

Annex 1. Prohibited chemicals

No.	Chemical substances	Threshold values	Subjects of restrictions	Main related laws, regulations, conventions
1	Cadmium and compounds thereof	Less than 100 ppm	All uses (other than uses exempted from the RoHS Directive) Note: Batteries are subject to the EU Batteries Directive	EU RoHS Directive Chinese RoHS
2	Lead and compounds thereof	Less than 1000 ppm	All uses (other than uses exempted from the RoHS Directive) Note: Batteries are subject to the EU Batteries Directive	EU RoHS Directive Chinese RoHS
3	Mercury and compounds thereof	Less than 1000 ppm	All uses (other than uses exempted from the RoHS Directive) Note: Batteries are subject to the EU Batteries Directive	EU RoHS Directive Chinese RoHS Minamata Convention on Mercury
4	Hexavalent chromium compounds	Less than 1000 ppm	All uses (other than uses exempted from the RoHS Directive) Note: Batteries are subject to the EU Batteries Directive	EU RoHS Directive Chinese RoHS
1~4	Cadmium, lead, hexavalent chromium, and mercury	Intentional use prohibited and less than 100 ppm in total	Packaging materials for IDEC products	EU packaging directive US Specified States TIP : Specified states in the US : Toxics in Packaging Regulation
5	Polybrominated biphenyls (PBB)	Less than 1000 ppm	All uses	EU RoHS Directive Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. Chinese RoHS EU POPs Regulations Annex I
6	Polybrominated diphenyl ethers (PBDE)	Less than 1000 ppm	All uses	EU RoHS Directive Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. Chinese RoHS EU POPs Regulations Annex I
7	Bis(2-Ethylhexyl) phthalate (DEHP)	Less than 1000 ppm	All uses	EU RoHS Directive EU REACH Regulations, Annex XIV
8	Dibutyl phthalate (DBP)	Less than 1000 ppm	All uses	EU RoHS Directive EU REACH Regulations, Annex XIV
9	Benzyl butyl phthalate (BBP)	Less than 1000 ppm	All uses	EU RoHS Directive EU REACH Regulations, Annex XIV
10	Diisobutyl phthalate (DIBP)	Less than 1000 ppm	All uses	EU RoHS Directive EU REACH Regulations, Annex XIV
11	Polychlorinated biphenyls (PCBs)	Intentional use prohibited and less than 50 ppm	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I
12	Polychlorinated terphenyls (PCTs)	Less than 50 ppm	All uses	EU REACH Regulations, Annex XVII
13	Asbestos	Intentional use prohibited and less than 1000 ppm	All uses	EU REACH Regulations, Annex XVII
14	Tri-substituted organostannic compounds	Less than 1000 ppm (concentration contained in tin)	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc., EU REACH Regulations, Annex XVII

No	Chemical substances	Threshold values	Subjects of restrictions	Main related laws, regulations, conventions
15	Tributyltin oxide (TBTO)	Less than 1000 ppm(concentration contained in tin)	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. EU REACH Regulations, Annex XVII EU POPs Regulations Annex I
16	Short-Chain Chlorinated Paraffin (SCCPs) (C10 - 13)	Intentional use prohibited	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I
17	Azocolorants and azodyes that form specified amine compounds	Less than 30 mg/kg(30 ppm) as specified amine compounds	Textile and leather parts that may come into direct contact with human skin or oral cavities for a long period of time	EU REACH Regulations, Annex XVII
18	Polychlorinated naphthalenes (CL _{>/=1})	Intentional use prohibited	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I
19	Ozone-depleting substances	Intentional use prohibited	All uses and use in producing process	Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures Montreal Protocol on Substances that Deplete the Ozone Layer
20	Dibenzothiophene (DBT) compounds	Less than 1000 ppm(concentration contained in tin)	All uses	EU REACH Regulations, Annex XVII
21	Diocetyl tin (DOT) compounds	Less than 1000 ppm(concentration contained in tin)	Textiles coming into contact with the skin Two-ingredient greenhouse-effect mold kit	EU REACH Regulations, Annex XVII
22	Formaldehyde	Aerial concentration less than 0.1 ppm	Fiberboard and wood parts	Germany Chemical prohibition ordinance US TSCA
23	Radioactive substances	Intentional use prohibited	All uses	Act on Prevention of Radiation Hazards due to Radioisotopes, etc.
24	Perfluorooctanoic Sulfonate (PFOS) and its chlorides	Intentional use prohibited and less than 1000 ppm	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I
25	Perfluorooctanoic acid (PFOA), its chlorides and PFOA related substances	PFOA and its chlorides: less than 0.025 ppm PFOA-related substances: less than 5 ppm in total	All uses	EU REACH Regulations, Annex XVII
26	2-(2H-1,2,3-benzotriazole-2-yl)-4,6-dii-tert-butylphenol	Intentional use prohibited	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc.
27	Dimethyl fumarate	Less than 0.1 ppm	All uses	EU REACH Regulations, Annex XVII
28	Polycyclic aromatic hydrocarbons (PAH)	Less than 1 ppm	Rubber or plastic parts that may come into contact with human skin or oral cavities directly for a long period of time or repeated contact for a short period of time	EU REACH Regulations, Annex XVII
29	Hexabromocyclododecane (HBCD)	Intentional use prohibited and less than 100 ppm	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I
30	Hexachlorobenzene (HCB)	Intentional use prohibited	All uses	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc. POPs Convention EU POPs Regulations Annex I

No.	Chemical substances	Threshold values	Subjects of restrictions	Main related laws, regulations, conventions
31	Perfluorocarboxylic acids (PFCAs) (C9-C14), their salts and related substances	PLess than 0.025ppm for PFCA (C9-C14) and its salts, less than 0.26ppm for PFCA (C9-C14) related substances in total.	All uses	EU REACH Regulations, Annex XVII
32	Phenol, isopropylphosphoric acid (3: 1) (PIP (3: 1))	Intentional use prohibited	All uses	US TSCA
33	Pentachlorothiophenol (PCTP)	Intentional use prohibited and less than1000ppm	All uses	US TSCA

* 1 If there is a chemical substance agreement for a product for a specific customer, that agreement will take precedence.

* 2 Report required if lead is intentionally added to the material that covers the surface of the cord, or if the lead content exceeds 300 ppm (0.03%).

Annex 2. Controlled chemicals

No.	Subject	Notes
1	IEC 62474	Other than prohibited chemicals under Annex 1
2	Candidate substances for permission under EU REACH regulations (SVHCs)	Other than prohibited chemicals under Annex 1
3	Restricted substances under EU REACH Regulations, Annex XVII	Other than prohibited chemicals under Annex 1
4	chemSHERPA substances subject to control	Other than prohibited chemicals under Annex 1

Annex 3. Applicable laws and regulations

No.	Common name	Official name
1	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc.	Act on the Evaluation of Chemical Substances and Regulation of their Manufacture, etc.
3	Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures	Act on the Protection of the Ozone Layer Through the Control of Specified Substances and Other Measures
3	Act on Prevention of Radiation Hazards due to Radioisotopes, etc.	Act on Prevention of Radiation Hazards due to Radioisotopes, etc.
4	Act to Prevent the Mercurial Pollution of the Environment	Act to Prevent the Mercurial Pollution of the Environment
5	EU RoHS Directive	Directive 2011/65/EU
6	EU REACH Regulation Annex X VII	Regulation(EC) No 1907/2006 Annex X VII
7	EU REACH Regulation Annex X IV	Regulation(EC) No 1907/2006 Annex X IV
8	Chinese RoHS	Administrative Measure on the Control of Pollution Caused by Electronic Information Products
9	POPs Convention	Stockholm Convention on Persistent Organic Pollutants
10	EU POPs Regulation Annex I	Regulation (EC) No 850/2004 Annex I
11	EU packaging directive	Directive 94/62/EC
12	Germany Chemical prohibition ordinance	ChemVerbotsV/Germany Chemical prohibition ordinance
13	US TSCA	US Toxic substances Control Act (TSCA)
14	US Specified States TIP : Specified states in the US : Toxics in Packaging Regulation	US Specified States TIP : Specified states in the US : Toxics in Packaging Regulation
15	EU Battery Directive	Directive 2006/66/EC , 2013/56/EU
16	Minamata Convention on Mercury	The Minamata Convention on Mercury

Annex 1. Prohibited chemicals

No.	Material	Exclusions	Deadline at IDEC
5(b)	Lead	Glass fluorescent tube with lead content not exceeding 0.2wt%	
6(a)	Lead	Lead as an alloying element in steel for machining purposes and in galvanized steel containing up to 0,35 % lead by weight	2024/07/21
6(a)- I	Lead	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up to 0,2 % lead by weight	
6(b)	Lead	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	
6(b)- I	Lead	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	
6(b)- II	Lead	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	
6(c)	Lead	Copper alloy containing up to 4 % lead by weight	
7(a)	Lead	Lead in high melting temperature type solders (i.e. lead- based alloys containing 85 % by weight or more lead)	
7(c)- I	Lead	Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g. piezoelectronic devices, or in a glass or ceramic matrix compound	
7(c)- II	Lead	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
7(c)-IV	Lead	Lead in PZT based dielectric ceramic materials for capacitors which are part of integrated circuits or discrete semiconductors	
8(b)	Cadmium	Cadmium and its compounds in electrical contacts	2024/07/21
8(b)- I	Cadmium	Cadmium and its compounds in electrical contacts used in: <ul style="list-style-type: none"> - circuit breakers, - thermal sensing controls, - thermal motor protectors (excluding hermetic thermal motor protectors), - AC switches rated at: <ul style="list-style-type: none"> - 6 A and more at 250 V AC and more, or - 12 A and more at 125 V AC and more, - DC switches rated at 20 A and more at 18 V DC and more, and - switches for use at voltage supply frequency \geq 200 Hz. 	2024/07/21
9	Hexavalent chromium	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	
13(a)	Lead	Lead in white glasses used for optical applications	
13(b)	Cadmium and lead	Cadmium and lead in filter glasses and glasses used for reflectance standards	
13(b)- I	Lead	Cadmium and lead in filter glasses and glasses used for reflectance standards	
13(b)- II	Cadmium	Cadmium in striking optical filter glass types; excluding applications falling under point 39 of this Annex	
13(b)- III	Lead	Cadmium and lead in glazes used for reflectance standards	
15	Lead	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
15(a)	Lead	Lead in solders to complete a viable electrical connection between the semiconductor die and carrier within integrated circuit flip chip packages where at least one of the following criteria applies: <ul style="list-style-type: none"> - a semiconductor technology node of 90 nm or larger; - a single die of 300 mm² or larger in any semiconductor technology node; - stacked die packages with die of 300 mm² or larger, or silicon interposers of 300 mm² or larger. 	
18(b)	Lead	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP (BaSi 2 O 5 :Pb)	
18(b)- I	Lead	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps containing phosphors such as BSP (BaSi2O5:Pb) when used in medical phototherapy equipment	

No.	物質名	除外項目	IDEC 期限※
24	Lead	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	
29	Lead	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC(*)	
32	Lead	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
34	Lead	Lead in cermet-based trimmer potentiometer elements	
37	Lead	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
39(a)	Lead	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0,2 µg Cd per mm ² of display screen area)	
41	Lead	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council (1))	

Revision Record

Revised Date/Version	Revised contents
January, 2020 Ver.2	Annex 1. Prohibited chemicals No.11 Polychlorinated biphenyls (PCBs): Added less than 50 ppm to threshold value. No.18 Polychlorinated naphthalenes: Changed to (CL>=1) from (CL>=2) No.19 Ozone-depleting substances: Added "use in producing process" to subjects of restrictions. No.25 Perfluorooctanoic acid (PFOA), its chlorides and PFOA related substances: Changed threshold value. PFOA and its chlorides: less than 0.025 ppm, PFOA-related substances: less than 5 ppm in total No.30 Deleted Reaction products of benzamine, N-phenyl, styrene, and 2,4,4-Trimethyl-pentene
March, 2022 Ver.2.1	Annex 2. Controlled chemicals No.4 Changed to "chemSHERPA substances subject to control" from "JAMP substances subject to control".