

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Refractory

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

Intended use

Refractory mastic.

1.3 Details of the supplier of the safety data sheet

Company name	TORGGLER S.R.L.
Full address	Via Prati Nuovi 9
Town	Marlengo
Postal code	39020
Province	BZ
Country	Italy
Phone number	+39 0473 282400
Fax	+39 0473 282501
e-mail address of the competent person responsible for the Safety Data Sheet	reach@torggler.com

1.4 Emergency telephone number

For urgent inquiries refer to +39 348 662 70 93 (08.00 - 17.30)

Section 2 Hazards identification

2.1 Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification

Skin irritation, category 2	H315	Causes skin irritation.
Eye irritation, category 2	H319	Causes serious eye irritation.

2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms



Signal word

Warning

Hazard statements

H315	Causes skin irritation.
H319	Causes serious eye irritation.

Section 2

Precautionary statements

P102	Keep out of reach of children.
P101	If medical advice is needed, have product container or label at hand.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P280	Wear protective gloves / eye protection / face protection.
P337+P313	If eye irritation persists: Get medical advice / attention.
P264	Wash exposed body parts thoroughly after handling.

2.3 Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration $\geq$ 0.1%.

Section 3 Composition/information on ingredients

Potassium-silicate based compound containing inert mineral charges.

3.2 Mixtures
Aluminium hydroxide

Concentration	$20.5 \leq x < 31 \%$
CAS number	21645-51-2
EC number	244-492-7
Registration Number	01-2119529246-39-xxxx
Substance with a community workplace exposure limit.	

Silicic acid, potassium salt

Concentration	$8.1 \leq x < 12.6 \%$
CAS number	1312-76-1
EC number	215-199-1
Registration Number	01-2119456888-17-xxxx
Hazard classification	- Skin Irrit. 2; H315 - Eye Irrit. 2; H319

KAOLIN

Concentration	$6.1 \leq x < 9.6 \%$
CAS number	1332-58-7
EC number	310-194-1
Hazard classification	STOT RE 2; H373

POTASSIUM HYDROXIDE

Concentration	$0.9 \leq x < 1.4 \%$
CAS number	1310-58-3
EC number	215-181-3
INDEX number	019-002-00-8
Registration Number	01-2119487136-33-xxxx
Hazard classification	- Met. Corr. 1; H290 - Acute Tox. 4; H302 - Skin Corr. 1A; H314 - Eye Dam. 1; H318
Specific concentration limits	- Skin Irrit. 2; H315: $0.5 \leq x < 2 \%$ - Skin Corr. 1B; H314: $\geq 2 \%$ - Eye Irrit. 2; H319: $0.5 \leq x < 2 \%$ - Eye Dam. 1; H318: $\geq 2 \%$
LD50 (Oral):	333 mg/kg

Section 3

QUARTZ

Concentration	$0.113 \leq x < 0.48 \%$
CAS number	14808-60-7
EC number	238-878-4
Hazard classification	▪ STOT RE 1; H372
Substance with a community workplace exposure limit.	

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Section 4 First aid measures

4.1 Description of first aid measures

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuers protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed

If skin irritation occurs: Get medical advice / attention.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

Section 5 Firefighting measures

5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Do not breathe combustion products.

Section 5

5.3 Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

Section 7 Handling and storage

7.1 Precautions for safe handling

Ensure that there is an adequate earthing system for the equipment and personnel. Avoid contact with eyes and skin. Do not breathe powders, vapours or mists. Do not eat, drink or smoke during use. Wash hands after use. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a ventilated and dry place, far away from sources of ignition. Keep containers well sealed. Keep the product in clearly labelled containers. Avoid overheating. Avoid violent blows. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

None

Applicable technical instruction according to Royal Decree 656/2017:

Classification	Storage in fixed containers	Storage in mobile containers
- H315 – Skin Irrit. 2 - H319 – Eye Irrit. 2	Not applicable	MIE APQ-10 – Storage in mobile containers

Respect the joint storage conditions established in Royal Decree 656/2017.

7.3 Specific end use(s)

Information not available.

Section 8

Section 8 Exposure controls/personal protection

8.1 Control parameters

Biological monitoring must include measuring the blood lead level (PbB) using absorption spectrometry or a method giving equivalent results. The binding biological limit value is: 30 µg Pb/100 ml blood For workers whose blood lead level exceeds the biological limit value of 30 µg Pb/100 ml blood due to exposure which has occurred before 9 April 2026, but is below 70 µg Pb/100 ml blood, medical surveillance is carried out on a regular basis. If a declining trend towards the limit value of 30 µg Pb/100 ml blood is established in those workers, they may be allowed to continue with work involving exposure to lead. Medical surveillance is carried out if exposure to a concentration of lead in air is greater than 0,015 mg/m³, calculated as a time-weighted average over 40 hours per week, or a blood lead level greater than 9 µg Pb/100 ml blood is measured in individual workers. Medical surveillance is also carried out with regard to female workers of childbearing age whose blood lead level exceeds 4,5 µg Pb/100 ml blood or the national reference value of the general population not occupationally exposed to lead, if such a value exists.

Regulatory references

ACGIH	ACGIH 2026
European Union-OEL	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
Ireland-OELV	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Malta-TLV	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L424.22)

POTASSIUM HYDROXIDE

	TWA		STEL		CEILING		Remarks	
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm		
ACGIH					2		--	
Ireland-OELV			2				--	

Health - Derived no-effect level - DNEL / DMEL

	Local effect	Systemic effect
Consumers, long-term, inhalation	1 mg/m ³	Not available
Workers, long-term, inhalation	1 mg/m ³	Not available

KAOLIN

	TWA		STEL		CEILING		Remarks	
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm		
ACGIH	2						Respiratory	
Ireland-OELV	2						Respiratory	
Ireland-OELV	2						--	

QUARTZ

	TWA		STEL		CEILING		Remarks	
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm		
ACGIH	0.025						Respiratory	
European Union-OEL	0.1						Respiratory	
Ireland-OELV	0.1						Respiratory	
Ireland-OELV	0.1						--	
Malta-TLV	0.1						Respiratory	As Silica

Aluminium hydroxide

	TWA		STEL		CEILING		Remarks	
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm		
European Union-OEL	6						--	

Section 8

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, long-term, inhalation	10.76 mg/m ³	10.76 mg/m ³
Workers, long-term, oral	Not available	4.74 mg/kg bw/d

Silicic acid, potassium salt

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	348 mg/l
Normal value in fresh water	7.5 mg/l
Normal value in marine water	1 mg/l
Normal value for water, intermittent release	7.5 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal	Not available	0.74 mg/kg bw/d
Consumers, long-term, inhalation	Not available	1.38 mg/m ³
Consumers, long-term, oral	Not available	0.74 mg/kg bw/d
Workers, long-term, dermal	Not available	1.49 mg/kg bw/d
Workers, long-term, inhalation	Not available	5.61 mg/m ³

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

When choosing risk management measures and operating conditions, consult the exposure scenarios attached.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Protect your hands with gloves of the following type:

Protect your hands with gloves of the following type

Material	Thickness	Breakthrough time
Butyl rubber (IIR) –	> 0.3 mm Glove thickness must be selected based on the minimum required breakthrough time.	> 180 min Glove resistance depends on various elements, such as temperature and other environmental factors.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344/EN ISO 13034).

Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Section 9

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	pasty	
Colour	grey	
Odour	odourless	
Odour threshold	Not applicable	
Melting point / freezing point	Not available	
Initial boiling point	> 35 °C (> 95 °F)	
Flammability	not flammable	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 60 °C (> 140 °F)	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	8.5	
Kinematic viscosity	> 20.5 mm ² /s	Temperature: 40 °C (104 °F)
Solubility	partially soluble	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	2.2 g/ml	
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Total solids	82.53 %	Temperature: 250 °C (482 °F)
Kinematic viscosity (40 °C)	> 0.5 m ² /s	

Section 10 Stability and reactivity

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

POTASSIUM HYDROXIDE

May develop:

May corrode: metals

POTASSIUM HYDROXIDE: potential for exothermic hazard. May be corrosive to metals.

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

POTASSIUM HYDROXIDE

Stable in normal conditions of use and storage

POTASSIUM HYDROXIDE: stable under recommended storage conditions.

Section 10

10.3 Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

POTASSIUM HYDROXIDE

Develops hydrogen on contact with: metals

Develops heat on contact with: strong acids

Reacts violently with: water

POTASSIUM HYDROXIDE: gives off hydrogen by reaction with metals. Exothermic reaction with strong acids. Reacts violently with water.

10.4 Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

POTASSIUM HYDROXIDE

Avoid exposure to: sources of heat

Keep away from: oxidising agents, acids, flammable substances, halogens, organic substances

Keep away from: lead, aluminium, copper, tin, sulphur, bronze

POTASSIUM HYDROXIDE: unstable on exposure to air. Freezing.

10.5 Incompatible materials

POTASSIUM HYDROXIDE

POTASSIUM HYDROXIDE: keep away from: heat sources, oxidizing agents, acids, highly flammable materials, halogens, organic materials. Keep away from: lead, aluminium, copper, tin, zinc, bronze.

10.6 Hazardous decomposition products

POTASSIUM HYDROXIDE

May develop: flammable gases

POTASSIUM HYDROXIDE: absorbs the atmospheric CO₂. Hydrogen: reacts with (some) metals and their compounds; release of highly flammable gas.

Section 11 Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

11.1.1 Metabolism, toxicokinetics, mechanism of action and other information

Information not available.

11.1.2 Information on likely routes of exposure

Information not available.

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

ATE (Inhalation) of the mixture	Not classified (no significant component)
ATE (Oral) of the mixture	> 2,000 mg/kg

Section 11

ATE (Dermal) of the mixture	Not classified (no significant component)
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POTASSIUM HYDROXIDE

LD50 (Oral):	333 mg/kg	Species/guidelines: Rat
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Aluminium hydroxide

LD50 (Oral):	> 2,000 mg/kg	Species/guidelines: Rat
LC50 (Inhalation mists/powders):	> 7.6 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

Silicic acid, potassium salt

LD50 (Oral):	> 5,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 5,000 mg/kg	Species/guidelines: Rat

11.1.6 SKIN CORROSION/IRRITATION

Causes skin irritation.

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.14 ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class
Viscosity:

11.2 Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

Section 12 Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

Section 12

12.1 Toxicity**Silicic acid, potassium salt**

EC50 - for Crustacea	> 146 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	> 146 mg/l	Exposure duration: 96 hours Species/guidelines: Leuciscus idus
EC50 - for Algae / Aquatic Plants	207 mg/l	Exposure duration: 72 hours Species/guidelines: Scenedesmus subspicatus

12.2 Persistence and degradability**POTASSIUM HYDROXIDE**

Solubility in water	> 10,000 mg/l	
Degradability	Unavailable	

Aluminium hydroxide

Solubility in water	0.09 mg/l	
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Silicic acid, potassium salt

Solubility in water	115 mg/l	
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12.3 Bioaccumulative potential

Information not available.

12.4 Mobility in soil

Information not available.

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

12.6 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Information not available.

Section 13 Disposal considerations

EWC: 080409*.

13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

Directive 2008/98/EC (waste)

For the disposal of waste from this material, the hazard characteristics shall be assessed in accordance with Directive 2008/98/EC. Any transboundary shipment must comply with Regulation (EU) 2024/1157.

Section 13

Hazardous waste classification - Reg. (UE) 1357/2014

HP 4 – Irritant — skin irritation and eye damage

Section 14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN number or ID number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

Section 15 Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****Seveso Category - Directive 2012/18/EU:**

None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

	Restrictions	Registration Number EU
Product restrictions	3	
Contained substance		
	75	

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)**Registration Number EU**On the basis of available data, the product does not contain any SVHC in percentage $\geq$ than 0,1%.

Section 15

Substances subject to authorisation (Annex XIV REACH)Authorisation
Number

Sunset date

Registration Number EU

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Regulation (EU) 2019/1021 - on persistent organic pollutants

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Notification Art. 45 CLP

The mixture may not have been notified in all EU Member States. In the event of resale in a country other than the one in which it was purchased, contact the supplier to verify any applicable obligations.

Regulation (EU) 2024/590 – Substances that deplete the ozone layer

Annex I. Contains:

None

Annex II. Contains:

None

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK1 – Low hazard to waters

Denmark - MAL code - Executive Order No. 301 of 13 May 1993

n.a.

15.2 Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

Section 16 Other information**Text of hazard (H) indications mentioned in section 2-3 of the sheet:**

Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Met. Corr. 1	Substance or mixture corrosive to metals, category 1
Skin Corr. 1A	Skin corrosion, category 1A
Skin Corr. 1B	Skin corrosion, category 1B
Skin Irrit. 2	Skin irritation, category 2
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

Section 16

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Effective concentration (required to induce a 50% effect)
- EC: Identifier in ESIS (European archive of existing substances)
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

General Bibliography

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I ATP CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II ATP CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III ATP CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV ATP CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V ATP CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI ATP CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII ATP CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII ATP CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX ATP CLP)
13. Regulation (EU) 2017/776 (X ATP CLP)
14. Regulation (EU) 2018/669 (XI ATP CLP)
15. Regulation (EU) 2019/521 (XII ATP CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII ATP CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV ATP CLP)
19. Delegated Regulation (EU) 2020/1182 (XV ATP CLP)
20. Delegated Regulation (EU) 2021/643 (XVI ATP CLP)

Section 16

General Bibliography

21. Delegated Regulation (EU) 2021/849 (XVII ATP CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII ATP CLP)
23. Delegated Regulation (EU) 2023/707
24. Delegated Regulation (EU) 2023/1434 (XIX ATP CLP)
25. Delegated Regulation (EU) 2023/1435 (XX ATP CLP)
26. Delegated Regulation (EU) 2024/197 (XXI ATP CLP)
27. Delegated Regulation (EU) 2024/2564 (XXII ATP CLP)
28. Regulation (EU) 2024/2865
29. Delegated Regulation (EU) 2025/1222 (XXIII ATP CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Calculation methods for classification

Chemical and physical hazards:
Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes from the previous revision

This SDS has been prepared with a different software from the one previous revision. The new calculation does not allow us to identify all the differences compared to the previous version. We therefore recommend carefully reviewing all 16 sections of the SDS. We remain available to provide any clarification regarding the content or the changes made compared to the previous version, which is available to professional or industrial users.