

List of prohibited hazardous substances (as of: April 2010 - status: informative; frozen 4/2010)

Summary of bans or restrictions on the distribution of hazardous substances, valid in the EC and in some other countries

<i>Substance/ substance group</i>	<i>CAS No.</i>	<i>Affected application</i>	<i>Limit value (wt.%) ¹⁾</i>	<i>Excep- tions</i>	<i>Legal regulations ²⁾</i>
Electrical and electronic equipment and components; metal, glass and ceramic parts					
Lead	7439-92-1	Electrical and electronic equipment	0.1	yes	EU RoHS ChemRRV App. 2.16(6) CH
Cadmium Cadmium compounds	7440-43-9	Electrical and electronic equipment	0.01	yes	EU RoHS ChemRRV App. 2.16(6) CH
		Metal surface coating	n.d.	yes	EU REACH App. XVII ChemRRV App. 2.9, 2.16(2) Statutory Order No. 1199: limit value 0.0075 % CH
		Zinc layers	0.025		ChemRRV App. 2.16(3) CH
Mercury Mercury compounds	7439-97-6	Electrical and electronic equipment	0.1	yes	EU RoHS
		All applications	n.d.	yes	CH ChemRRV App. 1.7 Decree 9 September 1998 NL SE SFS 1998:944
Hexavalent chromium (Cr ^{VI})		Electrical and electronic equipment	0.1	yes	EU RoHS ChemRRV App. 2.16(6) CH
Polybrominated biphenyls (PBBs) Polybrominated diphenyl ethers (PBDEs)		Electrical and electronic equipment	0.1	yes	EU RoHS CH ChemRRV App. 1.9
Octabromodiphenylether (OBDE)	32536-52-0	All applications	0.1		EU REACH
Pentabromodiphenylether (PeBDE)	32534-81-9				
Batteries and accumulators					
Lead	7439-92-1	Fixed batteries ⁶⁾	0.1	yes	CH ChemRRV App. 2.15
Cadmium	7440-43-9	Portable batteries and accumulators	0.002	yes	EU 2006/66/EC
		Zinc-carbon batteries Fixed batteries ⁶⁾	0.015 0.015	yes	CH ChemRRV App. 2.15
Mercury	7439-97-6	Batteries and accumulators	0.000 5	yes	EU 2006/66/EC
		Fixed batteries ⁶⁾	0.000 5		CH ChemRRV App. 2.15
		Button cells and batteries composed of button cells	2		EU 2006/66/EC CH ChemRRV App. 2.15
		Alkali-manganese batteries	0.000 5	yes	CH ChemRRV App. 2.15
		Zinc-carbon batteries	0.000 5		CH ChemRRV App. 2.15

Substance/ substance group	CAS No.	Affected application	Limit value (wt.%)¹⁾	Excep- tions	Legal regulations²⁾
Plastics and rubber parts, wire insulation, coats of lacquer					
Polybrominated biphenyls (PBBs) Polybrominated diphenyl ethers (PBDEs)		Electrical and electronic equipment	0.1	yes	EU RoHS CH ChemRRV App. 1.9
Octabromodiphenylether (OBDE) Pentabromodiphenylether (PeBDE)	32536-52-0 32534-81-9	All applications	0.1		EU REACH App. XVII
Short-chain chlorinated paraffins (C ₁₀ -C ₁₃)		Sealing compounds Plastics and rubber	1.0		CH ChemRRV App. 1.2
Lead and lead compounds		Paints and varnishings	0.01	yes	CH ChemRRV App. 2.8
Cadmium and cadmium compounds		Pigments in plastics	0.01	yes	EU REACH App. XVII ChemRRV App. 2.9, 2.16(2) DK Statutory Order No. 1199: limit values 0.0075 %
		Stabilized vinyl chloride polymers and copolymers (e.g. PVC)	0.01	yes	
		Paints and varnishings	0.01	yes	
Insulating materials					
Asbestos	1332-21-4 see below ⁴⁾	All applications	0.1 (total)	yes	EU REACH App. XVII
			n.d.	yes	CH ChemRRV App. 1.6
Man-made vitreous (silicate) fibres with random orientation with oxide of sodium, potassium, calcium, magnesium and barium content >18 % by mass		Articles for heat and noise reduction in building construction including technical insulation and for ventilation systems	0.1 (total)	yes	DE ChemVerbotsV
Other materials (e.g. wood)					
Arsenic compounds Formaldehyd	50-00-0	Wood Holzwerkstoffe	n.d. 0,1 ml/m ³ (special method of testing)	yes ja	EU REACH App. XVII DE ChemVerbotsV AT BGBl. Nr. 194/1990 SE KIFS 1998:8 (9, 20-27 §§)
Creosote	8001-58-9	Wood and wooden materials	n.d.	yes	EU REACH App. XVII
Pentachlorophenol (PCP) Pentachlorophenol, sodium salt Other PCP salts and compounds	87-86-5 131-52-2	All applications	0.000 5 (total)	yes	EU REACH App. XVII

Substance/ substance group	CAS No.	Affected application	Limit value (wt.%) ¹⁾	Excep- tions	Legal regulations ²⁾
Coolants, insulating gases and liquids, fire extinguishing agents					
CFCs and halons	see be- low ⁵⁾	All applications	n.d.		EU 1005/2009 US CAA (42 USC 7671 et seq.) CH ChemRRV App. 1.4, 2.3, 2.9- 12
HCFCs		Use in cooling and air- conditioning devices	n.d.	yes	EU 1005/2009
FCs		Fire protection systems and fire extinguishers	n.d.		EU Regulation No. 842/2006
FCs HFCs		Non-confined direct- evaporation systems con- taining refrigerants	n.d.		EU Regulation No. 842/2006
		Cooling and air condi- tion- ing equipment	n.d.	yes	AT BGBl. Nr. 447/2002
FCs HFCs Sulfur hexafluoride (SF ₆)	2551-62-4	One component foams	n.d.	yes	EU Regulation No. 842/2006
HFCs		Cooling plants, heat pumps, air conditioning plants (comfort cooling) and dehumidifiers with charges ≥ 10 kg	n.d.		DK Statutory Order no. 552 of 2 July 2002
HCFCs (C ₁ to C ₃) HBrFCs (C ₁ to C ₃) Methyl bromide	74-83-9	All applications	n.d.	yes	CH ChemRRV App. 1.4, 2.3, 2.9- 12
Sulfur hexafluoride (SF ₆)	2551-62-4	Insulating and quenching gas in electrotechnical systems and appliances up to 1 kV (over 1kV obli- gation to report)	n.d.		AT BGBl. Nr. 447/2002
		Low voltage plants (≤ 1 kV)	n.d.		DK Statutory Order no. 552 of 2 July 2002
		All applications (over 1 kg obligation to report in cases of exceptions)	n.d.	yes	CH ChemRRV App. 1.5
Polychlorinated biphe- nyls (PCBs)	1336-36-3	All applications	0.005 (total)	yes	EU REACH App. XVII
Polychlorinated ter- phen- yls (PCTs)	61788-33- 8		n.d.		CH ChemRRV App. 1.1, 2.14
Monomethyltetrachlo- rodi- phenylmethane (Ugilec 141)	76253-60- 6				
Monomethyldichlorodi- phenylmethane (Ugilec 121 or 21)					

Substance/ substance group	CAS No.	Affected application	Limit value (wt.%) ¹⁾	Excep- tions	Legal regulations ²⁾
Coolants, insulating gases and liquids, fire extinguishing agents					
Monomethyldibromodi-phenylmethane (DBBT)	99688-47-8				
Polychlorinated biphenyls (PCBs)	1336-36-3	Not totally enclosed	0.05	yes	US TSCA (15 USC 2605) + 40 CFR 761
Halogenated biphenyls, terphenyls, naphthalenes		All applications	n.d.		CH ChemRRV App. 1.1
Halogenated aromatic compounds		Capacitors and transformers	0,05/0,005 (mono-/polyhalogenated)		CH ChemRRV App. 2.14
Perfluorooctane sulfonic acid and its metal salts, halides, amides, and other derivatives including polymers (PFOS)		All applications	0.1	yes	EU REACH App. XVII
Packaging					
Heavy metals (lead, cadmium, hexavalent chromium, mercury)		Packaging and packaging components	0.01 (total)		EU 94/62/EC ChemRRV App. 2.16(4) CH
Cleaning agents					
Aliphatic CHCs	s. u. ³⁾	All applications	0.1 (total)	yes	EU REACH App. XVII CH ChemRRV App. 1.3
1,1,1-Trichloroethane Tetrachloromethane	71-55-6 56-23-5	All applications	n.d.		CH ChemRRV App. 1.4

Notes

1) "n.d." means that no limit value is defined by the legislation.

2) Country codes according to ISO 3166

ChemVerbotsV	German chemicals prohibition ordinance (Chemikalienverbotsverordnung)
CAA	Clean Air Act
KIFS	Swedish National Chemicals Inspectorate's Regulations (Kemikalieinspektionensföreskrifter)
REACH	Regulation 1907/2006 of the European Parliament and the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RoHS	Directive of the European Parliament and the Council on the restriction of the use of certain hazardous substances in electrical and electronic equipment (Directive 2002/95/EC)
SFS	Swedish Code of Statutes (Svensk författningssamling)
ChemRRV	Swiss ordinance on reduction of chemical risks (Chemikalien-Risikoreduktions-Verordnung)
TSCA	Toxic Substances Control Act

	CAS No.		CAS No.
3) Aliphatic CHCs		5) CFCs/Halons	
Tetrachloromethane	56-23-5	Trichlorofluoromethane (R11)	75-69-4
1,1,2,2-Tetrachloroethane	79-34-5	Dichlorodifluoromethane (R12)	75-71-8
1,1,1,2-Tetrachloroethane	630-20-6	Chlorotrifluoromethane (R13)	75-72-9
Pentachloroethane	76-01-7	Tetrachlorodifluoroethane (R112)	76-11-9
Trichloromethane (Chloroform)	67-66-3	Trichlorotrifluoroethane (R113)	76-13-1
1,1,1-Trichloroethane	71-55-6	Dichlorotetrafluoroethane (R114)	76-14-2
1,1,2-Trichloroethane	79-00-5	Chloropentafluoroethane (R115)	76-15-3
1,1-Dichloroethylene	75-35-4	Bromochlorodifluoromethane (Halon 1211)	353-59-3
		Bromotrifluoromethane (Halon 1301)	75-63-8
4) Asbestos		Dibromotetrafluoroethane (Halon 2402)	124-73-2
Aktinolite	77536-66-4	Tetrachloromethane	56-23-5
Amosite	12172-73-5	1,1,1-Trichloroethane	71-55-6
Anthophyllite	77536-67-5	Chlorodifluoromethane (R22)	75-45-6
Chrysotile	12001-29-5		
Crocidolite	12001-28-4		
Tremolite	77536-68-6		

6) Fixed batteries are those which cannot be removed without effort from the appliances. They are either soldered, welded or in some other manner permanently connected to the contacts.