-3	—	○	—
262	2-(2-butoxyethoxy)ethanol (DEGBE)	112-34-5	—	○	—
263	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	—	○	—
264	Cyclohexane	110-82-7	—	○	—
265	Ammonium nitrate (AN)	6484-52-2	—	○	—
266	Dichloromethane	75-09-2	—	○	—
267	Dimethylfumarate (DMF)	624-49-7	—	○	—
268	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	—	○	—
269	Lead and its compounds	—	—	○	—
270	1,4-Dichlorobenzene	106-46-7	—	○	—
271	Inorganic ammonium salts	—	—	○	—
272	Perfluorooctanoic acid and its salts	—	—	○	—
273	Methanol	67-56-1	—	○	—
274	Octamethylcyclotetrasiloxane (D4)	—	—	○	—
	Decamethylcyclopentasiloxane (D5)	—	—	○	—
275	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	—	—	○	—

■ Candidate substances for authorization under REACH (SVHC) and MDR

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No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
276	(3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl) silanetriol Any of its mono-, di- or tri-O-(alkyl) derivatives (TDFAs)	—	—	○	—
277	Diisocyanates $\text{O}=\text{C}=\text{N}-\text{R}-\text{N}=\text{C}=\text{O}$ , with R an aliphatic or aromatic hydrocarbon unit of unspecified length	—	—	○	—
278	Substances in tattoo inks and permanent make up	—	—	○	—
279	Ethanol, 2,2'-iminobis-, N-(C13-15-branched and linear alkyl) derivs.	97925-95-6	—	—	○
280	Cobalt	7440-48-4	—	—	○
281	Acetaldehyde	75-07-0	—	—	○
282	Pyrocatechol	120-80-9	—	—	○
283	Diisohexyl phthalate	71850-09-4	—	—	○
284	halosulfuron-methyl (ISO); methyl 3-chloro-5-[[[4,6-dimethoxypyrimidin-2-yl]carbamoyl]sulfamoyl]-1-methyl-1H-pyrazole-4-carboxylate	100784-20-1	—	—	○
285	Propiconazole; ()-1-[2-(2,4-dichlorophenyl)-4-propyl-1,3-dioxolan-2-ylmethyl]-1H-1,2,4-triazole	60207-90-1	—	—	○
286	Benzo(r,s,t)pentaphene	189-55-9	—	—	○
287	Dibenzo[b,def]chrysene	189-64-0	—	—	○
288	Beryllium oxide	1304-56-9	—	○	○
289	Phenol, 4-dodecyl, branched	210555-94-5	○	○	○
	4-isododecylphenol	27459-10-5	○	—	—
	Phenol, 4-isododecyl	7147-75-7	○	—	—
	Phenol, dodecyl-, branched	121158-58-5	○	○	○
	Phenol, (tetrapropenyl) derivatives	74499-35-7	○	○	○
	Phenol, tetrapropylene	57427-55-1	○	—	—
290	boric acid (H3BO3), sodium salt, hydrate	25747-83-5	○	—	—
	Boric acid (H3BO3), disodium salt	22454-04-2	○	—	—
	Trisodium orthoborate	14312-40-4	○	—	—
	Boric acid, sodium salt	1333-73-9	○	—	—
	Orthoboric acid, sodium salt	13840-56-7	○	○	○
	Boric acid (H3BO3), sodium salt (1:1)	14890-53-0	○	—	—
291	Alkanes, C14-16, chloro	1372804-76-6	○	—	—
	Alkanes, C14-17, chloro	85535-85-9	○	—	—
	di-, tri- and tetrachlorotetradecane	—	○	—	—
	Tetradecane, chloro derivs.	198840-65-2	○	—	—
292	glutaral	111-30-8	○	—	—
293	4,4'-(1-methylpropylidene)bisphenol	77-40-7	○	—	—
294	(2R)-3-(4-tert-butylphenyl)-2-methylpropanal	75166-31-3	○	—	—
	2-(4-tert-butylbenzyl)propionaldehyde	80-54-6	○	—	○
	(2S)-3-(4-tert-butylphenyl)-2-methylpropanal	75166-30-2	○	—	—
295	3-bromo-2,2-bis(bromomethyl)-1-propanol (TBNPA)	1522-92-5	○	—	—
	2,2-dimethylpropan-1-ol, tribromo derivative (TBNPA)	36483-57-5	○	—	—
	2,2-bis(bromomethyl)propane-1,3-diol (BMP)	3296-90-0	○	—	○
	2,3-dibromo-1-propanol (2,3-DBPA)	96-13-9	○	○	○
296	1,4-dioxane	123-91-1	○	—	—

■ Other than Candidate substances for authorization under REACH and MDR

No.	Chemical substances	CAS No ※2	REACH SVHC	REACH Annex XV II	MDR
1	Polyvinyl chloride (PVC)	9002-86-2	—	—	—
2	Perchlorate	—	—	—	—
3	Brominated flame retardants (other than PBBs, PBDEs, or HBCDD)	—	—	—	—

### **Declaration of Non-Use of Prohibited Substances**

Signature	:
Print Name	:
Job Title	:
Company Name	:
Address	:
Telephone No.	:
Fax 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	ポリ臭化ジフェニールエーテル類(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: Annex III and Annex IV.

The revised RoHS Directive (2011/65/EU, RoHS2) has two types of lists, Annex III and Annex IV. Please check the latest lists and strictly observe that prohibited substances do not contain more than the allowable amount.

■ Toxic Substances Control Act (TSCA) substances

11	リン酸トリス(イソプロピルフェニル) (PIP/PIP(3:1))	PhenoIIsopropylated Phosphate (3:1) (PIP 3:1)	68937-41-7	使用禁止 (Prohibition of use)
12	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)
13	ヘキサクロロブタジエン (HCBd)	Hexachlorobutadiene (HCBd)	87-68-3	使用禁止 (Prohibition of use)
14	ペンタクロロチオフェノール (PCTP)	Pentachlorothiophenol (PCTP)	133-49-3	1000ppm以下 (10000ppm or less)
15	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 commercially 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.

16	アスベスト類	Asbestos	-	意図的な使用禁止かつ、1000ppm以下 (Intentional use is prohibited, however, 1000ppm or less as tin)
17	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)
18	ジブチルスズ化合物(DBT類) ジオクタルスズ化合物(DOT類)	Dibutyltin (DBT) compounds Diocetyl tin (DOT) compounds	-	スズとして1000ppm以下 (1000ppm or less as tin)
19	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)
20	デカ-BDE	Deca-BDE	1163-19-5	意図的な使用禁止 (Intentional use is prohibited)
21	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)
22	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)
23	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)
24	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)
25	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)
26	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)
27	PFOS(パ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)
28	PFOA(パーフルオロオクタン酸)	Perfluorooctanoic acid	-	意図的な使用禁止かつ、1ppm以下 (Intentional use is prohibited, however, 1ppm or less as tin)
29	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)
30	HCB(ヘキサクロロベンゼン)	Hexachlorobenzene	-	意図的な使用禁止 (Intentional use is prohibited)
31	放射性物質	Radioactive substances	-	意図的な使用禁止 (Intentional use is prohibited)
32	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)
33	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)
34	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)

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

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