So.Lux 7243

Version number: SDSCH 1.0 Date of compilation: 2025-03-04

SECTION 1: Identification

1.1 Product identifier

Trade name **So.Lux 7243**

1.2 Relevant identified uses of the substance or mixture and uses advised against

Sector(s) of use	Welding and soldering product Welding and soldering products (with flux coatings or flux cores), flux products Industrial uses Professional uses
Product category/ies	laboratory chemicals
Process category	industrial use of substances in closed systems use in batch and other process (synthesis) where opportunity for exposure arises mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) transfer of substance or preparation (charging/discharging) from/to vessels/large containers at facilities roller application or brushing production of preparations or articles by tabletting, compression, extrusion, pelletisation low energy manipulation of substances bound in materials and/or articles open processing and transfer operations with minerals/metals at elevated temperature handling of solid inorganic substances at ambient temperature
Environmental release category/ies	industrial use resulting in manufacture of another substance (use of intermediates) industrial use resulting in inclusion into or onto a matrix
Uses advised against	Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

C. HAFNER & HILDERBRAND SA
Route de la Galaise 11b
1228 Plan-les-Ouates Switzerland

Telephone: +41 22 349 00 24
e-Mail: Quality@hilderbrand.ch
Website: www.hilderbrand.ch

e-Mail quality@hilderbrand.ch

1.4 Emergency telephone number

Emergency information service This number is only for medical emergencies

Opening hours 24h/24h 7/7

Poison center

Country	Name	Postal code/city	Telephone	Website
United States	California Poison Control System San Francisco Division	94110 San Francisco	1 800 222 1222	https://calpoison.org/
United States	Drug and Poison Information Center	45229-3026 Cincinnati	1 800 222 1222	https://www.cincinnatichildrens.org/ser-

Poison center				
Country	**Name**	**Postal code/city**	**Telephone**	**Website**
				vice/d/dpic
United States	Florida/USVI Poison Information Center	Jacksonville	1 800 222 1222	
United States	National Capital Poison Center	Washington	1 800 222 1222	https://www.poison.org/
United States	Northern New England Poison Center	4102 Portland	1 800 222 1222	https://www.nnepc.org/
United States	Texas Panhandle Poison Center	79106 Amarillo	1 800 222 1222	https://www.poison-control.org/home/
United States	Utah Poison Control Center	84112 Salt Lake City	1 800 222 1222	https://poisoncontrol.utah.edu/

1.5 Additional relevant and available information there is no additional information

1.6 Remarks there is no additional information

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.6	carcinogenicity	1A	Carc. 1A	H350
A.7	reproductive toxicity	1B	Repr. 1B	H360FD

For full text of abbreviations: see SECTION 16.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word danger

- Pictograms

GHS08

- Hazard statements

H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.

- Precautionary statements

P202	Do not handle until all safety precautions have been read and understood.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	If exposed or concerned: Get medical advice/attention.
P405	Store locked up.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling Boric acid

2.3 Other hazards

Material intended for fusion. During melting, it can produce noxious fumes if inhaled. May produce: pulmonary edema, irritation of the mucous membranes of the nose and throat.

Hazards not otherwise classified

May be harmful if swallowed (GHS category 5: acutely toxic - oral).
May be harmful in contact with skin (GHS category 5: acutely toxic - dermal).
Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.

Endocrine disrupting properties

Contains an endocrine disruptor (ED) in a concentration of ≥ 0.1%.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
White Mineral Oil	CAS No 8042-47-5	10 – < 25	Asp. Tox. 1 / H304	
Copper	CAS No 7440-50-8	5 – < 10	Acute Tox. 3 / H301 Acute Tox. 4 / H312	
Gallium	CAS No 7440-55-3	1 – < 5	Acute Tox. 4 / H302	
Boric acid	CAS No 10043-35-3	1 – < 5	Carc. 1A / H350 Repr. 1B / H360FD	

Remarks

For full text of abbreviations: see SECTION 16

SECTION 4: First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label or safety data sheet where possible). In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water. Take off immediately all contaminated clothing.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Causes serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, ABC-powder, Sand

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

none

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

Special protective equipment for firefighters

Wear self-contained breathing apparatus

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Provision of sufficient ventilation. Remove persons to safety. Remove unequipped persons.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains, Take up mechanically

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Personal protective equipment: see section 8. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

- Specific notes/details

Dust deposits may accumulate on all deposition surfaces in a technical room. The product in the delivered form is not

dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Removal of dust deposits. Store at temperatures not exceeding 25 °C.

Consideration of other advice

- Packaging compatibilities

Keep only in original container. Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Plastic packaging.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Source
US	boric acid	10043-35-3	i	TLV®		2		6			ACGIH® 2023
US	silver	7440-22-4		PEL (CA)		0.01					Cal/OSHA PEL
US	silver	7440-22-4		PEL		0.01					29 CFR 1910.1000
US	silver	7440-22-4	df	TLV®		0.1					ACGIH® 2023
US	silver	7440-22-4	dust	REL		0.01 (10 h)					NIOSH REL
US	copper	7440-50-8	dm	REL		1 (10 h)					NIOSH REL
US	copper	7440-50-8	dm	TLV®		1					ACGIH® 2023
US	copper	7440-50-8	dm	PEL		1					29 CFR 1910.1000
US	copper	7440-50-8	fume	PEL (CA)		0.1					Cal/OSHA PEL
US	copper	7440-50-8	fume	REL		0.1 (10 h)					NIOSH REL

Country	Name of agent	CAS No	Notation	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Source
US	copper	7440-50-8	fume	TLV®		0.2					ACGIH® 2023
US	copper	7440-50-8	fume	PEL		0.1					29 CFR 1910.1000
US	mineral oil	8042-47-5	i, exMetWorkFl	TLV®		5					ACGIH® 2023

Notation

Ceiling-C	ceiling value is a limit value above which exposure should not occur
df	as dust and fumes
dm	as dusts and mists
dust	as dust
exMetWork-Fl	excluding metal working fluids
fume	as fume
i	inhalable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified

Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Copper	7440-50-8	DNEL	20 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Copper	7440-50-8	DNEL	137 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Copper	7440-50-8	DNEL	273 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
Boric acid	10043-35-3	DNEL	8.3 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Boric acid	10043-35-3	DNEL	392 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Copper	7440-50-8	PNEC	7.8 µg/l	aquatic organisms	freshwater	short-term (single instance)
Copper	7440-50-8	PNEC	5.2 µg/l	aquatic organisms	marine water	short-term (single instance)
Copper	7440-50-8	PNEC	230 µg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Copper	7440-50-8	PNEC	87 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Copper	7440-50-8	PNEC	676 $^{mg}/_{kg}$	aquatic organisms	marine sediment	short-term (single instance)
Copper	7440-50-8	PNEC	65 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)
Boric acid	10043-35-3	PNEC	2.9 $^{mg}/_{l}$	aquatic organisms	freshwater	short-term (single instance)
Boric acid	10043-35-3	PNEC	13.7 $^{mg}/_{l}$	aquatic organisms	water	intermittent release
Boric acid	10043-35-3	PNEC	10 $^{mg}/_{l}$	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Boric acid	10043-35-3	PNEC	5.7 $^{mg}/_{kg}$	terrestrial organisms	soil	short-term (single instance)
Boric acid	10043-35-3	PNEC	2.9 $^{mg}/_{l}$	aquatic organisms	marine water	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

Provision of sufficient ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection. Folow norm EN 166.

Skin protection

Preventive skin protection (barrier creams/ointments) is recommended.

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

- Type of material

NR: natural rubber, latex, CR: chloroprene (chlorobutadiene) rubber, NBR: acrylonitrile-butadiene rubber, FKM: fluoroelastomer

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. P3 (filters at least 99,95 % of airborne particles, color code: White). Type : B (against inorganic gases and vapors, color code: Grey).

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	solid (waxy)
Color	grey

Odor	odorless

Other safety parameters

pH (value)	not determined
Melting point/freezing point	630 °C
Initial boiling point and boiling range	not determined
Flash point	not determined
Evaporation rate	Not determined
Flammability (solid, gas)	not combustible but contains combustible materials
Vapor pressure	0.01 kPa at 20 °C
Density	See technical data sheet
Vapor density	not determined
Auto-ignition temperature	>1,059 °C (relative self-ignition temperature for solids)
Viscosity	thixotropic
Explosive properties	none
Oxidizing properties	none

9.2 Other information

Data are conclusive but not sufficient for classification.

Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat.

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Data apply to the technically active substance. Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Shall not be classified as acutely toxic.
GHS of the United Nations, annex 4: May be harmful if swallowed or in contact with skin.

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
White Mineral Oil	8042-47-5	inhalation: dust/mist	>5 $^{mg}/_{l}$/4h
Copper	7440-50-8	oral	300 $^{mg}/_{kg}$
Copper	7440-50-8	dermal	2,000 $^{mg}/_{kg}$
Gallium	7440-55-3	oral	500 $^{mg}/_{kg}$

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
Boric acid		1	

Legend

1 Carcinogenic to humans

Reproductive toxicity

May damage the unborn child. May damage fertility.

Specific target organ toxicity (STOT)

Shall not be classified as a specific target organ toxicant.

Specific target organ toxicity - single exposure

The classification criteria for this hazard class are not met.

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
White Mineral Oil	8042-47-5	LL50	>100 $^{mg}/_{l}$	fish	96 h
Copper	7440-50-8	LC50	193 $^{µg}/_{l}$	fish	96 h
Gallium	7440-55-3	EC50	137.5 $^{mg}/_{l}$	aquatic invertebrates	24 h
Gallium	7440-55-3	ErC50	58.58 $^{mg}/_{l}$	algae	72 h

12.2 Persistence and degradability
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties
The mixture contains substance(s) with an endocrine disrupting potential.

12.7 Other adverse effects
Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Assign arising waste to a waste code according to the national list of waste.

SECTION 14: Transport information

14.1 UN number

DOT	UN 3077
IMDG-Code	UN 3077
ICAO-TI	UN 3077

14.2 UN proper shipping name

DOT	Environmentally hazardous substance, solid, n.o.s.
IMDG-Code	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
ICAO-TI	Environmentally hazardous substance, solid, n.o.s.
Technical name (hazardous ingredients)	Silver (< 1 mm), Zinc

14.3 Transport hazard class(es)

DOT	9
IMDG-Code	9
ICAO-TI	9

14.4 Packing group

DOT	III
IMDG-Code	III
ICAO-TI	III

14.5 Environmental hazards

hazardous to the aquatic environment

Environmentally hazardous substance (aquatic environment)	Silver (< 1 mm), Zinc

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road or rail (49 CFR US DOT) - Additional information

Particulars in the shipper's declaration	UN3077, Environmentally hazardous substance, solid, n.o.s., (contains: Silver (< 1 mm), Zinc), 9, III
Reportable quantity (RQ)	5.417 lbs (2.459 kg) (Silver (< 1 mm)) (Zinc)
Danger label(s)	9, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	8, 146, 335, 384, 441, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33
ERG No	171

International Maritime Dangerous Goods Code (IMDG) - Additional information

Marine pollutant	yes (hazardous to the aquatic environment) (Silver (< 1 mm))
Danger label(s)	9, fish and tree

Special provisions (SP)	274, 335, 966, 967, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Environmental hazards	yes (hazardous to the aquatic environment)
Danger label(s)	9, fish and tree

Special provisions (SP)	A97, A158, A179, A197, A215
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	**CAS No**	**Remarks**	**Effective date**
Copper	7440-50-8		1987-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
Copper	7440-50-8	[4]	2	5000 (2270)

Legend

2	"2" indicates that the source is section 307(a) of the Clean Water Act
[4]	No reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers (0.004 inches).

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
Copper	7440-50-8		CWA 303(c) CWA 303(d) OEHHA RELs
Boric acid	10043-35-3		EC Annex VI CMRs - Cat. 1B

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Copper	7440-50-8				1.0 %

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
Copper		1015			1.0 %

- Hazardous Substances List (MN-ERTK)

Name of substance	CAS No	References	Remarks
Boric acid		A	fume
Copper	7440-50-8	A, O	dust mist
Copper	7440-50-8	A, O	fume
Gallium	7440-55-3	N, *	

Legend

*	Substances which are regulated by OSHA as carcinogens; have been categorized by the ACGIH as either "human carcinogens" or "suspect of carcinogenic potential for man"; have been evaluated by the International Agency for Research on Cancer (IARC) and found to be carcinogens or potential carcinogens; or have been listed as a carcinogen or potential carcinogen in the Annual Report on Carcinogens published by the National Toxicology Program (NTP).
A	American Conference of Governmental Industrial Hygienists (ACGIH), "Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices for 1992-93", available from ACGIH
dust	If the substance poses an airborne particulate exposure hazard, the substance is followed by the word "dust."
fume	Small solid particles formed by the condensation of vapors of solid materials.
N	National Institute for Occupational Safety and Health (NIOSH), "Recommendations for Occupational Safety and Health Standards," August 1988, available from NIOSH, Publications Dissemination Office, Division of Standards Development and Technology Transfer
O	Occupational Safety and Health Administration (OSHA), Safety and Health Standards, Code of Federal Regulations, title 29, part 1910, subpart Z, "Toxic and Hazardous Substances, 1990." General information: Minnesota Department of Labor and Industry, Occupational Safety and Health Division

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
Copper	7440-50-8		
Gallium	7440-55-3		CO

Legend

CO	Corrosive

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
WELDING FUMES		

- Hazardous Substance List (RI-RTK)

Name of substance	CAS No	References
Boric acid		T
Copper	7440-50-8	T

Legend

T	Toxicity (ACGIH®)

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	0	no significant risk to health
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
EU	REACH Reg.	all ingredients are listed

Legend

REACH Reg. REACH registered substances

15.2 Chemical Safety Assessment

SECTION 16: Other information, including date of preparation or last revision

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
29 CFR 1910.1000	29 CFR 1910.1000, Tables Z-1, Z-2, Z-3 - Occupational Safety and Health Standards: Toxic and Hazardous Substances (permissible exposure limits)
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH®	American Conference of Governmental Industrial Hygienists
ACGIH® 2023	From ACGIH®, 2023 TLVs® and BEIs® Book. Copyright 2023. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
Cal/OSHA PEL	California Division of Occupational Safety and Health (Cal/OSHA): Permissible Exposure Limits (PELs)

Abbr.	Descriptions of used abbreviations
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
ED	Endocrine disruptor
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LHS	Lower hazard substance
LL50	Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality
NIOSH REL	National Institute for Occupational Safety and Health (NIOSH): Recommended Exposure Limits (RELs)
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible exposure limit
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Repr.	Reproductive toxicity
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.

Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H350	May cause cancer.
H360FD	May damage fertility. May damage the unborn child.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.