

Prohibited substance level 1

This applies to substances that may be used in products. If a substance is currently prohibited from being included in products or has an upper limit set on its concentration under existing laws and regulations, its use must be immediately discontinued.

No.	Substance name	Regulatory Provisions	Names of Commonly Contained Components	Legal Regulations
1	Polychlorinated biphenyls (PCBs)	Intentional use prohibited and below 50 ppm	Insulating oil, lubricating oil, electrical insulating material, plasticizer, flame retardant, etc.	Chemical Substances Control Law POPs treaty EU POPs Regulation Annex I
	Polychlorinated terphenyls (PCTs)	Intentional use prohibited and below 50 ppm	Insulating oil, lubricating oil, electrical insulating material, plasticizer, flame retardant, etc.	EU REACH Regulation Annex XVII
2	Asbestos	Intentional use prohibited Furthermore, the inclusion of this substance is prohibited, including unintentional contamination/adhesion from parallel production or manufacturing equipment.	Gaskets (sealants), insulators, fillers, abrasives, pigments, paints, etc.	EU REACH Regulation Annex XVII
3	Specific organotin compounds Bis(tributyltin) oxide 3-substituted organotin compounds	Less than 1000 ppm (tin content concentration)	Paints, pigments, preservatives, stabilizers, etc.	Chemical Substances Control Law EU REACH Regulation Annex XVII
4	Specific organotin compounds Dibutyltin compounds	Less than 1000 ppm (tin content concentration)	Resin stabilizers, curing catalysts for polyurethanes, curing catalysts for silicones, etc.	EU REACH Regulation Annex XVII
5	Specific organotin compounds Dioctyltin compounds	Less than 1000 ppm (tin content) (Limited to regulated items)	Fibers that come into contact with the skin, walls, floor covers, etc.	EU REACH Regulation Annex XVII
6	Short-chain paraffin chloride (SCCP, C10-13)	Intentional use prohibited and concentration must be less than 1500 ppm.	Plasticizers and flame retardants for polyvinyl chloride (PVC), etc.	EU POPs Regulation Annex I POPs treaty
7	Specific brominated flame retardants (PBB)	Intentional use prohibited and less than 1000 ppm For equipment other than those subject to the EU RoHS Directive, PBDE must be less than 500 ppm	Printed circuit boards, enclosures, terminal blocks, plastic flame retardants Uses include battery materials, packaging materials, toys and childcare products.	RoHS Directive EU REACH Regulation Annex XVII EU POPs Regulation Annex I TSCA
8	Specific brominated flame retardants (PBDE)	EU RoHS Directive – Applicable Equipment Intentionally prohibited from use and less than 1000 ppm	(1) EU RoHS compliant equipment	Chemical Substances Control Law EU RoHS EU POPs Annex I TSCA POPs treaty
		EU RoHS Directive: Not applicable to all equipment Intentionally prohibited from use and less than 10 ppm	(2) Other uses: All uses (such as materials for batteries, automotive parts, packaging materials, and baby products) <Exemptions> · PBDE levels below 350 ppm in toys and childcare materials containing recycled PBDE (until October 20, 2026) · PBDE levels below 350 ppm in molded articles (other than toys and childcare products) containing recycled PBDE (until June 30, 2027) · PBDE levels below 200 ppm in molded articles (other than toys and childcare products) containing recycled PBDE (from July 1, 2027 onwards)	
9	Azo dyes and pigments that form specific amines.	As a specific amine, the amount must be less than 30 mg/kg (30 ppm) (Limited to the scope of regulation)	Textiles, leather products, etc., that may come into direct and prolonged contact with human skin or oral cavity.	EU REACH Regulation Annex XVII
10	Polychlorinated naphthalene (Substances with 1 or more chlorine atoms)	Intentional use prohibited	Lubricants, paints, plastic stabilizers	EU POPs Annex I Chemical Substances Control Law POPs treaty
11	Cadmium and its compounds	It must be less than 100 ppm. (Exemptions apply)	Packaging materials, plastic stabilizers, pigments, paints, inks, coatings, etc.	Resource Effective Utilization Promotion Act EU RoHS Directive EU REACH Regulation Annex XVII EU ELV Directive
12	Lead and its compounds	It must be less than 1000 ppm. (Exemptions apply)	Packaging materials, soldering materials, brazing materials, lead-acid batteries, electronic components, cold cathode tubes, paints, pigments, dyes, inks, etc.	Resource Effective Utilization Promotion Act EU RoHS Directive EU REACH Regulation Annex XVII EU ELV Directive
13	Hexavalent chromium compounds	· Leather products and leather parts: Less than 3 ppm · Other: Less than 1000 ppm (Exemptions apply)	Rust prevention and corrosion-resistant surface treatment for packaging materials, screws, sheet metal, etc. Plating, colorants, leather products	Resource Effective Utilization Promotion Act EU RoHS Directive EU REACH Regulation Annex XVII EU ELV Directive
14	Mercury and its compounds	It must be less than 1000 ppm. (Exemptions apply)	Switches, sensors, packaging materials, paints, inks, pigments, mercury batteries, mercury clocks	EU RoHS Directive Resource Recycling Promotion Act Minamata Convention EU ELV Directive
-	No. 10-13 Four heavy Metals (Cadmium, Lead, Hexavalent Chromium, Mercury)	Intentional use is prohibited, and the total amount of the components constituting the packaging is less than 100 ppm (the regulation applies to packaging materials).	Pigments, dyes, paints, inks, adhesives, labels, etc.	EU Packaging Directive Specific states in the U.S. Packaging material heavy metal regulations
15	Ozone-depleting substances (excluding HCFCs)	Intentional use prohibited	Refrigerants, foaming agents, cleaning agents for mounted circuit boards, etc.	Ozone Layer Protection Act Montreal Protocol US CFC Tax
16	Hydrochlorofluorocarbons (HCFC)	Intentional use prohibited	Refrigerants, foaming agents, cleaning agents for mounted circuit boards, etc.	EU ODS Regulation US Clean Air Act
17	Formaldehyde	· Wood-based molded products Airborne concentration less than 0.062 mg/m ³ (0.05 ppm) · Molded products other than those listed above Airborne concentration less than 0.080 mg/m ³ (0.06 ppm)	All applications (applies to molded products) However, regulatory values for building materials, housing equipment, etc., will be separately stipulated by the relevant business company/business site.	Regulation Annex XVII TSCA Canada Environmental Protection Act 1999
18	Perfluorooctanesulfonic acid and its salts and PFOS-related substances	Intentional use prohibited and · For PFOS (including salts): less than 25 ppb (0.025 ppm) · For combinations of one or more PFOS-related substances: total concentration less than 1000 ppb (1 ppm) · For semi-finished products, molded articles, and parts: less than 1000 ppm · For surface treatments: less than 1 μg/m ² (exemptions apply)	All uses	EU POPs Annex I Chemical Substances Control Law POPs treaty
19	Specific benzotriazoles compounds UV-320	Intentional use prohibited	UV absorber for plastic resins	Chemical Substances Control Law
20	Dimethyl fumarate	It must be less than 0.1 ppm.	Moisture absorbers, mold inhibitors, etc.	EU REACH Regulation Annex XVII
21	Polycyclic aromatic hydrocarbons (PAHs)	It must be less than 0.1 ppm.	Automobiles, household goods, clothing, footwear, wristbands, masks	EU REACH Regulation Annex XVII
22	Hexabromocyclododecane (HBCD)	Intentional use prohibited and below 75 ppm	Flame retardant	EU POPs Annex I Chemical Substance Control Law POPs Convention
23	Phthalate esters (4 types) Bis(2-ethylhexyl) phthalate (DEHP) Butyl benzyl phthalate (BBP) Di-n-butyl phthalate (DBP) Diisobutyl phthalate (DIBP)	The concentration of one substance must be less than 1000 ppm.	Rubber, elastomers, plasticizers for resins, paints, inks, adhesive additives, etc.	EU RoHS Directive
		EU RoHS Directive – Not applicable to the equipment The total concentration of the four components must be less than 1000 ppm.	Rubber, elastomers, plasticizers for resins, paints, inks, adhesive additives, etc.	EU REACH Regulation Annex XVII
24	Chloride phosphate ester-based flame retardants (3 types) · Tris(1,3-dichloro-2-propyl) = Phosphate (TDCPP) · Tris(2-chloroethyl) = Phosphate (TCEP) · Tris(1-chloro-2-propyl) = Phosphate (TCPP)	It must be less than 1000 ppm.	Flame retardant	U.S. domestic law (including local government law)

Prohibited Substance Level 1

No.	Substance name	Regulatory Provisions	Names of Commonly Contained Components	Legal Regulations
25	Hydrofluorocarbon (HFC)	Prohibition of Intentional Use (Subject to Restrictions)	Standalone cooling equipment, centralized cooling systems Chillers, portable cooling units, household	Canadian Environmental Protection Act, 1999
26	Perfluorooctanoic acid (PFOA), its salts, and PFOA-related substances	Intentional use is prohibited, and: • In the case of PFOA (including its salts), the concentration must be less than 25 ppb (0.025 ppm). • In the case of a combination of one or more PFOA-related substances, the combined concentration must be less than 1,000 ppb (1 ppm). (Subject to exemptions)	Fluor resins/Rubber, Fluorine Coatings, Anti-reflective Agents for Semiconductor Exposure Processes	EU POPs Regulation Annex I
27	Perfluoro carboxylic acids with 9 to 14 carbon atoms (C9-C14 PFCAs) and their salts, and C9-C14 PFCA-related substances*3 (Also known as: Perfluoro carboxylic acids with 9 to 14 carbon atoms (C9-C14 PFCAs) and their salts, and C9-C14 PFCA-related substances)	[C9-C14 PFCAs] Prohibited from intentional use, and: • In the case of C9-C14 PFCAs (including their salts), the concentration must be less than 25 ppb (0.025 ppm); • In the case of a combination of one or more C9-C14 PFCA-related substances, the aggregate concentration must be less than 250 ppb	All Applications <Exclusions> • C9-C14 PFCAs present as impurities at concentrations of 1 ppm or less in the manufacture of polytetrafluoroethylene (PTFE) micro powder via ionizing radiation or thermal decomposition	EU REACH Regulation Annex XVII POPs Convention
		[C15-C21 PFCAs] Prohibited for Intentional Use	All Uses	POPs Convention
28	Perfluoro hexane sulfonic acid (PFHxS), its salts, and PFHxS-related substances (Also known as: Perfluoro hexane sulfonic acid (PFHxS), its salts, and PFHxS-related substances)	Intentional use is prohibited, and: • In the case of PFHxS (including its salts), the concentration must be less than 25 ppb (0.025 ppm). • In the case of a combination of one or more PFHxS-related substances, the combined concentration must be less than 1,000 ppb (1 ppm).	Fluorine Coating, Metal Plating	POPs Convention
29	Tris(isopropyl phenyl) Phosphate (PIP (3:1))	Prohibition of Intentional Use (Exceptions Apply)	Flame retardants, plasticizers	TSCA
30	Dechlorane Plus™	Intentional use prohibited; less than 1,000 ppm (Less than 1 ppm as of April 16, 2027)	All Applications <Exclusions> (Until August 26, 2029) • Aerospace and defense applications • Medical diagnostic imaging and radiation therapy equipment/facilities	Chemical Substances Control Law EU POPs Annex POPs treaty
31	Specific Benzotriazole Compound (2) UV-328	Intentional Use Prohibited; Limit: <100 ppm • Effective August 4, 2026: <10 ppm • Effective August 4, 2028: <1 ppm	All Uses <Exemptions> (Until February 4, 2030) • Automobiles (including trucks, motorcycles, construction vehicles, agricultural vehicles, industrial vehicles, etc.) • Industrial Coatings (e.g., engineering machinery, rail transport, heavy-duty anti-corrosion coatings for large steel structures) • Triacetylcellulose (TAC) films in polarizers • Aircraft	Chemical Substances Control Law EU POPs Annex POPs treaty
32	Short-chain Chlorinated Paraffins (MCCP, C14-17) (Limited to those with a chlorination degree of 45% by weight or more)	Prohibited for Intended Use	All Applications <Exemptions> ① Flexible polyvinyl chloride used in the following applications: • Applications in the construction sector (including the maintenance of buildings and other structures), excluding flooring materials for indoor spaces used for non-commercial purposes • Wires and cables in the construction sector • Wires and cables for medical devices and in vitro diagnostic devices ② Flexible Elastomeric Foams (FEF) for thermal insulation ③ Adhesives and sealants used in the following applications: • Polysulfide-based sealants and one-component polyurethane foams used for sealing doors and windows • Waterproofing and anti-corrosion coatings • Aerospace and defense applications ④ Tapes used for non-structural bonding in aerospace and defense products ⑤ Fat liquoring agents for leather (excluding products for children)	POPs Convention

Prohibited substances Level 3

- (1) Substances other than those specified as Prohibited Substances Level 1, the inclusion of which in products is prohibited—subject to a prescribed deadline—under treaties or laws and regulations.
- (2) Substances for which the prohibition of inclusion in products is being advanced ahead of the deadlines established by treaties and regulations.
- (3) Substances Subject to Usage Restrictions Through Voluntary Initiatives

*If the presence of this substance in a product is confirmed, its replacement must be promoted in accordance with the prescribed deadlines and restrictive conditions.

No.	Substance name	Usage prohibited period	Usage Restrictions	Legal Regulations
1	Polyvinyl chloride (PVC) and mixtures thereof, and copolymers	After April 2011	(1) Internal wiring in new electrical and electronic products (2) Packaging materials used for products and for accessories bundled with	Self-regulation
2	Bisphenol A (also known as BPA or 2,2-bis(4-hydroxyphenyl)propane) and Bisphenols of Similar Concern	Set according to future legal and regulatory trends.	All Uses	EU REACH regulation
3	Organ halogen Flame Retardants (OFRs)	Set according to future legal and regulatory trends.	The following applications: (1) Plastic enclosures and stands for displays; (2) Other than the above: Plastic enclosures for indoor EEE. <Exclusions> (1) Enclosures for components that do not come into contact with the skin (2) Cords, cables, switches, and connectors	U.S. Domestic Law
4	Dexabromobiphenyl ethane (DBDPE)	Set according to future legal and regulatory trends.	All Uses	Canadian Environmental Protection Act, 1999
5	Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)	January 1, 2031 However, this is subject to change in response to future trends in laws and regulations.	All Uses	U.S. Domestic Law
6	Perfluoro hexanoic acid (PFHxA), its salts, and PFHxA-related substances	October 10, 2026	For use in textiles, leather, furs, and hides: • In the case of PFHxA (including its salts): Less than 25 ppb (0.025 ppm) • In the case of a combination of one or more PFHxA-related substances: A total concentration of less than 1,000 ppb (1 ppm)	EU REACH regulation

Prohibited substances Level 3

These are substances that are not currently prohibited from use, but for which bans or restrictions are under consideration pursuant to legal regulations or similar frameworks. For these substances, we will identify the challenges associated with finding alternatives and, while taking into account future trends in legal regulations, determine the appropriate timeline for their prohibition. Once the effective date for the ban has been established, these substances will be

No.	Substance name	Selection Criteria	Legal Regulations	No.	Substance name	Selection Criteria	Legal Regulations
1	Phthalates other than DEHP, BBP, DBP, and DIBP	-	EU REACH Regulation Proposition 65 TSCA SNUR U.S. State-Specific Packaging Hazardous Substances Regulations	5	Beryllium oxide	Avoidance of Exposure During Disposal	WEEE Recycler Substances Subject to Information Provision
2	Arsenic trioxide, arsenic pentoxide	Avoidance of Exposure During Disposal	REACH regulation approval Target candidate substance	6	Triphenyl phosphate (TPP)	-	TSCA
3	Cobalt chloride	Exposure due to misuse of desiccants	REACH regulation approval Target candidate substance	7	Additive Tetrabromobisphenol A (TBBPA)	-	EU REACH
4	Ceramic Fiber	Avoidance of Exposure During Disposal	REACH regulation approval Target candidate substance	-	-	-	-