

Appendix 3. Regulated Substances List

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.

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.

Date enacted: Aug. 20, 2007
Date revised: Nov. 13, 2017

No.	Name of substance	Chemical substance no. CAS No.	Management category ○ : Relevant △ : Relevant at customer's request						Concentration and application limits	Remarks		
			Specific prohibited substances	Prohibited substances	Abolished substances	Deadline		Managed substances			* Specific managed substances	Customer's requirement
						Year	Month					
1	Cadmium and its compounds	7440-43-9/-	○ ○ ○ ○	○ ○ ○ ○					○ ○ ○ ○	[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 ,RoHS Directive , REACH SVHC,PRTR(1-	
2	Lead and its compounds	7439-92-1/-	○ ○ ○ △	○ ○ ○ △					○ ○ ○ ○	[Permissible concentration: under 50ppm] Plastic, ink and other materials (Except packaging, use, metal and ceramic) [Permissible concentration: Under 1000ppm, 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. Leaded solder and its raw materials (plating, cream solder, etc.)	Heavy metals, ELV Directive, RoHS Directive, (1-304, 1-305)	
3	Mercury and its compounds	7439-97-6/-	○ ○	○ ○					○ ○ ○	[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, RoHS Directive, PRTR(1-237)	
4	Chrome (VI) compounds (hexavalent chromium compounds)	18540-29-9/-	○ ○	○ ○					○ ○ ○	[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, RoHS Directive, PRTR(1-88)	
5	Polybrominated biphenyls(PBB)	—	○	○					○	[Permissible concentration: under 100ppm, unintentional content]	Organic brominated compounds, RoHS Directive, Chemical Substances Control Law	
6	Polybrominated diphenyl ethers(PBDE)	—	○	○					○	[Permissible concentration: under 100ppm, unintentional content]	Organic brominated compounds, RoHS Directive, Chemical Substances Control Law	
60-1	DBP(Dibutyl phthalate)											
60-2	Di(2-ethylhexyl) phthalate											
60-3	BBP(Butyl benzyl phthalate)											
60-9	Diisobutyl phthalate											
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 brominated compounds, Chemical Substances Control Law, 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)	61788-76-9/- 85535-84-8 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) triclosan α-hexachlorocyclohexane, β-hexachlorocyclohexane, γ-hexachlorocyclohexane(Lindane) Chlordecone	— 3380-34-5 58-89-9/- 143-50-0		○ ○ ○					○ ○ ○	For separate items required to be halogen-free (900ppm max.Cl, 900ppm max.Br, 1500ppm max.Cl+Br) Other Other Other	Organic chloride compounds Antiseptic BHC, Pesticide, Chemical Substances Control Law 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 Other	Inorganic chloride substances	
14	Hexabromocyclododecane(HBCDD) and all major diastereoisomers	25637-99-4, 3194-55-6/-		○					○	[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)	—		○					○ ○ ○	For separate items required to be halogen-free (900ppm max.Cl, 900ppm max.Br, 1500ppm max.Cl+Br) Other 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 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	Dioctyltin (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	134-32-7/-		○					○		Safety and Health Law	
23	o-tolidine and its salts	119-93-7/-		○					○		Safety and Health Law, PRTR(1-231)	
24	Asbestos	1332-21-4/-		○					○	○	Safety and Health Law, PRTR(1-33)	
25	Dianisidine and its salts	119-90-4/-		○					○		Safety and Health Law	
26	Beryllium and its compounds	7440-41-7/-		○					○		Safety and Health Law, PRTR(1-394)	
27	Beryllium oxide	1304-56-9		○					○	○	PRTR(1-394)	
28	Benzotrichloride	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	
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	9002-86-2/-		○					○	Target: Primary materials and Packaging materials Related to Secondary materials		

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

No.	Azo compounds and aromatic amines No.40	CAS No.	SP	P	A	y	m	M	SM	C	
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		○						○	
40-4)	3,3'-Dichlorobenzidine	91-94-1		○						○	PRTR(1-180)
40-5)	Biphenyl-4-ylamine	92-67-1		○						○	REACH SVHC
40-6)	Benidine	92-87-5		○						○	
40-7)	o-Toluidine	95-53-4		○						○	REACH SVHC, PRTR(1-299)
40-8)	4-Chloro-o-toluidine	95-69-2		○						○	
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		○						○	
40-12)	3,3'-Dichloro-4,4'-diaminodiphenylmethane	101-14-4		○					○	○	REACH SVHC, PRTR(1-160)
40-13)	4,4'-Methylenedianiline	101-77-9		○						○	REACH SVHC, PRTR(1-446)
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		○						○	
40-17)	3,3'-Dimethylbenzidine	119-93-7		○						○	PRTR(1-231)
40-18)	2-Methoxy-5-methylaniline	120-71-8		○						○	REACH SVHC, PRTR(1-451)
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.	SP	P	A	y	m	M	SM	C	
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)	57583-64-7		○						○	[Permissible concentration: 1000ppm or less]
51-15)	Cyclic phosphonate ester	61840-22-0		○						○	[Permissible concentration: 1000ppm or less]
51-16)	[[Bis (2hydroxyethyl) 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)	Trioctyl 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	-							○	○	

*3 Phthalates

No.	Phthalates No.60	CAS No.	SP	P	A	y	m	M	SM	C	
60-1)	Dibutyl phthalate	84-74-2		○	○				○	○	REACH SVHC, PRTR(1-354) Denmark Phthalate regulation
60-2)	Di(2-ethylhexyl) phthalate	117-81-7		○	○				○	○	For primary product materials and packaging, substances of which use is prohibited (total for the 3 substances: 0.1wt% or less). For subsidiary materials, management substances.
60-3)	Butyl benzyl phthalate	85-68-7		○	○				○	○	REACH SVHC, PRTR(1-355) Denmark Phthalate regulation
60-4)	Diisononyl phthalate	28553-12-0, 68515-48-0		○	○				○	○	REACH SVHC, PRTR(1-356) Denmark Phthalate regulation
60-5)	Diisodecyl phthalate	26761-40-0, 68515-49-1		○	○				○	○	-
60-6)	Di-n-octyl phthalate	117-84-0		○	○				○	○	
60-9)	Diisobutyl phthalate	84-69-5		○	○				○	○	For primary product materials and packaging, substances of which use is prohibited 1),2),3) and 9), total for the 4 substances:0.1% or less(by July 2014) For subsidiary materials, managed substances.
60-7)	Dibutyl phthalate (2-methoxyethyl)	117-82-8							○	○	REACH SVHC
60-8)	Di-n-hexyl phthalate	84-75-3							○	○	REACH SVHC
60-10)	Diisooheptyl phthalate	71888-89-6							○	○	REACH SVHC
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		○					○	○	For primary product materials and packaging, substances of which use is prohibited (0.1wt% or less). For subsidiary materials, managed substances.
60-13)	Dimethyl phthalate	131-11-3		○					○	○	
60-14)	Other phthalate	-							○	○	

*4PAHs (polycyclic aromatic hydrocarbons)

No.	PAHs No.100	CAS No.	SP	P	A	y	m	M	SM	C	
100-1)	Naphthalene	91-20-3		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-2)	Acenaphthene	83-32-9		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-3)	Acenaphthylene	208-96-8		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-4)	Fluorene	86-73-7		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-5)	Phenanthrene	85-01-8		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-6)	Anthracene	120-12-7		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-7)	Fluoranthene	206-44-0		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-8)	Pyrene	129-00-0		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-9)	Crysene	218-01-9		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-10)	Benz[a]anthracene	56-55-3		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-11)	Benzo[b]fluoranthene	205-99-2		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-12)	Benzo[k]fluoranthene	207-08-9		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-13)	Indeno[1,2,3-cd]-pyrene	193-39-5		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-14)	Dibenzo(a,h)anthracene	53-70-3		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-15)	Benzo(g,h,i)perylene	191-24-2		○						○	[Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-16)	Benzo[a]pyrene	50-32-8		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-17)	Benzo(j)fluoranthene	205-82-3		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)
100-18)	Benzo(e)pyrene	192-97-2		○						○	* [Permissible concentration: Total of 18 kinds is under 10ppm] (Skin-contact use)

* : under 1ppm for each (REACH Annex X VII)