



LIST OF PROHIBITED, DECLARABLE AND AVOIDABLE HAZARDOUS SUBSTANCES

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1 SCOPE

This works standard (WN) applies at ELAC SONAR GmbH.

This works standard is to be applied during the design and development of environmentally safe products and during the procurement of all materials and outsourced parts.

2 GENERAL

It is the policy ELAC SONAR GmbH to design, manufacture and market all products and to process and dispose of all materials in such a way that the environment, the employees, the customers and the general public are protected from inadmissible risks over their whole service life!

3 LIST OF PROHIBITED HAZARDOUS SUBSTANCES

The list of prohibited substances (Table 1) gives a simplified overview of the relevant restrictions on hazardous substances in the EU and in other countries for the electrical and electronics industry.

The list is not exhaustive, but contains a selection of substances relevant to ELAC SONAR GmbH.

For some substances, the statutory prohibitions are limited to certain applications or special exceptions are permitted.

If deliveries to ELAC SONAR GmbH contain hazardous substances in line with these admissible exceptions, these substances must be declared by type and quantity by the supplier in advance.

4 DECLARATION AND AVOIDANCE LIST FOR HAZARDOUS SUBSTANCES

The declaration and avoidance list (Table 2) contains substances whose use in products is not or not yet prohibited, but whose application should be avoided or at least reduced as far as possible since they can lead to risks during the production, use and disposal of products. In many cases substances on the declaration and avoidance list cannot be avoided for technical reasons or due to reliability demands.

If deliveries to ELAC SONAR GmbH contain hazardous substances contained in the declaration and avoidance list, these substances must be declared by type and quantity by the supplier in advance.

5 TABLE 1: LIST OF PROHIBITED HAZARDOUS SUBSTANCES

Table 1: List of Prohibited Hazardous Substances

Excerpt from the statutory prohibitions or restrictions on the marketing of hazardous substances applicable in Germany, the EU and some other countries. The list aims to take into consideration all relevant substance regulations, but this cannot be guaranteed.

As of: December 2015

Substance	CAS No.	Application concerned	Limit value (% w/w) ¹⁾	Exceptions	Statutory regulations ²⁾
Aliphatic chlorinated hydrocarbons (HC)	see and ³⁾	As an ingredient in other substances or in mixtures	< 0.1 % (total)	Yes	DE EU JP ChemVerbotsV Directive (EC) No. 1907/2006 CSCL (Class II); PDSCL; Act on the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures
Asbestos	1332-21-4 see and ⁴⁾	Preparations containing these substances	0.1 % (total)	Yes	DE EU US JP IMO ChemVerbotsV Directive (EC) No. 1907/2006 TSCA ISHL SR/CONF/45
Lead and lead compounds	7439-92-1	Electrical and electronic equipment, incl. cables and spare parts Packagings, packaging components	0.1 % (per homogeneous material) 0.01 % (cumulative)	Yes	DE EU US JP IMO ElektroStoffV; VerpackV 94/62/EC; 2011/65/EU TSCA; Restrictions on Heavy Metal Content of Packaging (18 States); Proposition 65 PDSCL SR/CONF/45
Hexavalent chromium (Cr ^{VI})	18540-29-9	Electrical and electronic equipment, incl. cables and spare parts Packagings, packaging components Coatings, pigments in plastics	0.1 % (per homogeneous material) 0.01 % (cumulative)	Yes	DE EU US IMO ElektroStoffV; VerpackV 94/62/EC; 2011/65/EU TSCA (40 CFR 749.68); Restrictions on Heavy Metal Content of Packaging (18 States) SR/CONF/45

List of Prohibited Hazardous Substances – Continued

Substance	CAS No.	Application concerned	Limit value (% w/w) ¹⁾	Exceptions	Statutory regulations ²⁾
Mercury and mercury compounds	7439-97-6	Electrical and electronic equipment, incl. cables and spare parts Packagings, packaging components Batteries and rechargeable batteries (irrespective of whether or not they are installed in equipment) Antifouling coatings; wood protection agents; impregnation of heavy industrial textiles and of the threads used in their production; water treatment; measuring instruments used for commercial and industrial purposes	0.1 % (per homogeneous material) 0.01 % (cumulative) 0.0005 % -	Yes	DE BattG; ChemVerbotsV; ElektroStoffV; VerpackV EU 94/62/EC; 2006/66/EC* (2013/56/EU); Ordinance (EC) No. 1907/2006* (Ordinance (EU) No. 847/2012); 2011/65/EU US TSCA* (Mercury Export Ban Act); Mercury-Containing Battery Management Act; Restrictions on Heavy Metal Content of Packaging (18 States) PDSCCL JP IMO SR/CONF/45
Phenylmercuric compounds (prohibition in place since 10/2017)	see and 7)	Substances, mixtures, products or their constituents (use particularly as catalysts in PU systems, adhesives and sealing agents, elastomers)	< 0.01 % (Pb)		EU Ordinance (EC) No. 1907/2006* (Ordinance (EU) No. 848/2012) JP CSCL; PDSCCL

List of Prohibited Hazardous Substances – Continued

Substance	CAS No.	Application concerned	Limit value (% w/w) ¹⁾	Exceptions	Statutory regulations ²⁾	
Cadmium and cadmium compounds	7440-43-9	Electrical and electronic equipment, incl. cables and spare parts	0.01 % (per homogeneous material)	Yes	DE	BattG; ChemVerbotsV; ElektroStoffV; VerpackV 94/62/EC; 2006/66/EC* (2013/56/EU); Directive (EC) No. 1907/2006; 2011/65/EU Restrictions on Heavy Metal Content of Packaging (18 States) PDSCL SR/CONF/45
		Packagings, packaging components	0.01 % (cumulative)		EU	
		Plastic mixtures, paints and lacquers; hard solders; stabilisers	0.01 %		US	
		Equipment batteries and rechargeable batteries (including those installed in equipment)	0.002 %		JP IMO	
		Paints and lacquers with > 10 % zinc content	0.1 %			
		Painted / lacquered products	0.1 % (of the paint / lacquer on the product)			
Polybrominated biphenyls (PBB)		Electrical and electronic equipment, incl. cables and spare parts	0.005 % (per homogeneous material)		DE EU JP IMO	ElektroStoffV 2011/65/EU CSCL (Class I) SR/CONF/45
Polybrominated diphenyl ethers (PBDE)	40088-47-9 32534-81-9 36483-60-0 68928-80-3	Electrical and electronic equipment, incl. cables and spare parts	0.1 % (per homogeneous material)	Yes	DE EU	ElektroStoffV Directive (EC) No. 850/2004; 2011/65/EU CSCL (Class I) SR/CONF/45
	and others	Articles and preparations made from recycled material	< 0.1 %		JP IMO	
Octabromodiphenyl ether (OctaBDE)	32536-52-0	As constituents of other substances or in mixtures; products and their parts treated with flameproofing agents	0.1 %	Yes	DE EU	ChemVerbotsV Directive (EC) No. 1907/2006 US Law (CA, HI, IL, ME, MD, MI, MN, NY, RI, OR, WA)
Pentabromo-diphenyl ether (PentaBDE)	32534-81-9				US	
Polychlorinated biphenyls (PCB)	1336-36-3 and others	Preparations containing these substances	0.005 %	Yes	DE EU US JP	ChemVerbotsV Directive (EC) No. 850/2004 TSCA CSCL (Class I); ISHL
Polychlorinated naphthalenes (PCN) ⁸⁾	70776-03-3 and others	General prohibition	-	Yes	EU JP IMO	Directive (EC) No. 850/2004 CSCL SR/CONF/45

List of Prohibited Hazardous Substances – Continued

Substance	CAS No.	Application concerned	Limit value (% w/w) ¹⁾	Exceptions	Statutory regulations ²⁾	
Short-chain chlorinated paraffins (C ₁₀ -C ₁₃ chloro-alkanes) (SCCP)	85535-84-8	Substances and preparations	< 1 %	Yes	DE EU IM O	ChemVerbotsV Directive (EC) No. 850/2004; Directive (EC) No. 1907/2006 SR/CONF/45
		Substances and preparations for use in metal processing and metalworking	1 %			
Organostannic compounds		Antifouling; water treatment	-		DE EU IM O	ChemVerbotsV Directive (EC) No. 1907/2006 SR/CONF/45
Tri-substituted organostannic compounds such as tributyltin compounds (TBT), e.g. tributyltin oxide (TBTO), and triphenyltin compounds. (TPT)	56-35-9 (TBTO)	Products and their parts	0.1 %	Yes	EU	Directive (EC) No. 1907/2006 CSCL (Class I); PDSCL
	and others				JP	
Pentachlorophenol (PCP);	87-86-5	As an ingredient in other substances or in mixtures	< 0.1 %	Yes	DE EU JP	ChemVerbotsV Directive (EC) No. 1907/2006 CSCL; PDSCL
Pentachlorophenol as sodium salt;	131-52-2	Preparations containing these substances	0.01 %			
Other PCP salts and compounds		Products treated with a preparation containing these substances and their parts involved in the treatment	0.0005 % (total)			

List of Prohibited Hazardous Substances – Continued

Substance	CAS No.	Application concerned	Limit value (% w/w) ¹⁾	Exceptions	Statutory regulations ²⁾
Perfluorooctane sulfonic acid (PFOS)			0.0001 %		IMO EU SR/CONF/45 Regulation (EC) No. 1257/2013
Polychlorinated dioxins and furanes Polybrominated dioxins and furanes	see and 5)	Substances, preparations and products containing the following: - Compounds mentioned in No. 1, - Compounds mentioned in No. 1 and 2, - Compounds mentioned in No. 1, 2 and 3, - Compounds mentioned in No. 4, - Compounds mentioned in No. 4 and 5	Max. sum of the contents: 1 myg/kg 5 myg/kg 100 myg/kg 1 myg/kg 5 myg/kg	Yes	DE ChemVerbotsV
Ozone depleting substances	see and 6)	General prohibition	-	Yes	DE EU JP US All IMO ChemOzonSchichtV Ordinance (EC) No. 1005/2009* (Ordinance (EU) No. 744/2010) CSCL; Act on the Protection of the Ozone Layer through the Control of Specified Substances and Other Measures CAA Montreal Protocol on Substances that Deplete the Ozone Layer SR/CONF/45
Radioactive substances		Measuring instruments, surge arresters, thorium in welding electrodes			DE EU JP US IMO German Atomic Energy Act (AtomG) German Radiation Protection Ordinance (StrlSchV) 2013/59/Euratom Act on the Regulation of Nuclear Source Material, Nuclear Fuel Material and Reactors Environmental Radiation Protection Standards for Nuclear Power Operations (40 CFR Part 190) SR/CONF/45

- 1) "n.a." means that no limit value is specified in the regulatory framework. In these cases the chemicals legislation consideration limits have to be observed.
- 2) Country codes in accordance with ISO 3166

German acts and ordinances:

BattG = German Battery Act

ChemVerbotsV = German Regulation on Prohibited Chemicals

ChemOzonSchichtV = German Ozone Layer Chemicals Directive

ElektroStoffV = German Ordinance on the restriction of the use of certain hazardous substances in electrical and electronic equipment

VerpackV = German Packaging Ordinance

EU directives and ordinances:

94/62/EC Packaging and Packaging Waste Directive

2006/66/EC Directive on Batteries and Accumulators and Waste Batteries and Accumulators

2011/65/EU Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS 2 Directive, RoHS = Restriction of Hazardous Substances)

Regulation (EC) No. 850/2004 Regulation on Persistent Organic Pollutants (POPs)

Regulation (EC) No. 1907/2006 Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Regulation (EC) No. 1005/2009 Regulation on Substances that Deplete the Ozone Layer

Regulation (EC) No. 1257/2013 Regulation on Ship Recycling

Non-European acts and ordinances:

Japan: CSCL = Chemical Substances Control Law = The Law Concerning the Examination and Regulation of Manufacture of Chemical Substances;

ISHL = Industrial Safety and Health Law;

PDSCL = Poisonous and Deleterious Substances Control Law

US: TSCA = Toxic Substances Control Act;

CAA = Clean Air Act;

Proposition 65 = Safe Drinking Water and Toxic Enforcement Act of 1986 (California)

IMO: IMO Guidelines Resolution MEPC.269(68)

Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships, 2009 (SR/CONF/45)

* () relevant additions to the previously mentioned directive/regulation

3) Aliphatic HC	CAS No.		
Tetrachloromethane (carbon tetrachloride)	56-23-5		
1,1,2,2-tetrachloroethane	79-34-5		
1,1,1,2-tetrachloroethane	630-20-6		
Pentachloroethane	76-01-7		
Trichloromethane (chloroform)	67-66-3		
1,1,1-trichloroethane	71-55-6		
1,1,2-trichloroethane	79-00-5		
1,1-Dichloroethene	75-35-4		
4) Asbestos	CAS No.		
Actinolite	77536-66-4		
Amosite	12172-73-5		
Anthophyllite	77536-67-5		
Chrysotile	12001-29-5		
	132207-32-0		
Crocidolite	12001-28-4		
Tremolite	77536-68-6		
5) Halogenated dioxins and furanes	CAS No.		
<u>1.</u>		<u>4.</u>	
2,3,7,8-tetra-CDD	1746-01-6	2,3,7,8-tetra-BDD	50585-81-6
1,2,3,7,8-penta-CDD	40321-76-4	1,2,3,7,8-penta-BDD	109333-34-8
2,3,7,8-tetra-CDF	51207-31-9	2,3,7,8-tetra-BDF	67733-57-7
2,3,4,7,8-penta-CDF	57117-31-4	2,3,4,7,8-penta-BDF	131166-92-2
<u>2.</u>		<u>5.</u>	
1,2,3,4,7,8-hexa-CDD	39227-28-6	1,2,3,4,7,8-hexa-BDD	110999-44-5
1,2,3,7,8,9-hexa-CDD	19408-74-3	1,2,3,7,8,9-hexa-BDD	110999-46-7
1,2,3,6,7,8-hexa-CDD	57653-85-7	1,2,3,6,7,8-hexa-BDD	110999-45-6
1,2,3,7,8-penta-CDF	57117-41-6	1,2,3,7,8-penta-BDF	109333-34-8
1,2,3,4,7,8-hexa-CDF	70648-26-9		
1,2,3,7,8,9-hexa-CDF	72918-21-9		
1,2,3,6,7,8-hexa-CDF	57117-44-9		
2,3,4,6,7,8-hexa-CDF	60851-34-5		
<u>3.</u>			
1,2,3,4,6,7,8-hepta-CDD	35822-46-9		
1,2,3,4,6,7,8,9-octa-CDD	3268-87-9		
1,2,3,4,6,7,8-hepta-CDF	67562-39-4		
1,2,3,4,7,8,9-hepta-CDF	55673-89-7		
1,2,3,4,6,7,8,9-octa-CDF	39001-02-0		

6) Ozone depleting substances		CAS No.		
REGULATED SUBSTANCES				
<u>Group I: Fluorinated hydrocarbons</u>			<u>Group VIII: Hydrochlorofluorocarbons</u>	
Trichlorofluoromethane (FCKW-11)	75-69-4	Dichlorofluoromethane (HCFC-21)	75-43-4	
Dichlorodifluoromethane (FCKW-12)	75-71-8	Chlorodifluoromethane (HCFC-22)	75-45-6	
Trichlorotrifluoroethane (FCKW-113)	76-13-1	Chlorofluoromethane (HCFC-31)	593-70-4	
Dichlorotetrafluoroethane (FCKW-114)	76-14-2	Tetrachlorofluoroethane (HCFC-121)	354-14-3	
Chloropentafluoroethane (FCKW-115)	76-15-3	Trichlorodifluoroethane (HCFC-122)	354-21-2	
<u>Group II:</u>		Dichlorotrifluoroethane (HCFC-123)	306-83-2	
Chlorotrifluoromethane (FCKW-13)	75-72-9	Chlorotetrafluoroethane (HCFC-124)	2837-89-0	
Pentachlorofluoroethane (FCKW-111)	354-56-3	Trichlorofluoroethane (HCFC-131)	359-28-4	
Tetrachlorodifluoroethane (FCKW-112)	76-12-0	Dichlorodifluoroethane (HCFC-132)	431-06-1	
Heptachlorofluoropropane (FCKW-211)	422-78-6	Chlorotrifluoroethane (HCFC-133)	1330-45-6	
Hexachlorodifluoropropane (FCKW-212)	3182-26-1	Dichlorofluoroethane (HCFC-141)	430-57-9	
Pentachlorotrifluoropropane (FCKW-213)	2354-06-5	1,1-dichloro-1-fluoroethane (HCFC-141b)	1717-00-6	
Tetrachlorotetrafluoropropane (FCKW-214)	29255-31-0	Chlorodifluoroethane (HCFC-142)	25497-29-4	
Trichloropentafluoropropane (FCKW-215)	4259-43-2	1-chloro-1,1-difluoroethane (HCFC-142b)	75-68-3	
Dichlorohexafluoropropane (FCKW-216)	661-97-2	Chlorofluoroethane (HCFC-151)	110587-14-9	
Chloroheptafluoropropane (FCKW-217)	422-86-6	Hexachlorofluoropropane (HCFC-221)	422-26-4	
<u>Group III: Halons</u>		Pentachlorodifluoropropane (HCFC-222)	422-49-1	
Bromochlorodifluoromethane (Halon-1211)	353-59-3	Tetrachlorotrifluoropropane (HCFC-223)	422-52-6	
Bromotrifluoromethane (Halon-1301)	75-63-8	Trichlorotetrafluoropropane (HCFC-224)	422-54-8	
Dibromotetrafluoroethane (Halon-2402)	124-73-2	Dichloropentafluoropropane (HCFC-225)	127564-92-5	
<u>Group IV:</u>		3,3-dichloro-1,1,1,2,2-pentafluoropropane (HCFC-225ca)	422-56-0	
Tetrachloromethane (CTC)	56-23-5	1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb)	507-55-1	
(carbon tetrachloride)		Chlorohexafluoropropane (HCFC-226)	431-87-8	
<u>Group V:</u>		Pentachlorofluoropropane (HCFC-231)	421-94-3	
1,1,1-trichloroethane (1,1,1-TCA)	71-55-6	Tetrachlorodifluoropropane (HCFC-232)	460-89-9	
(methylchloroform)		Trichlorotrifluoropropane (HCFC-233)	7125-84-0	
<u>Group VI:</u>		Dichlorotetrafluoropropane (HCFC-234)	425-94-5	
Bromomethane (methyl bromide)	74-83-9	Chloropentafluoropropane (HCFC-235)	460-92-4	
<u>Group VII:</u>		Tetrachlorofluoropropane (HCFC-241)	666-27-3	
Dibromofluoromethane (HBFC-21 B2)	1868-53-7	Trichlorodifluoropropane (HCFC-242)	460-63-9	
Bromodifluoromethane (HBFC-22 B1)	1511-62-2	Dichlorotrifluoropropane (HCFC-243)	460-69-5	
Bromofluoromethane (HBFC-31 B1)	373-52-4	Chlorotetrafluoropropane (HCFC-244)	134190-50-4	
Tetrabromofluoroethane (HBFC-121 B4)	---	Trichlorofluoropropane (HCFC-251)	421-41-0	
Tribromodifluoroethane (HBFC-122 B3)	---	Dichlorodifluoropropane (HCFC-252)	819-00-1	
Dibromotrifluoroethane (HBFC-123 B2)	---	Chlorotrifluoropropane (HCFC-253)	460-35-5	
Bromotetrafluoroethane (HBFC-124 B1)	---	Dichlorofluoropropane (HCFC-261)	420-97-3	
Tribromofluoroethane (HBFC-131 B3)	---	Chlorodifluoropropane (HCFC-262)	421-02-03	
Dibromodifluoroethane (HBFC-132 B2)	---	Chlorofluoropropane (HCFC-271)	430-55-7	
Bromotrifluoroethane (HBFC-133 B1)	---			
Dibromofluoroethane (HBFC-141 B2)	---	<u>Group IX:</u>		
Bromodifluoroethane (HBFC-142 B1)	---	Bromochloromethane (BCM)	74-97-5	
Bromofluoroethane (HBFC-151 B1)	---			
Hexabromofluoropropane (HBFC-221 B6)	---			
Pentabromodifluoropropane (HBFC-222 B5)	---			
Tetrabromotrifluoropropane (HBFC-223 B4)	---			
Tribromotetrafluoropropane (HBFC-224 B3)	---			
Dibromopentafluoropropane (HBFC-225 B2)	---			
Bromohexafluoropropane (HBFC-226 B1)	---			
Pentabromofluoropropane (HBFC-231 B5)	---			
Tetrabromodifluoropropane (HBFC-232 B4)	---			
Tribromotrifluoropropane (HBFC-233 B3)	---			
Dibromotetrafluoropropane (HBFC-234 B2)	---			
Bromopentafluoropropane (HBFC-235 B1)	---			
Tetrabromofluoropropane (HBFC-241 B4)	---			
Tribromodifluoropropane (HBFC-242 B3)	---			
Dibromotrifluoropropane (HBFC-243 B2)	---			
Bromotetrafluoropropane (HBFC-244 B1)	---			
Tribromofluoropropane (HBFC-251 B1)	---			
Dibromodifluoropropane (HBFC-252 B2)	---			
Bromotrifluoropropane (HBFC-253 B1)	---			
		NEW SUBSTANCES:		
		Dibromodifluoromethane (Halon-1202)	75-61-6	

Dibromofluoropropane (HBFC-261 B2)	---
Bromodifluoropropane (HBFC-262 B1)	---
Bromofluoropropane (HBFC-271 B1)	---

7) Phenylmercuric compounds	CAS No.
Phenylmercury acetate	62-38-4
Phenylmercury propionate	103-27-5
Phenylmercury 2-ethyl hexanoate	13302-00-6
Phenylmercury octanoate	13864-38-5
Phenylmercury neodecanoate	26545-49-3

8) These are chemical compounds based on the naphthalene ring system where one or more H atoms have been replaced by Cl atoms.

6 TABLE 2: DECLARATION AND AVOIDANCE LIST FOR HAZARDOUS SUBSTANCES

Table 2: Declaration and Avoidance List for Hazardous Substances

This list contains a regularly reviewed selection of relevant hazardous substances.
As of: January 2016

Substance group	Reason	Application examples
Antimony trioxide	Possibly carcinogenic (Cat. 3), stricter classification possible	Plastics with halogenated flame retardants
Arsenic and its compounds	Toxic, arsenic trioxide as well as arsenic acids and its salts are also carcinogenic	Pb and Cu alloys, metal adhesives, soft solders, paint pigments
Azo compounds with carcinogenic amine components	Release carcinogenic substances	Pigmented plastics
Halogenated flame retardants Brominated Flame Retardant (HBCDD)	May form hazardous halogen compounds and make the material non-recyclable special waste	Flame retardants in printed circuit boards and plastic mouldings
Chlorinated hydrocarbons	Water hazardous, persist and accumulate in organisms	Solvents, cleaning and degreasing agents
Chlorinated paraffins	Water hazardous, persist and accumulate in organisms; short-chain chlorinated paraffins are possibly carcinogenic	Additives in cooling lubricants, flame retardant plasticisers in plastics, flame retardants in rubber
Dibutyl phthalate (DBP)	Toxic to reproduction, water hazardous	Plasticiser, also used in PVC
Bis(2-ethyl hexyl)phthalate (diethyl hexyl phthalat, DEHP)	Toxic to reproduction	Plasticiser, very widely used also in PVC
Dimethyl formamide (DMF)	Toxic to reproduction	Electrolytic capacitors
H-CFC (CFC substitutes)	Climate changing, ozone depleting	Refrigerants and cleaning agents
Synthetic mineral fibres that are classified as carcinogenic	Carcinogenic by inhalation Prohibited in Germany	Thermal insulating materials
Nickel, nickel compounds and nickel-based alloys	Various Ni compounds are carcinogenic; may cause sensitisation by skin contact	Metal parts, power supply leads, base parts
Selenium and its compounds	Acutely and chronically toxic	Plastics, photoelectric coatings, diodes, rectifiers, paint pigments
With the following substance group there is only a risk if respirable dusts or fumes are produced during processing of the materials, e.g. during grinding or welding. The compact form in which the products exist does not pose a hazard that has to be avoided.		
Beryllium and its compounds	Very toxic and carcinogenic in respirable form (dust or fumes)	Contact and spring materials, beryllium oxide ceramics, high-temperature materials
Assuming safe encapsulation in the product (> 10 years, leakage rate < 0.5 %/a) and a safe recycling route, the following substance does not pose an environmental hazard. Its use, e.g. in switchgears, actually reduces energy losses and hence emissions. All applications in which there is a risk of the release of this substance (e.g. in the shredder) must be avoided. In all other cases a declaration is necessary.		
Sulphur hexafluoride (SF ₆)	Climate changing	Electronic components

Declaration limit for all substances on the declaration and avoidance list: 0.1 % w/w in homogeneous material

7 CONFLICT MINERALS

In July 2010 the US government signed the Dodd-Frank Wall Street Reform and the Consumer Protection Act (financial market reform and consumer protection act "Dodd-Frank Act"). Paragraph 1502 of the Dodd-Frank Act requires all US-listed companies to submit publications in conjunction with the use of conflict minerals for their products to the U.S. Securities and Exchange Commission (SEC).

The term "conflict minerals" refers in this context to specific minerals whose origin lies in mines controlled by armed groups in the Democratic Republic of the Congo (DRC) or neighbouring territories. These precious minerals include:

Gold (Au), tin (Zn), tantalum (Ta) and tungsten (W).

Regulation (EU) 2017/821, published in the Official Journal of the EU on May 19, 2017, creates a legal framework within the territory of the European Union to restrict the opportunities for armed groups and security forces to trade in tin, tantalum, tungsten, their ores and gold (Union system). Transparency and security are to be ensured with regard to the supply practices of Union importers as well as smelters and refineries that obtain raw materials from conflict and high risk areas. The EU regulation will apply from July 9, 2017, although large parts of the Union importers' due diligence obligations, their management systems and risk management obligations as well as control mechanisms will only have to be complied with from January 1, 2021.

In its international business, ELAC SONAR GmbH is obliged vis à vis some of its customers to observe this regulations. As part of the supply chain, ELAC SONAR GmbH thus demands compliance with this regulations accordingly also by its suppliers.

8 REVISION HISTORY

Revision	Date	Name (short mark)	Page	Section	Comment
-	03.2007	VL	alle		New document
A	12.2015	VL	2-11		Adaptation to the new statutory regulations and change to Wärtsilä
			11	7 und 8	New added
B	20.11.2020	LU	alle		Change to ELAC SONAR GmbH
			4-8	5	Reference to IMO Ship Recycling added
			9	6	Requirement of IMO Ship Recycling added
			8	5	PFOS added
			15	7	Reference to (EU) 2017/821 (Conflict Minerals) added