

List of Banned and Controlled Substances (Revised July/01/2025)

This list was prepared based on the IEC62474 DB substance list.

Classification	
Banned	Substances indicated in the Reportable Application(s) column are banned from being added intentionally. Content level must
Banned Candidates	In accordance with legal regulations, we will prohibit the inclusion of these substances in newly adopted products, and will also set
Controlled	Content levels that exceed the threshold level must be reported. Content levels below the threshold level are treated as no

[NOTE]

1. Substances that exceed the threshold content level must be reported, regardless of classification. The definition of "molded parts" conforms to the definition in respective

■List of Substance group  
◆Banned Substances

No.	Classification	Substance Group	CAS No.	Reportable Application(s)	Threshold Level (Reporting level)	Key Legal and Regulatory or Industry Standard/Agreement Citation	主な使用例
1	Banned	Cadmium/cadmium compounds	See another list	All, except batteries	0.01% by weight (100 ppm) of homogeneous materials	ANNEX XVII of REACH Regulation (EC) No 1907/2006; Directive 2011/65/EU; China RoHS; Korea RoHS; Japan J-MOSS; US/CA SB-20/50; Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.06.2013)	Pigments, corrosion-resistant surface treatment, electrical and electronic materials, optical glass, stabilizers, plating, pigments for resins, fluorescent lamps, electrodes, solder, electrical contacts, contacts, zinc plating, stabilizers for PVC
	Banned	Cadmium/cadmium compounds		Batteries	0.001% by weight (10 ppm) of cadmium in battery	Korean Quality Management and Safety Control of Industrial Products Act; EU Batteries Regulation: Regulation(EU) 2023/1542; Chinese Standard GB 24427-2009 "Limitation of mercury, cadmium and lead contents for alkaline and non-alkaline zinc manganese dioxide batteries"	NiCad battery
2	Banned	Chromium VI compounds	See another list	All	0.1% by weight (1 000 ppm) of chromium (VI) in homogeneous materials	Directive 2011/65/EU; China RoHS; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	Pigments, paints, inks, catalysts, plating, anti-corrosion surface treatments, dyes
3	Banned	Lead/lead compounds	See another list	All, except as noted below	0.1% by weight (1 000 ppm) of lead in homogeneous materials	Directive 2011/65/EU; ANNEX XVII of REACH Regulation (EC) No 1907/2006; China RoHS; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	Rubber hardeners, pigments, paints, lubricants, plastic stabilizers, free-cutting alloys, free-cutting steels, optical materials, X-ray shielding for CRT glass, electric solder materials, mechanical solder materials, hardeners, vulcanizing agents, ferroelectric materials, plating, alloys, resin additives
	Banned	Lead/lead compounds		Lead in PVC Articles	0.1% by weight (1 000 ppm)	ANNEX XVII of REACH Regulation (EC) No 1907/2006	
	Banned	Lead/lead compounds		Consumer products designed or intended primarily for children 12 years of age or younger	0.01% by weight (100 ppm) of lead in the children's product	U.S. Consumer Product Safety Improvement Act as amended by HB 2715	Pigments, paints, plastic stabilizers, colorants
	Banned	Lead/lead compounds		Paint and similar surface coatings of toys and other articles intended for use by children	0.009% by weight (90 ppm) of lead in surface coating	U.S. Consumer Product Safety Improvement Act	Pigments, paints, plastic stabilizers, colorants
	Banned	Lead/lead compounds		Cables/cords with thermoset or thermoplastic coatings	0.03% by weight (300 ppm) of lead in surface coating	US/CA Proposition 65 Case law	Pigments, paints, plastic stabilizers, colorants
	Banned	Lead/lead compounds		Batteries	0.004% by weight (40 ppm) of lead in battery	EU Batteries Regulation: Regulation(EU) 2023/1542; Chinese Standard GB 24427-2009 "Limitation of mercury, cadmium and lead contents for alkaline and non-alkaline zinc manganese dioxide batteries"	Manganese battery, alkaline button battery

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4	Banned	Mercury/mercury compounds	See another list	All, except batteries	Intentionally added or 0.1% (1 000 ppm) of mercury in homogeneous material 8	Vermont act relating to comprehensive management of exposure to mercury; Rhode Island General Laws 23-24.9 and amendment of 2007; Louisiana Mercury Risk Reduction Act; ANNEX XVII of REACH Regulation (EC) No 1907/2006; Directive 2011/65/EU; Chine RoHS; Korea RoHS; Japan J-MOSS; US/CA SB-20/50	Fluorescent lamps, electrical contact materials, pigments, anti-corrosive agents, switches, highly efficient illuminants, antibacterial treatment
	Banned	Mercury/mercury compounds		Batteries	Intentionally added or 0.0001% by weight (1 ppm) of mercury in the battery 8 (1ppm)	Rhode Island & Connecticut Mercury Reduction and Education Acts; New York Env Law § 27-0719 Battery Management and Disposal; Taiwan Restrictions on the Manufacture, Import, and Sale of Dry Cell Batteries; Korea: Law on quality management and control of safety of industrial products Battery regulation; EU Batteries Regulation: Regulation(EU) 2023/1542; Chinese Standard GB 24427-2009 "Limitation of mercury, cadmium and lead contents for alkaline and non-alkaline zinc manganese dioxide batteries"	Silver oxide button cell, alkaline cell, manganese cell
5	Banned	Nickel	7440-02-0	All, where prolonged skin contact is expected	Intentionally added	ANNEX XVII of REACH Regulation (EC) No 1907/2006	Stainless steel, plated; Example of long-term skin contact application: headphones
6	Banned	Tributyl Tin Oxide (TBTO)	56-35-9	All	Intentionally added or 0.1% by weight (1,000 ppm) of the product	Japan Law concerning the evaluation of chemical substances Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Preservatives, antifungal agents, paints, pigments, anti-staining agents, refrigerants, foaming agents, fire extinguishing agents, cleaning agents
7	Banned	Tri-substituted organostannic compounds	See another list	All	0.1% by weight (1,000 ppm) of tin in a material	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EU) No 276/2010; Japan Law concerning the evaluation of chemical substances Norwegian product regulation	Stabilizers, antioxidants, antibacterial and antifungal agents, antifouling agents, preservatives, antifungal agents, paints, pigments, anti-staining agents
8	Banned	Dibutyltin (DBT) compounds	See another list	All	0.1% by weight (1,000 ppm) of tin in a material	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EU) No 276/2010	"PVC stabilizer, curing catalyst for silicone resin and urethane resin"
9	Banned	Diocetyl tin (DOT) compounds	See another list	(a) textile and leather articles intended to come into contact with the skin, (b) childcare articles (c) two-component room temperature vulcanisation moulding kits (RTV-2 moulding kits)	0.1% by weight (1,000 ppm) of tin in a material	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EU) No 276/2010	"PVC stabilizer, curing catalyst for silicone resin and urethane resin"
10	Banned	Polybrominated Biphenyls (PBBs)	See another list	All	0.1% by weight (1,000 ppm) in homogeneous material	Directive 2011/65/EU; Chine RoHS; Korea RoHS; Japan J-MOSS	Flame retardants

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11	Banned	Polybrominated Diphenylethers (PBDEs)	See another list	All	0.1% by weight (1,000 ppm) in homogeneous material	Directive 2011/65/EU; China RoHS; Korea RoHS; Japan J-MOSS, Japan Law concerning the evaluation of chemical substances	Flame retardants
12	Banned	Polychlorinated Biphenyls (PCBs) and specific substitutes	See another list	All	Intentionally added	Japan Law concerning the evaluation of chemical substances; ANNEX XVII of REACH Regulation (EC) No 1907/2006; US TSCA.	Insulating oils, lubricants, electrical insulation materials, solvents, electrolytes; plasticizers, fire retardants, flame retardants, dielectric sealants
13	Banned	Polychlorinated Terphenyls (PCTs)	See another list	All	0.005% by weight (50 ppm) in material	ANNEX XVII of REACH Regulation (EC) No 1907/2006;	Insulating oils, lubricants, electrical insulation, solvents, electrolytes; plasticizers, fire retardants, coatings for wire and cable, dielectric sealants
14	Banned	Polychlorinated Naphthalenes (more than 3 chlorine atoms)	See another list	All	Intentionally added	Japan Law concerning the evaluation of chemical substances Stockholm convention on Persistent Organic Pollutants; EU POPs Regulation	Lubricants, paints, stabilizers (electrical properties, flame resistance, water resistance), insulating materials, flame retardants
15	Banned	Perchlorates	See another list	All	0.000006% by weight (0.006 ppm) of the product	US/ California - Perchlorate Contamination Prevention Act of 2003	Coin Cell Batteries
16	Banned	Perfluorooctane sulfonate (PFOS)	See another list	All	Intentionally added or 1 microgram/m <sup>2</sup> of coated material or 0.1% by weight (1,000 ppm) of the Article	Stockholm convention on Persistent Organic Pollutants; EU POPs Regulation; Canadian Environmental Protection Act SOR/ 2008-178; Japan Law concerning the evaluation of chemical substances	Antistatic agent for coin cell battery films and plastics
17	Banned	Fluorinated greenhouse gases (PFC, SF <sub>6</sub> , HFC)	See another list	All	Intentionally added	EU Reg. No. 517/2014	Refrigerants, spraying agents, fire extinguishing agents, cleaning agents, insulating materials, caustic gases
18	Banned	Asbestos	See another list	All	Intentionally added	ANNEX XVII of REACH Regulation (EC) No 1907/2006; US TSCA; Swiss Ordinance on Reduction of Risk from Chemical Products	Brake lining pads, insulators, fillers, abrasives, pigments, paints, talc, heat insulation materials
19	Banned	Azocolourants and azodyes which form certain aromatic amines	See another list	Textiles and leather	0.003% by weight (30 ppm) of the finished textile/leather product 1	ANNEX XVII of REACH Regulation (EC) No 1907/2006;	Pigments, dyes, colorants
20	Banned	Ozone Depleting Substances	See another list	All	Intentionally added	Montreal Protocol EU EC No. 2037/2000 EC 1005/2009 US Clean Air Act	Refrigerants, foaming agents, fire extinguishing agents, cleaning agents
21	Banned	Radioactive substances	See another list	All	Intentionally added	Radiation Protection Law Directive 2013/59/Euratom, Act on Regulation of Nuclear Source Materials, Nuclear Fuel Materials, and Reactors(Japan), Act on Regulation of Radioisotopes and Others(Japan), NRC Regulation Title 10 CFR Part 20(US)	Optical properties (thorium), measuring equipment, gauges, detectors
22	Banned	Formaldehyde	See another list	Textiles	0.0075% by weight (75 ppm) of textile product	Austria - BGB I 1990/194: Formaldehydverordnung, §2, 12/2/1990; Lithuanian Hygiene Norm HN 96:2000 (Hygiene standards and regulations)	fabric
	Banned	Formaldehyde		Composite wood (plywood, particle board, medium density fiberboard) products or components	Intentionally added	US/CA CARB Rule US Federal Law 111-199/TSCA Section 601	Stereo cabinets, kiosk enclosures

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23	Banned	Phenol,2-(2H-benzotriazol-2-yl)-4,6-bis(1,1-dimethylethyl)	3846-71-7	All	Intentionally added or 0.1% by weight (1,000 ppm) of the Article	Japan Law concerning the evaluation of chemical substances Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2014)	Adhesives, paints, printing inks, plastics, ink ribbons, putty, caulking or sealing fillers
24	Banned	Selected Phthalates Group 1 (BBP, DBP, DEHP)	See another list	Children's toy or child care article	0.1% by weight (1,000 ppm) in plasticized material	ANNEX XVII of REACH Regulation (EC) No 1907/2006; U.S. Consumer Product Safety Improvement Act	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
25	Banned	Selected Phthalates Group 2 (DIDP, DINP, DNOP)	See another list	Children's toy or child care article that can be placed in a child's mouth	0.1% by weight (1,000 ppm) in plasticized material	ANNEX XVII of REACH Regulation (EC) No 1907/2006; U.S. Consumer Product Safety Improvement Act	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
26	Banned	Dimethyl fumarate	624-49-7	All	0.00001% by weight (0.1 ppm) in a material	COMMISSION DECISION 2009/251/EC	Anti-mold treatment for electronic leather seats including insecticides, recliners and massage chairs
27	Banned	Diarsenic Pentoxide	1303-28-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	"Additives for wood, metal, glass and plastics"
28	Banned	Diarsenic Trioxide	1327-53-3	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Additives for wood, metal, glass and plastics
29	Banned	Hexabromocyclododecane(HBCDD) and all major diastereoisomers	See another list	All	Intentionally added or 0.01% by weight (100 ppm) of the Article	POPs: Persistent Organic Pollutants EU POPs Regulation	A flame retardant used primarily in expanded polystyrene and some textiles.
30	Banned	Shortchain Chlorinated Paraffins (C10 – C13)	See another list	All	Intentionally added or 0.1(1,000ppm) of the Article	EU POPs Regulation Swiss Ordinance on Reduction of Risk from Chemical Products	PVC plasticizers, flame retardants
31	Banned	Tris(2-chloroethyl) phosphate (TCEP)	115-96-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)	Flame retardants
32	Banned	Lead chromate	7758-97-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)	Plastic colorants, paint colorants

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33	Banned	Lead chromate molybdate sulphate red (C.I. Pigment Red 104)	12656-85-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)	Plastic colorant, red paint colorant
34	Banned	Lead sulfochromate yellow (C.I. Pigment Yellow 34)	1344-37-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 13.01.2010)	Plastic colorant, yellow paint colorant
35	Banned	Strontium chromate	7789-06-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Rust Inhibitor
36	Banned	Potassium hydroxyoctaoxodizincate dichromate	11103-86-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Coloring agent
37	Banned	Pentazinc chromate octahydroxide	49663-84-5	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Coloring agent
38	Banned	Decabromodiphenyl ether	1163-19-5	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
39	Banned	Sulfurous acid, lead salt, dibasic	62229-08-7	All	0.1% by weight of the Article(EU RoHS) Intentionally added(TSCA)	POPs: Persistent Organic Pollutants Toxic Substance Control Act (TSCA)	
40	Banned	Trilead dioxide phosphonate	12141-20-7	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
41	Banned	4-Aminoazobenzene	60-09-3	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	

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42	Banned	Tetralead trioxide sulfate	12202-17-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
43	Banned	Orange lead (lead tetroxide)	1314-41-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
44	Banned	Pyrochlore, antimony lead yellow	8012-00-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
45	Banned	Pentalead tetraoxide sulphate	12065-90-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
46	Banned	Dibutyltin dichloride (DBTC)	683-18-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
47	Banned	Lead cyanamidate	20837-86-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
48	Banned	Silicic acid (H <sub>2</sub> SiO <sub>5</sub> ), barium salt (1:1), lead-doped	68784-75-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
49	Banned	Lead titanium trioxide	12060-00-3	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
50	Banned	Lead titanium zirconium oxide	12626-81-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
51	Banned	Lead oxide sulfate	12036-76-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	

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52	Banned	[Phthalato(2-)]dioxotrilead	69011-06-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
53	Banned	Dioxobis(stearato)trilead	12578-12-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
54	Banned	Fatty acids, C16-18, lead salts	91031-62-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
55	Banned	Lead dinitrate	10099-74-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	
56	Banned	Specific Heavy Metals Cd/Cd Compounds; Pb/Pb Compounds; Hg/Hg Compounds; CrVI Compounds	—	Packaging, packaging component	Intentionally added or 0.01% by weight (100ppm) of the sum of Cd, Hg, Pb, Cr <sup>6+</sup> in the material	EU 94/62/EC Directive; US State Toxic in Packaging (TIP)	Pigments, paints, PVC stabilizers
57	Banned	Cadmium oxide	1306-19-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.6.2013)	
58	Banned	Pentadecafluorooctanoic acid (PFOA) and its salts	See another list	All	0.1% by weight (1,000 ppm) of the Article	POPs: Persistent Organic Pollutants EU POPs Regulation	
59	Banned	Cadmium sulphide	1306-23-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
60	Banned	Bis (2-ethylhexyl) phthalate (DEHP)	117-81-7	All	0.1% by weight (1,000 ppm) in homogeneous material	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Plasticizers, Dyes, Pigments, Paints, Inks, Adhesives, Lubricants



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61	Banned	Dibutylphthalate (DBP)	84-74-2	All	0.1% by weight (1,000 ppm) in homogeneous material	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Plasticizers, Dyes, Pigments, Paints, Inks, Adhesives, Lubricants
62	Banned	Butyl benzyl phthalate (BBP)	85-68-7	All	0.1% by weight (1,000 ppm) in homogeneous material	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Plasticizers, Dyes, Pigments, Paints, Inks, Adhesives, Lubricants
63	Banned	Diisobutyl phthalate (DIBP)	84-69-5	All	0.1% by weight (1,000 ppm) in homogeneous material	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
64	Banned	Polycyclic aromatic hydrocarbon (PAH)	See another list	Rubber or plastic parts that come into direct, prolonged or repetitive skin or oral cavity contact except those for toys or childcare articles	0.0001 mass% (1ppm) of the plastic or rubber part	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EU) No 1272/2013	
65	Banned	Polycyclic aromatic hydrocarbon (PAH)		Rubber or plastic parts of toys and childcare articles that come into direct, prolonged or repetitive skin or oral cavity contact	0.00005 mass% (0.5ppm) of the plastic or rubber part	ANNEX XVII of REACH Regulation (EC) No 1907/2006 and Commission Regulation (EU) No 1272/2013	
66	Banned	Phenol, Isopropylated Phosphate (3:1) (PIP (3:1))	68937-41-7	All	Intentionally added	US TSCA.	
67	Banned	Pentachlorothiophenol (PCTP)	133-49-3	All	1% by weight of the Article	US TSCA.	
68	Banned	Hexachlorobutadiene (HCBD)	87-68-3	All	Intentionally added	POPs: Persistent Organic Pollutants Toxic Substance Control Act (TSCA)	
69	Banned	Hexachlorobenzene	118-74-1	All	Intentionally added or 0.001% by weight (10 ppm) of the Article	POPs: Persistent Organic Pollutants Toxic Substance Control Act (TSCA)	
70	Banned	Mineral Oil Aromatic Hydrocarbons (MOAH) consisting of 1-7 aromatic rings	-	Packaging and printed materials	Intentionally added	French Mineral Oil Regulation	
71	Banned	Mineral Oil Saturated Hydrocarbons (MOSH) with carbon chain lengths of 16-35	-	Packaging and printed materials	Intentionally added	French Mineral Oil Regulation	
72	Banned	2,4,6-Tri-tert-butylphenol	-	Substances and mixtures	0.3% by weight (3,000 ppm)	Toxic Substance Control Act (TSCA)	
73	Banned	Methoxychlor	-	All	Intentionally added or substances, mixtures or articles.000001% by weight (0.01 ppm)	POPs: Persistent Organic Pollutants	
74	Banned	2-(2H-benzotriazol-2-yl)-4,6-diterphenylphenol (UV-328)	25973-55-1	All	Intentionally added or 0.0001% by weight (1 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2014) POPs: Persistent Organic Pollutants	

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75	Banned	4,4'-Isopropylidenediphenol	80-05-7	Applications of thermal paper.	It is prohibited to market thermal paper containing a concentration of 0.02% or more by weight.	ANNEX XVII of REACH Regulation (EC) No 1907/2006	
76	Banned	Perfluorocarboxylic acids (C9-C14 PFCAs) and their salts	See another list	All	0.0000025 mass% of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 3.Sep.2017)	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
77	Banned	Perfluorohexane-1-sulphonic acid and its salts	See another list	All	0.0000025 mass% of the Article	EU POPs Regulation Swiss Regulations on Risk Reduction from Chemical Products POPs: Persistent Organic Pollutants	
78	Banned	1,6,7,8,9,14,15,16,17,17,18,18-Dodecachloropentacyclo[12.2.1.16,9.0.2,13.05,10]octadeca-7,15-diene ("Dechlorane Plus"™)	See another list	All	Intentionally added or 0.0001% by weight (1 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.Jan.2018) POPs: Persistent Organic Pollutants	Non-plasticized flame retardants for adhesives, sealants and bonding agents
79	Banned	Medium-chain chlorinated paraffin (MCCPs)	See another list	All	Intentionally added	POPs: Persistent Organic Pollutants	Effective date of the ban on the delivery: January 1, 2026
80	Banned	Long-chain perfluorocarboxylic acids (PFCAs)	See another list	All	Intentionally added	POPs: Persistent Organic Pollutants	Effective date of the ban on the delivery: January 1, 2026
81	Banned	Per- and polyfluoroalkyl substances (PFAS)	-	Packaging and Packaging materials	Intentionally added	US Specified State TIP	Effective date of the ban on the delivery: January 1, 2026

#### ◆Controlled substances

1	Controlled	Beryllium Oxide (BeO)	1304-56-9	All	0.1% by weight (1,000 ppm) of the Article	DIGITALEUROPE 2/CECED/AeA 3/ EERA guidance	Ceramics
2	Controlled	Brominated flame retardants (other than PBBs,PBDEs, or HBCDD)	See another list	Plastic materials except printed wiring board laminates	0.1% total bromine content by weight (1,000 ppm) in the plastic material	JS709	Flame retardants in encapsulants for housings, connectors, and package molds
	Controlled	Brominated flame retardants (other than PBBs,PBDEs, or HBCDD)		Printed wiring board laminate	0.09% total bromine content by weight (900 ppm) in the laminate	IPC-4101 and IEC 61249-2-21	Laminated printed wiring board
3	Controlled	Chlorinated flame retardants	See another list	Plastic materials except printed wiring board laminates 4	0.1% total chlorine content by weight (1,000 ppm) in the plastic material	JS709	Flame retardants in encapsulants for housings, connectors, and package molds
	Controlled	Chlorinated flame retardants		Printed wiring board laminate 4	0.09% total chlorine content by weight (900 ppm) in the laminate	IPC-4101 and IEC 61249-2-21	Flame retardants
4	Controlled	Polyvinyl Chloride (PVC) and PVC Copolymers	See another list	Plastic materials except printed wiring board laminates 4	0.1% total chlorine content by weight (1,000 ppm) in the plastic material	JS709	Insulation material, chemical resistance, OHP film, sheath material
5	Controlled	Di-isodecyl phthalate (DIDP)	68515-49-1 26761-40-0	All	Intentionally added	US/CA Proposition65	Cable plasticizer
6	Controlled	Di-n-hexyl Phthalate (DnHP)	84-75-3	All	Intentionally added or 0.1% by weight (1,000 ppm) of the Article	US/CA Proposition65; Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 16.12.2013)	Cable plasticizer
7	Controlled	Cobalt dichloride (CoCl <sub>2</sub> )	7646-79-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 28.10.2008)	Pneumatic control panel for water pollution detection
8	Controlled	Refractory Ceramic Fibres, Aluminosilicate	-	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Insulation for high temperature testing equipment
9	Controlled	Refractory Ceramic Fibres, Zirconia Aluminosilicate	-	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Insulation for high temperature testing equipment

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10	Controlled	Boric acid	10043-35-3 11113-50-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)	Additives for glue and flame retardants in plywood/compressed wood; stabilizers for aminoplastic resins; wood preservatives; flame retardants in wood, cotton and other plant-based materials
11	Controlled	Disodium tetraborate, anhydrous	See another list	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)	Additives for glue and flame retardants in plywood/compressed wood; stabilizers for aminoplastic resins; wood preservatives; flame retardants in wood, cotton and other plant-based materials
12	Controlled	Tetraboron disodium heptaoxide, hydrate	12267-73-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)	Additives for glue and flame retardants in plywood/compressed wood; stabilizers for aminoplastic resins; wood preservatives; flame retardants in wood, cotton and other plant-based materials
13	Controlled	1,2-Benzenedicarboxylic acid, di-C6-8-branched alkyl esters, C7-rich (DIHP)	71888-89-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.06.2011)	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
14	Controlled	1,2-Benzenedicarboxylic acid, di-C7-11-branched and linear alkyl esters (DHNUP)	68515-42-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.06.2011)	Plasticizers, dyes, pigments, paints, inks, adhesives, lubricants
15	Controlled	4-[4,4'-bis(dimethylamino) benzhydrylidene] cyclohexa-2,5-dien-1-ylidene] dimethylammonium chloride (C.I. Basic Violet 3)	548-62-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)	Ink
16	Controlled	2,2'-dichloro-4,4'-methylenedianiline (MOCA)	101-14-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Polyurethane hardener
17	Controlled	Bis(2-methoxyethyl) phthalate	117-82-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Plasticizer
18	Controlled	4-(1,1,3,3-tetramethylbutyl)phenol, (4-tert-Octylphenol)	140-66-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Unreacted materials
19	Controlled	Bis(2-methoxyethyl) ether	111-96-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Battery electrolyte
20	Controlled	N,N-dimethylacetamide (DMAC)	127-19-5	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2011)	Unreacted materials
21	Controlled	1,2-bis(2-methoxyethoxy)ethane (TEGDME; triglyme)	112-49-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2010)	
22	Controlled	1,2-dimethoxyethane; ethyleneglycol dimethyl ether (EGDME)	110-71-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
23	Controlled	1,2-Diethoxyethane	629-14-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
24	Controlled	Diboron trioxide	1303-86-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 18.06.2012)	

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25	Controlled	N,N-dimethylformamide	68-12-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
26	Controlled	1,2-Benzenedicarboxylic acid, dipentylester, branched and linear	84777-06-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
27	Controlled	Diisopentylphthalate (DIPP)	605-50-5	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
28	Controlled	N-pentyl-isopentylphthalate	776297-69-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
29	Controlled	Hexahydromethylphthalic anhydride Hexahydro-4-methylphthalic anhydride, Hexahydro-1-methylphthalic anhydride, Hexahydro-3-methylphthalic anhydride	25550-51-0 19438-60-9 48122-14-1 57110-29-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2012)	
30	Controlled	Dipentyl phthalate (DPP)	131-18-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.06.2013)	
31	Controlled	4-Nonylphenol, branched and linear, ethoxylated	-	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 20.06.2013)	
32	Controlled	Trixylyl phosphate	25155-23-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
33	Controlled	Disodium 3,3'-[[1,1'-biphenyl]-4,4'-diylbis(azo)]bis(4-aminonaphthalene-1-sulphonate) (C.I. Direct Red 28)	573-58-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
34	Controlled	Imidazolidine-2-thione; (2-imidazoline-2-thiol)	96-45-7	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
35	Controlled	1,2-Benzenedicarboxylic acid, dihexyl ester, branched and linear	68515-50-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
36	Controlled	Diisononyl phthalate (DINP)	28553-12-0 68515-48-0	All	Intentionally added	California Proposition65	
37	Controlled	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	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 19.12.2013)	
38	Controlled	Benzenamine, N-phenyl-, reaction products with styrene and 2,4,4-trimethylpentene (BNST)	68921-45-9	All	0.1% by weight (1,000 ppm) of the Article	Prohibition of Certain Toxic Substances Regulations, 2012, CANADA	
39	Controlled	2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (DOTE)	15571-58-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2014)	

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40	Controlled	reaction mass of 2-ethylhexyl 10-ethyl-4,4-dioctyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate and 2-ethylhexyl 10-ethyl-4-[[2-[(2-ethylhexyl)oxy]-2-oxoethyl]thio]-4-octyl-7-oxo-8-oxa-3,5-dithia-4-stannatetradecanoate (reaction mass of DOTE and MOTE)		All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2014)	
41	Controlled	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 (EC No. 201-559-5)	68515-51-5 68648-93-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.6.2015)	
42	Controlled	Nitrobenzene	98-95-3	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2015)	
43	Controlled	2,4-di-tert-butyl-6-(5-chlorobenzotriazol-2-yl)phenol (UV-327)	3864-99-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2015)	
44	Controlled	2-(2H-benzotriazol-2-yl)-4-(tert-butyl)-6-(sec-butyl)phenol (UV-350)	36437-37-3	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2015)	
45	Controlled	1,3-propanesultone	1120-71-4	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 17.12.2015)	
46	Controlled	4,4'-Isopropylidenediphenol	80-05-7	All	Intentionally added or 0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 12.Jan.2017) ; US/CA Proposition65	PVC antioxidant, epoxy resin hardener, thermal paper
47	Controlled	Cadmium hydroxide	21041-95-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.Jan.2018)	
48	Controlled	Benzo[ghi]perylene	191-24-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
49	Controlled	Octamethylcyclotetrasiloxane	556-67-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
50	Controlled	Decamethylcyclopentasiloxane	541-02-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
51	Controlled	Dodecamethylcyclohexasiloxane	540-97-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
52	Controlled	Disodium octaborate	12008-41-2	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	Antifreeze, lubricants and greases
53	Controlled	Terphenyl, hydrogenated	61788-32-7	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	Plastic additives, solvents, paints and inks
54	Controlled	Dicyclohexyl phthalate	84-61-7	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	Plasticizers

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55	Controlled	2,2-bis(4'-hydroxyphenyl)-4-methylpentane	6807-17-6	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.Jan.2018)	
56	Controlled	Benzo[k]fluoranthene	207-08-9	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
57	Controlled	Phenanthrene	85-01-8	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 8.Jul.2018)	
58	Controlled	Fluoranthene	206-44-0 93951-69-0	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.Jan.2018)	
59	Controlled	Pyrene	129-00-0 1718-52-1	All	0.1% by weight (1,000 ppm) of the Article	Article 33 and 7.2 of REACH Regulation (EC) No 1907/2006 (Candidate list of SVHC for authorization 15.Jan.2018)	