

**Appendix 3. Regulated Substances List**

Date enacted: Aug. 20, 2007

Note 1: When the prohibited material contains 50% or more of the threshold, the proof material that doesn't exceed the threshold is demanded. And environmental safety manager determine the need of internal analysis.

Date revised: Mar. 19, 20

Note 2: The chemical substance not published in this table with the substance that corresponds to the PRTR law, GADSL and REACH SVHC does the same management as "Managed substances". REACH SVHC is shown in another sheet of this file.

Note 3: They are completely observed when provided for the chemical substance not published in this table by the agreement, the law, the ordinance, and the industry indicator, etc.

Note 4: The chemical substance not published in this table might be treated as a use prohibited material limited according to the customer request for the customer.

Note 5: If the customer requests exceeds this table, we should respond the customer individually. Such cases are shown in another sheet of this file.

No.	Name of substance	Chemical substance no.  CAS No.	Management category						Concentration and application limits	Remarks	
			○ : Relevant △ : Relevant at customer's request								
			Prohibited substances	Abolished substances	Deadline		Managed substances	Specific managed substances			Customer's requirement
Year	Month										
1	Cadmium and its compounds	—	○	○					○	[Permissible concentration: under 5ppm] Plastic, ink, rubber and paint [Permissible concentration: under 20ppm] Solder [Permissible concentration: under 50ppm] Metal materials and other materials above [Permissible concentration: Total value for lead, cadmium, mercury and chrome (VI) is under 100ppm] Used for packaging Those excluded from the RoHS regulations shall be handled in accordance with the RoHS Directive.	Heavy metals, ELV Directive, RoHS2, REACH SVHC, PRTR(1-75)
2	Lead and its compounds	—	○	○					○	[Permissible concentration: under 50ppm] Plastic, ink and other materials (Except packaging use, metal and ceramic) [Permissible concentration: Under 100ppm, unintentional content] Metal, Ceramic [Permissible concentration: Total value for lead, cadmium, mercury and chrome (VI) is under 100ppm] Used for packaging Those excluded from the RoHS regulations shall be handled in accordance with the RoHS Directive. △ [Permissible concentration: under 100ppm] Used for packaging Those excluded from the RoHS regulations shall be handled in accordance with the RoHS Directive.	Heavy metals, ELV Directive, RoHS2, (1-304, 1-305)
3	Mercury and its compounds	—	○	○					○	[Permissible concentration: Under 5ppm, unintentional content] For uses other than those excluded from the RoHS regulations [Permissible concentration: Total value for lead, cadmium, mercury and chrome (VI) is under 100ppm] Used for packaging Those excluded from the RoHS regulations shall be handled in accordance with the RoHS Directive.	Heavy metals, ELV Directive, RoHS2, PRTR(1-237)
4	Chrome (VI) compounds (hexavalent chromium compounds)	—	○	○					○	[Permissible concentration: under 500ppm] Except packaging use [Permissible concentration: Total value for lead, cadmium, mercury and chrome (VI) is under 100ppm] Used for packaging Those excluded from the RoHS regulations shall be handled in accordance with the RoHS Directive.	Safety and Health Law, Heavy metals, ELV Directive, RoHS2, PRTR(1-88)
5	Polybrominated biphenyls(PBB)	—	○	○					○	[Permissible concentration: under 100ppm, unintentional content]	Organic brominated compounds, RoHS2, Chemical Substances Control Law
6	Polybrominated diphenyl ethers(PBDE)	—	○	○					○	[Permissible concentration: under 100ppm, unintentional content]	Organic brominated compounds, RoHS2, Chemical Substances Control Law
60-1)	DBP(Dibutyl phthalate)	84-74-2	○	○					○		REACH SVHC, Denmark Phthalate regulation, RoHS2, PRTR (1-354)
60-2)	Di(2-ethylhexyl) phthalate	117-81-7	○	○					○	For primary product materials and packaging, substances of which use is prohibited (total content: 0.1wt% or less).	REACH SVHC, Denmark Phthalate regulation, RoHS2, PRTR (1-355)
60-3)	BBP(Butyl benzyl phthalate)	85-68-7	○	○					○	For subsidiary materials, management substances.	REACH SVHC, Denmark Phthalate regulation, RoHS2, PRTR (1-356)
60-9)	Diisobutyl phthalate	84-69-5	○	○					○		REACH SVHC, Denmark Phthalate regulation, RoHS2
7	Polychlorinated biphenyls(PCBs) and specific substitutes	1336-36-3 76253-60-6 81161-70-8 99688-47-8	○	○					○	[Non-detect (<0.1ppm)] [Intentional use prohibited]	Organic chloride compounds, Chemical Substances Control Law, PRTR(1-406) REACH Annex X VII
8	Polychlorinated naphthalenes (PCN, with 1 chlorine or more)	—	○	○					○	[Permissible concentration: under 5ppm, unintentional content] lubricating oil, paint	Chlorinated organic compounds, Chemical Substances Control Law (with 2 chlorine or more)
9	Chlorinated paraffins (CP) (Short chain chlorinated paraffin with carbon chain length of 10-13 and chlorine content of 50wt% or more) (Medium chain chlorinated paraffins, C14-C17)	— 85535-85-9	○	○					○	[Permissible concentration: under 300ppm, unintentional content]	Organic chloride compounds, REACH SVHC
10	Mirex	2385-85-5	○	○					○	For flame retardant, insecticide, antimold agents and all such uses	Organic chloride compounds, Chemical Substances Control Law
11	Tetrabromobisphenol A (TBBP-A)	79-94-7	○	○					○	[Permissible concentration: under 1000ppm, unintentional content]	Brominated flame retardant, The polymer is assumed to be "Other Organic brominated compounds".
12	Other chlorinated organic compounds (halogen-free-related substances) (Including chlorinated flame retardant)	—	○	○					○	For separate items required to be halogen-free (900ppm max Cl, 900ppm max Br, 1500ppm max Cl+Br) Other	Organic chloride compounds
	triclosan	3380-34-5	○	○					○		Antiseptic
	α-hexachlorocyclohexane, β-hexachlorocyclohexane, γ-hexachlorocyclohexane(Lindane)	—	○	○					○		BHC, Pesticide, Chemical Substances Control Law
	Chlordecone	143-50-0	○	○					○		Pesticide, Chemical Substances Control Law
13	Inorganic chlorinated substances (halogen-free-related substances)	—	○	○					○	For separate items required to be halogen-free (900ppm max Cl, 900ppm max Br, 1500ppm max Cl+Br) Other	Inorganic chloride substances
14	Hexabromocyclododecane(HBCDD) and all major diastereoisomers	25637-99-4, 3194-55-6, 134237-50-6, 134237-51-7, 134237-52-8	○	○					○	[Intentional use prohibited]	Brominated flame retardant, Chemical Substances Control Law, REACH SVHC 134237-50-6,134237-51-7,134237-52-8
15	Other brominated organic compounds (halogen-free-related substances) (Including brominated flame retardant)	—	○	○					○	For separate items required to be halogen-free (900ppm max Cl, 900ppm max Br, 1500ppm max Cl+Br) Other	Organic brominated compounds
16	Inorganic brominated substances (halogen-free-related substances)	—	○	○					○	For separate items required to be halogen-free (900ppm max Cl, 900ppm max Br, 1500ppm max Cl+Br) Other	Organic brominated compounds
17	Tributyl tin oxide(TBTO)	56-35-9	○	○					○		Chemical Substances Control Law, REACH SVHC
18	Tributyl, triphenyl tin compounds	—	○	○					○		Chemical Substances Control Law
19	Dibutyltin (DBT) compounds	—	○	○					○	[Permissible concentration: under 1000ppm (the tin)]	
20	Diocetyl tin (DOT) compounds	—	○	○					○	[Permissible concentration: under 1000ppm, unintentional content (the tin)] All uses listed below are prohibited. • Textile articles intended to come into contact with skin • Wall and floor coverings • Two-component room temperature vulcanization molding kits (RTV-2 molding kits)	
21	Dichlorobenzene and its salts	—	○	○					○		Safety and Health Law
22	α-naphthylamine and its salts	—	○	○					○		Safety and Health Law
23	o-tolidine and its salts	—	○	○					○		Safety and Health Law, PRTR(1-231)
24	Asbestos	—	○	○					○		Safety and Health Law, PRTR(1-33)
25	Dianisidine and its salts	—	○	○					○		Safety and Health Law
26	Beryllium and its compounds	—	○	○					○	[Permissible concentration: under 1000ppm]	Safety and Health Law, PRTR(1-394)
27	Beryllium oxide	1304-56-9	○	○					○		PRTR(1-394)
28	Benzotrithloride	98-07-7	○	○					○		Safety and Health Law, PRTR(1-397)
29	Ethyleneimine	151-56-4	○	○					○		Safety and Health Law, PRTR(1-54)
30	Vinyl chloride (monomers)	75-01-4	○	○					○		Safety and Health Law, PRTR(1-94)
31	Auramine	2465-27-2	○	○					○		Safety and Health Law
32	Chloromethyl methyl ether	107-30-2	○	○					○		Safety and Health Law
33	Benzene	71-43-2	○	○					○		Safety and Health Law, PRTR(1-400)
34	3,3'-dichloro-4,4'-diamino diphenyl methane	101-14-4	○	○					○		Safety and Health Law, PRTR(1-160), REACH SVHC
35	Nickel carbonyl	13463-39-3	○	○					○		Safety and Health Law
36	β-propiolactone	57-57-8	○	○					○		Safety and Health Law

No.	Name of substance	Chemical substance no.  CAS No.	Management category ○ : Relevant △ : Relevant at customer's request						Concentration and application limits	Remarks  Prohibited substances : Substances that are prohibited to purchase, carry in, use and contain in the product Abolished substances : Substances that need to be abolished by a defined period of time Managed substances : Substances that need management of the  *1: Safety and Health Law "Specified Chemical Substance trouble prevention rule", "○" = Special management substance (23) *2: "○" = It is an agreed substance as for the customer requirement. *3: "○" = Substance name, usage, concentration should be reported	
			Prohibited substances	Abolished substances	Deadline		Managed substances *3	Specific managed substances *1			Customer's requirement *2
					Year	Month					
37	p-dimethylaminoazobenzene	60-11-7	○							Safety and Health Law	
38	Magenta	632-99-5	○							Safety and Health Law	
39	Coal tar	—	○							Safety and Health Law	
40	Azo compounds and aromatic amines*1	—	○						○	Part in contact with the human body of a product made for sustained human contact that has azo pigments that can generate the specific amines on the separate table when decomposed [Permissible concentration: total content, under 30ppm]	EU Directive (76/769/EEC)
41	Polyvinyl chloride (PVC) and its blends	—	○							Target: Primary materials and Packaging materials	
42	Ozone depleting substances (ODS) Chlorofluorocarbon (CFC) Hydrochlorofluorocarbon (HCFC) 1,1,1-trichloromethane (methyl chloroform) Methyl bromide Carbon tetrachloride	— — 71-55-6 74-83-9 56-23-5	○ ○ ○ ○ ○							Related to Secondary materials Used at time of manufacture	Ozone depleting substances PRTR (1-185) PRTR (1-279) PRTR (1-386) PRTR (1-149)
43	Fluorinated greenhouse gases(HFC,PFC,SF6)	—	○							Used at time of manufacture (the refrigerative usage is excluded.)	
44	Organochlorine solvents 1,1,2-trichloroethane 1,2-dichloroethane 1,1-dichloroethylene 1,2-dichloroethylene Chloromethylene Chloroform Trichloroethylene Tetrachloroethylene Pentachloroethylene 1,1,1,2-Tetrachloroethane 1,1,2,2-Tetrachloroethane	— 79-00-5 107-06-2 75-35-4 540-59-0 75-09-2 67-66-3 79-01-6 127-18-4 76-01-7 630-20-6 79-34-5	○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○ ○							Used at time of manufacture	Chlorine organic solvents PRTR (1-280) PRTR (1-157), REACH SVHC PRTR (1-158) PRTR (1-186) PRTR (1-127), REACH SVHC PRTR (1-281) PRTR (1-262)
45	Halogenated diphenylmethane Monomethyl tetrachlorodiphenylmethane Monomethyl dichlorodiphenylmethane Monomethyl dibromodiphenylmethane	— 76253-60-6 81161-70-8 99688-47-8	○ ○ ○ ○								
46	Antimony and its compounds (halogen-free-related substances)	—	○							For separate items required to be halogen-free(Sb:700ppm or less) Other	PRTR (1-31)
47	Polychlorinated terphenyls (PCT)	—	○							[Permissible concentration: under 5ppm]	
48	Polybrominated terphenyls (PBT)	—	○							[Permissible concentration: under 1000ppm]	
49	Pentachlorophenol	—	○								Chemical Substances Control Law, PRTR (1-404)
50	Fluoroacetic acid	—	○								
51	Organic phosphorous compounds *2	—	○								
52	Hexachlorobenzene	118-74-1	○								Chemical Substances Control Law
53	Yellow phosphorous	12185-10-3, 7723-14-0	○								
54	Red phosphorous	7723-14-0	○							For separate items required to be halogen-free(1000ppm or less)	
55	2,4,6-tri-tert-butylphenol	732-26-3	○								Chemical Substances Control Law
56	4-nitrodiphenyl and its salts	—	○								
57	Octamethyl pyrophosphoramide	152-16-9	○								
58	Bis(chloromethyl)ether	542-88-1	○								
59	Aluminum phosphate	20859-73-8	○								PRTR (1-456)
60	Phthalates *3	—	○								
61	Radioactive substances	—	○								
62	Bismuth and its compounds	—	○								
63	Nickel and its compounds	—	○							Parts with direct and prolonged skin contact powdery	PRTR (1-308, 1-309)
64	Selenium and its compounds	—	○								PRTR (1-242)
65	Magnesium	7439-95-4	○								
66	Copper and its compounds	—	○								PRTR (1-272)
67	Gold and its compounds	—	○								
68	Palladium and its compounds	—	○								
69	Silver and its compounds	—	○								PRTR (1-82)
70	Dioxins	—	○								PRTR (1-243)
71	Cyan compounds (Nitriles are excluded.)	—	○								Uses for gold plating uses are outside the scope of application (managed substances)
72	Formaldehyde (formalin)	50-00-0	○							Target: Primary materials[Permissible concentration: under 300ppm]	Safety and Health Law, Radiation-emitting regulated substances
73	Chrome compounds (other than hexavalent chromium and metal chrome)	—	○								
74	Boron and its compounds	—	○								PRTR (1-405)
75	Cobalt and its compounds (cobalt sulfate)	—	○								PRTR (1-132)
76	Tellurium and its compounds	—	○								
77	Thallium and its compounds	—	○								
78	Vanadium and its compounds	—	○								PRTR (1-321)
79	Barium and its compounds	—	○								
80	Manganese and its compounds (potassium permanganate)	—	○								PRTR (1-412)
81	Molybdenum and its compounds	—	○								PRTR (1-453)
82	Zinc and its compounds (water soluble)	—	○								PRTR (1-1)
83	Lithium and its compounds	—	○								
84	Xylene	1330-20-7	○								PRTR (1-80)
85	Toluene	108-88-3	○								PRTR (1-300)
86	Phenol (monomers)	108-95-2	○								PRTR (1-349)
87	Arsenic and its compounds (arsenic)	—	○							[Permissible concentration: under 50ppm] (All materials except semiconductor,LED and metal) [Permissible concentration: under 1000ppm] (Metal alloys) [Permissible concentration: under 2ppm] (for preservation of wood products) for semiconductor, LED use	Safety and Health Law, PRTR(1-322)
88	PFOS(Perfluorooctane Sulfonate) and its salts PFOSF (Perfluorooctane sulfonyl fluoride)	— 307-35-7	○ ○							[Permissible concentration] under 10ppm, Unintentional content Parts under 1µg/m2 Textiles, Coated products	EU Directive (76/769/EEC), PRTR(1-396), Chemical Substances Control Law Chemical Substances Control Law
89	PFOA(Perfluorooctanoic acid) and individual salts and PFOA-related substances	—	○							[Permissible concentration] Unintentional content ·PFOA and its salts : under 25ppb ·Combination of one or multiple PFOA-related substances : under 1000ppb(1ppm)	EU Directive (76/769/EEC), REACH Annex X VII
90	Hexachloro-1,3-butadiene	87-68-3	○								Chemical Substances Control Law
91	2-(2H-Benzotriazolo-2-yl)-4,6-bis(1,1-dimethylethyl)-Phenol	3846-71-7	○								Chemical Substances Control Law, REACH SVHC
92	Crude rubber	—	○							Target: Primary materials (Intentional use prohibited)	
93	Sodium azide	26628-22-8	○								PRTR (1-11)
94	Cobalt(II) chloride	7646-79-9	○							[Permissible concentration: under 1000ppm] Humidity indicator used for desiccant (silicagel etc.) (Intentional use prohibited) Humidity indicator (The one that cobalt chloride was soaked into paper etc.) [Permissible concentration: under 1000ppm] (article)	REACH SVHC Prohibited for some customers, by 2011 Apr/1

No.	Name of substance	Chemical substance no.  CAS No.	Management category ○ : Relevant △ : Relevant at customer's request						Concentration and application limits	Remarks	
			Prohibited substances	Abolished substances	Deadline		Managed substances *3	Specific managed substances *1			Customer's requirement *2
					Year	Month					
95	Perchlorates	7791-03-9,7601-89-0,7778-74-7,7790-98-9,10034-81-8	○						○ [Permissible concentration: total content, under 0.1ppm Parts]	USA California State Law	
96	2-Methoxyethanol	109-86-4	○						○ [Permissible concentration: under 1000ppm]	GADSL classification P, PRTR (1-58), REACH SVHC	
97	N-Nitrosodimethylamine	62-75-9	○						○	GADSL classification P	
98	Pentachlorobenzene	608-93-5	○						○	GADSL classification P, Chemical Substances Control Law	
99	Tetrachlorobenzene	12408-10-5, 84713-12-2, 634-66-2, 634-90-2,95-94-3	○						○	GADSL classification P	
100	PAHs (polycyclic aromatic hydrocarbons) *4	—	○						○ Target: Skin-contact use	German equipment and product safety law	
101	Dimethylfumarate	624-49-7	○						○ [Permissible concentration: under 0.1ppm, unintentional content]	2009/251/EC (Decision of committee)	
102	Bisphenol A	80-05-7	○						○ [Permissible concentration: under 50ppm]	PRTR (1-37)	
103	N,N'-Ditolyl-p-phenylenediamine	27417-40-9	○						○	Chemical Substances Control Law	
104	Ethanolamine	141-43-5							○	PRTR (1-20)	
105	Ferric chloride	7705-08-0							○	PRTR (1-71)	
106	1,4-Dioxane	123-91-1							○	PRTR (1-150)	
107	N,N-Dimethylformamide	68-12-2	○						○ [Permissible concentration: under 1000ppm]	PRTR (1-232), REACH SVHC	
108	Hydroquinone	123-31-9							○	PRTR (1-336)	
109	n-Hexane	110-54-3	○						○ Used at time of manufacture	PRTR (1-392)	
110	Water-soluble salts of peroxodisulfuric acid	—							○	PRTR (1-395)	
111	Tantalum	7440-25-7							○	Ammonium persulfate, Sodium persulfate, other rare metal	
112	Gallium	7440-55-3							○	rare metal	
113	Nonylphenol, Nonylphenol ethoxylates	—	○						○ [Intentional use prohibited]	PRTR (1-320), REACH Annex X VII	
114	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNSI)	68921-45-9	○						○ Target: Primary materials [Permissible concentration: under 0.1wt%]	GADSL classification D/P Antioxidant	
115	Organic silicon compounds	—							○ Target: Primary materials for HDD Production (Banned)	(Siloxanes etc.)	
116	Talc	—							○ Target: Except for the above description		
117	Methyl-phenol compounds	95-48-7, 106-44-5, 108-39-4, 1319-77-3	○						○ [Permissible concentration: Total content under 10ppm]	Canadian Environmental Protection Act, 1999	
118	REACH Candidate List of SVHCs		○						○ [Permissible concentration: under 1000ppm] Applies to all materials unless preapproved by MEKTEC	Refer to Appendix 3, annex 1	
119	Bisphenol F, Bisphenol S	620-92-8, 2467-02-9, 1333-16-0, 80-09-1							○ 100ppm		
120	n-Propyl Bromide (nPB)	106-94-5							○ 100ppm		
121	Aminoethyl ethanolamine	111-41-1							○		
122	Indium Phosphide	22398-80-7							○		
123	Per- and Polyfluoroalkyl Substances (PFAS)	—							○	Substances that contain one or more perfluoroalkyl moieties, -CnF2n+1	

\*1 Azo compounds and aromatic amines : EU Directive (76/769/EEC) 19th Amendment

No.	Azo compounds and aromatic amines No.40	CAS No.	P	A	y	m	M	SM	C	Remarks
40-1)	4-Aminoazobenzene	60-09-3	○						○	REACH SVHC
40-2)	o-Anisidine	90-04-0	○						○	REACH SVHC, PRTR (1-17)
40-3)	2-Naphthylamine	91-59-8	○						○	PRTR (1-180)
40-4)	3,3'-Dichlorobenzidine	91-94-1	○						○	REACH SVHC
40-5)	Biphenyl-4-ylamine	92-67-1	○						○	REACH SVHC, PRTR (1-299)
40-6)	Benzidine	92-87-5	○						○	REACH SVHC
40-7)	o-Toluidine	95-53-4	○						○	REACH SVHC, PRTR (1-299)
40-8)	4-Chloro-o-toluidine	95-69-2	○						○	REACH SVHC
40-9)	2,4-Toluenediamine	95-80-7	○						○	REACH SVHC
40-10)	o-Aminoazotoluene	97-56-3	○						○	REACH SVHC
40-11)	5-Nitro-o-toluidine	99-55-8	○						○	REACH SVHC, PRTR (1-160)
40-12)	3,3'-Dichloro-4,4'-diaminodiphenylmethane	101-14-4	○					○	○	REACH SVHC, PRTR (1-446)
40-13)	4,4'-Methylenedianiline	101-77-9	○						○	REACH SVHC, PRTR (1-143)
40-14)	4,4'-Diaminodiphenylether	101-80-4	○						○	REACH SVHC, PRTR (1-143)
40-15)	p-Chloroaniline	106-47-8	○						○	PRTR (1-89)
40-16)	3,3'-Dimethoxybenzidine	119-90-4	○						○	PRTR (1-231)
40-17)	3,3'-Dimethylbenzidine	119-93-7	○						○	REACH SVHC, PRTR (1-451)
40-18)	2-Methoxy-5-methylaniline	120-71-8	○						○	
40-19)	2,4,5-Trimethylaniline	137-17-7	○						○	
40-20)	4,4'-Thiodianiline	139-65-1	○						○	
40-21)	4-Methoxy-m-phenylenediamine	615-05-4	○						○	PRTR (1-142)
40-22)	4,4'-Methylenedi-o-toluidine	838-88-0	○						○	REACH SVHC
40-23)	2,4-Dimethylaniline	95-68-1	○						○	PRTR (1-214)
40-24)	2,6-Dimethylaniline	87-62-7	○						○	PRTR (1-215)

\*2 Organic phosphorous compounds

No.	Organic phosphorous compounds No.51	CAS No.	P	A	y	m	M	SM	C	Remarks
51-1)	Diethyl paranitrophenyl thiophosphate	56-38-2	○						○	[Intentional use prohibited]
51-2)	Diethyl (diethyl amide-1-chlorocrotonyl) phosphate	13171-21-6	○						○	[Intentional use prohibited]
51-3)	Dimethylethylmercapto ethylthiophosphate	8022-00-2	○						○	[Intentional use prohibited]
51-4)	Diethyl paranitrophenyl thiophosphate	298-00-0	○						○	[Intentional use prohibited]
51-5)	O-ethyl =O-4-nitrophenyl=phenyl phosphorothioate	2104-64-5	○						○	[Intentional use prohibited]
51-6)	Tetraethyl pyrophosphate	107-49-3	○						○	[Intentional use prohibited]
51-7)	Tris (2,3-dibromopropyl) phosphate	126-72-7	○						○	[Intentional use prohibited]
51-8)	Tris (1-aziridinyl) phosphineoxide	545-55-1	○						○	[Intentional use prohibited]
51-9)	Ammonium polyphosphate	68333-79-9	○						○	[Permissible concentration: 1000ppm or less]
51-10)	Tris(2-butoxyethyl) phosphate	78-51-3	○						○	[Permissible concentration: 1000ppm or less]
51-11)	Triphenyl phosphate	115-86-6	○						○	[Permissible concentration: 1000ppm or less]
51-12)	Dimethyl methylphosphonate	756-79-6	○						○	[Permissible concentration: 1000ppm or less]
51-13)	Diethyl ethylphosphonate	78-38-6	○						○	[Permissible concentration: 1000ppm or less]
51-14)	Resorcinol bis(diphenyl phosphate)	57583-54-7	○						○	[Permissible concentration: 1000ppm or less]
51-15)	Cyclic phosphonate ester	61840-22-0	○						○	[Permissible concentration: 1000ppm or less]
51-16)	[Bis (2-hydroxyethyl) amino] methyl- diethyl ester	2781-11-5	○						○	[Permissible concentration: 1000ppm or less]
51-17)	Diphenyl cresyl phosphate	26444-49-5	○						○	[Permissible concentration: 1000ppm or less]
51-18)	Octyldiphenyl phosphate	115-88-8	○						○	[Permissible concentration: 1000ppm or less]
51-19)	Tris(2-ethylhexyl)phosphate	78-42-2	○						○	[Permissible concentration: 1000ppm or less]
51-20)	Triocetyl phosphate	1806-54-8	○						○	[Permissible concentration: 1000ppm or less]
51-21)	Triethyl phosphate	78-40-0	○						○	[Permissible concentration: 1000ppm or less]
51-22)	Tris(2-chloroethyl) Phosphate (TCEP)	115-96-8	○						○	[Permissible concentration: 1000ppm or less, unintentional content]
51-23)	Tris(2-chloro-1-methylethyl) phosphate [TCPP]	13674-84-5	○						○	[Permissible concentration: 1000ppm or less, unintentional content]
51-24)	Tris(1,3-dichloro-2-propyl) phosphate [TDCPP]	13674-87-8	○						○	[Permissible concentration: 1000ppm or less, unintentional content]
51-25)	Other organic phosphorus compound (Including other Additive Phosphorous Flame	-							○	

\*3 Phthalates

No.	Phthalates No.60	CAS No.	P	A	y	m	M	SM	C	Remarks
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No.	Name of substance	Chemical substance no.  CAS No.	Management category ○ : Relevant △ : Relevant at customer's request						Concentration and application limits	Remarks	
			Prohibited substances	Abolished substances	Deadline		Managed substances *3	Specific managed substances *1			Customer's requirement *2
					Year	Month					
60-1)	Dibutyl phthalate	84-74-2	○				○			REACH SVHC, RoHS2, PRTR (1-354) Denmark Phthalate regulation	
60-2)	Di(2-ethylhexyl) phthalate	117-81-7	○				○			REACH SVHC, RoHS2, PRTR (1-355) Denmark Phthalate regulation	
60-3)	Butyl benzyl phthalate	85-68-7	○				○			REACH SVHC, RoHS2, PRTR (1-356) Denmark Phthalate regulation	
60-4)	Diisononyl phthalate	28553-12-0, 68515-48-0	○				○				
60-5)	Diisodecyl phthalate	26761-40-0, 68515-49-1	○				○				
60-6)	Di-n-octyl phthalate	117-84-0	○				○				
60-7)	Dibutyl phthalate (2-methoxyethyl)	117-82-8	○				○			REACH SVHC	
60-8)	Di-n-hexyl phthalate	84-75-3	○				○			REACH SVHC	
60-9)	Diisobutyl phthalate	84-69-5	○				○			For primary product materials and packaging, substances of which use is prohibited (total content: 0.1wt% or less). For subsidiary materials, management substances.	
60-10)	Diisoheptyl phthalate	71888-89-6	○				○			REACH SVHC, RoHS2, Denmark Phthalate regulation	
60-11)	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters	68515-42-4	○				○			REACH SVHC	
60-12)	Diethyl phthalate	84-66-2	○				○				
60-13)	Dimethyl phthalate	131-11-3	○				○				
60-14)	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	68515-51-5 68648-93-1	○				○			REACH SVHC	
60-15)	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	○				○			REACH SVHC	
60-16)	Diisopentylphthalate	605-50-5	○				○			REACH SVHC	
60-17)	Di-n-pentyl phthalate	131-18-0	○				○			REACH SVHC	
60-18)	N-pentyl-isopentylphthalate	776297-69-9	○				○			REACH SVHC	
60-19)	Diundecyl phthalate	3648-20-2	○				○			REACH SVHC	
60-20)	Dicyclohexyl phthalate	84-61-7	○				○			REACH SVHC	
60-21)	Diisohexyl phthalate	68515-50-4	○				○			REACH SVHC	

\*4PAHs (polycyclic aromatic hydrocarbons)

No.	PAHs No.100	CAS No.	P	A	y	m	M	SM	C	Concentration and application limits	Remarks
100-1)	Naphthalene	91-20-3	○								PRTR (1-302)
100-2)	Acenaphthene	83-32-9	○								PRTR (1-15)
100-3)	Acenaphthylene	208-96-8	○								
100-4)	Fluorene	86-73-7	○								
100-5)	Phenanthrene	85-01-8	○								
100-6)	Anthracene	120-12-7	○								REACH SVHC, PRTR (1-32)
100-7)	Fluoranthene	206-44-0	○								
100-8)	Pyrene	129-00-0	○								
100-9)	Crysene	218-01-9	○								REACH SVHC
100-10)	Benz[a]anthracene	56-55-3	○								REACH SVHC
100-11)	Benzo[b]fluoranthene	205-99-2	○								
100-12)	Benzo[k]fluoranthene	207-08-9	○								
100-13)	Indeno-[1,2,3-cd]-pyrene	193-39-5	○								
100-14)	Dibenzo[a,h]anthracene	53-70-3	○								
100-15)	Benzo[g,h,i]perylene	191-24-2	○								[Permissible concentration: under 1ppm for each. Total of 27 items is under 10ppm] (Skin-contact use)
100-16)	Benzo[a]pyrene	50-32-8	○								REACH SVHC
100-17)	Benzo[j]fluoranthene	205-82-3	○								REACH SVHC
100-18)	Benzo[e]pyrene	192-97-2	○								
100-19)	Benzo[r,s,t]pentaphene	189-55-9	○								
100-20)	Dibenz[a,h]acridine	226-36-8	○								
100-21)	Dibenz[a,j]acridine	224-42-0	○								
100-22)	Dibenzo[a,e]fluoranthene	5385-75-1	○								
100-23)	Dibenzo[a,e]pyrene	192-65-4	○								
100-24)	Dibenzo[a,h]pyrene	189-64-0	○								
100-25)	Dibenzo[a,i]pyrene	191-30-0	○								
100-26)	7H-Dibenzo[c,g]carbazole	194-59-2	○								
100-27)	5-Methylchrysene	3697-24-3	○								