



## List of prohibited hazardous substances

### 1. Substances

The following substances are not included in the material or in the surface finishing of articles delivered to/from Ringele AG.

Substance	Application concerned	Declaration limit (ppm)	Typical use of substance
Aliphatic chlorinated hydrocarbon (e.g. chloroform, tetrachloride)	General ban	1000 (ges) <sup>1)</sup>	Solvents, oils, detergents, adhesives
Asbestos	General ban	1000 (ges) <sup>1)</sup>	Seals (in motors), lamp shields, furnace linings
Lead	Fixed integral batteries	1000	Solders, balancing weights, paints, batteries, stabilised plastics, radiation protection
	Electrical and electronic devices (RoHS) <sup>3)</sup>	1000 (hom) <sup>2)</sup>	
Cadmium and cadmium compounds	General ban	100	Dyed plastics, stabilised plastics (e.g. PVC), metallic surfaces (e.g. galvanised standard parts), batteries, contacts, solders
	Electrical and electronic devices (RoHS) <sup>3)</sup>	100 (hom) <sup>2)</sup>	
Chromium VI (hexavalent chromium)	Electrical and electronic devices (RoHS) <sup>3)</sup>	1000 (hom) <sup>2)</sup>	Surface coatings and standard parts (corrosion protection), colourants in plastics
FC, FBFC, CFC, halons, bromomethane (ozone-depleting substances)	General ban	1000	Aerosol dispensers, refrigerants, foams, detergents and solvents
Formaldehyde	Wood material and furniture	0.1 ml / m <sup>3</sup>	
Halogenated aromatic substances <sup>4)</sup> (e.g. PCB, PCT, DBBT, Ugilec)	General ban	500 (mono-) 50 (poly-)	Capacitors and transformers
Pentachlorophenol (PCP) and its salts and compound	General ban	5 (ges) <sup>1)</sup>	Capacitors and transformers
Polybrominated biphenyls (PBB) Polybrominated diphenyl ethers (PBDE) Pentabromodiphenyl ether (PenteBDE) Octabromodiphenyl ether (OctaBDE)	Electrical and electronic devices (RoHS) <sup>3)</sup>	1000 (hom) <sup>2)</sup>	Flame retardants in plastics
	Flame retardants	1000	
Polychlorinated or polybrominated dioxins and furans	General ban	0.005 (ges) <sup>1)</sup>	Impurities in oils
Mercury and mercury compounds	General ban	1000	Switches, lamps, liquid crystal displays, thermometers, barometers
	Electrical and electronic devices (RoHS) <sup>3)</sup>	1000 (hom) <sup>2)</sup>	
	Batteries	5	Button cells, alkaline manganese batteries, carbon-zinc batteries
Sulphur hexafluoride (SF <sub>6</sub> )	General ban	Detection limit	Extinguishing and insulating gas
Heavy metals (lead, cadmium, hexavalent chromium, mercury)	Packaging and packaging components	100 (ges) <sup>1)</sup>	
Tar oils	Wood and wood material	Detection limit	Impregnations

### Comments:

- 1.) (ges) = Limit value refers to the total of all substances covered in this class
- 2.) (hom) = Limit value refers to the homogeneous material (cannot be separated further mechanically)
- 3.) (RoHS) = Substance is prohibited according to the EU directive RoHS of 2006-07-01
- 4.) With the exception of reactively bound tetrabromobisphenol A (TBBA) as a flame retardant



## **2. Standards for the list of banned substances**

The following standards and legal foundations form the framework conditions for the "List of banned hazardous substances".

EU 2009 / 251	Decision by the Commission of 17 March 2009 obliging the Member States to ensure that products containing biocide dimethylfumarate are not distributed in the market or made available on the market
EU Battery and Accumulator Directive	Directive 2006/66/EC on batteries and accumulators and waste batteries and accumulators
EU-ELV	Directive 2000/53/EC on end of life vehicles
EU-REACH	Regulation (EC) No. 1907 / 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
EU-RoHS	Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic devices
EU Packaging Directive	Directive 94/62/EC on packaging and packaging waste
GADSL	<b>The Global Automotive Declarable Substance List</b> contains bans on substances and declaration requirements for substances that may be found in the automotive industry, produced by the Global Automotive Stakeholders Group (GASG)
IMDS	<b>The International Material Data System</b> is the declaration system on the Internet of a network of automobile manufacturers
SVHC	<b>Substances Of Very High Concern</b> as defined in the candidate list by the European Chemicals Agency (ECHA)