

Safety Data Sheet

According to Annex II to REACH – Regulation 2015/830

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name Fire Sealing Silicone

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

Intended use Silicone sealant.

1.3. Details of the supplier of the safety data sheet

Name ROTHO BLAAS SRL
Full address Via dell'Adige N. 2/1
District and Country 39040 Cortaccia (BZ)
Italy
tel. +39 0471 818400
fax +39 0471 818484

e-mail address of the competent person
responsible for the Safety Data Sheet reach@rothoblaas.com

1.4. Emergency telephone number

For urgent inquiries refer to UK NPIS +44 0344 892 0111
Ireland NPIC (01) 809 2566 (01) 809 2166

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 2015/830. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1B	H317	May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms:



Signal words: Danger

Hazard statements:

H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.

Precautionary statements:

P501	Dispose of contents / container according to the regulation in force.
P102	Keep out of reach of children.
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.
P310	Immediately call a POISON CENTER / doctor / . . .
P101	If medical advice is needed, have product container or label at hand.

Contains: Bis-(N-Methylbenzamido)-methylethoxysilan

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

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%.

SECTION 3. Composition/information on ingredients

Mixture of polydimethylsiloxanes, charges and benzamidic crosslinkers.

3.1. Substances

Information not relevant

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
Bis-(N-Methylbenzamido)-methylethoxysilan		
CAS 16230-35-6	$2 \leq x < 2,5$	Acute Tox. 4 H302, Eye Dam. 1 H318, Skin Irrit. 2 H315, Skin Sens. 1B H317
EC 240-354-5		
INDEX -		
Reg. no. 01-2120770139-50-xxxx		
bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium		
CAS 83877-91-2	$2 \leq x < 2,5$	Flam. Liq. 3 H226, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
EC 281-161-6		
INDEX -		
Reg. no. 01-2119968551-31-xxxx		
TOLUENE		
CAS 108-88-3	$0 \leq x < 0,05$	Flam. Liq. 2 H225, Repr. 2 H361d, Asp. Tox. 1 H304, STOT RE 2 H373, Skin Irrit. 2 H315, STOT SE 3 H336
EC 203-625-9		
INDEX 601-021-00-3		

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

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.

SKIN: Remove contaminated clothing. Wash immediately with plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

INHALATION: Remove to open air. In the event of breathing difficulties, get medical advice/attention immediately.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Never give anything by mouth to an unconscious person, unless authorised by a doctor.

4.2. Most important symptoms and effects, both acute and delayed

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

4.3. Indication of any immediate medical attention and special treatment needed

Information not available.

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.

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

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. 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 cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

CZE	Česká Republika	Nařízení vlády č. 246/2018 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	TRGS 900 - Seite 1 von 69 (Fassung 29.03.2019)- Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte
ESP	España	LÍMITES DE EXPOSICIÓN PROFESIONAL PARA AGENTES QUÍMICOS EN ESPAÑA 2019 (INSST)
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
GRC	Ελλάδα	ΕΦΗΜΕΡΙΔΑ ΤΗΣ ΚΥΒΕΡΝΗΣΕΩΣ - ΤΕΥΧΟΣ ΠΡΩΤΟ Αρ. Φύλλου 152 - 21 Αυγούστου 2018
HRV	Hrvatska	Pravilnik o zaštiti radnika od izloženosti opasnim kemikalijama na radu, graničnim vrijednostima izloženosti i biološkim graničnim vrijednostima (NN 91/18)
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
POL	Polska	ROZPORZĄDZENIE MINISTRA RODZINY, PRACY I POLITYKI SPOŁECZNEJ z dnia 12 czerwca 2018 r
SVK	Slovensko	Nariadenie vlády č. 33/2018 Z. z. Nariadenie vlády Slovenskej republiky, ktorým sa mení a dopĺňa nariadenie vlády Slovenskej republiky č. 355/2006 Z. z. o ochrane zamestnancov pred rizikami súvisiacimi s expozíciou chemickým faktorom pri práci v znení neskorších predpisov
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Third edition, published 2018)

EU	OEL EU	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.
	TLV-ACGIH	ACGIH 2019

Bis-(N-Methylbenzamido)-methylethoxysilan

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	15,313	mg/kg/d
Normal value for marine water sediment	1,531	mg/kg/d
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	1,78	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral								0,25 mg/kg bw/d
Inhalation				0,43 mg/m3				1,76 mg/m3
Skin				0,25 mg/kg bw/d				0,5 mg/kg bw/d

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,1	mg/l
Normal value in marine water	0,01	mg/l
Normal value for fresh water sediment	0,0816	mg/kg
Normal value for marine water sediment	0,0082	mg/kg
Normal value for water, intermittent release	1	mg/l
Normal value of STP microorganisms	28	mg/l
Normal value for the terrestrial compartment	0,019	mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

Route of exposure	Effects on consumers				Effects on workers			
	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral				22 mg/kg bw/d				
Inhalation				303 mg/m3				
Skin				220 mg/kg bw/d				

TOLUENE

Threshold Limit Value						
Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	200		500		SKIN
AGW	DEU	190	50	760	200	SKIN
MAK	DEU	190	50	760	200	
VLA	ESP	192	50	384	100	SKIN
VLEP	FRA	76,8	20	384	100	SKIN
TLV	GRC	192	50	384	100	
GVI/KGVI	HRV	192	50	384	100	SKIN
VLEP	ITA	192	50			SKIN

NDS/NDSch	POL	100		200				
NPEL	SVK	192	50	384			SKIN	
WEL	GBR	191	50	384	100		SKIN	
OEL	EU	192	50	384	100		SKIN	
TLV-ACGIH		75,4	20					
Predicted no-effect concentration - PNEC								
Normal value in fresh water				0,68			mg/l	
Normal value in marine water				0,68			mg/l	
Normal value for fresh water sediment				16,39			mg/kg/d	
Normal value for marine water sediment				16,39			mg/kg/d	
Normal value of STP microorganisms				13,61			mg/l	
Normal value for the terrestrial compartment				2,89			mg/kg/d	
Health - Derived no-effect level - DNEL / DMEL								
	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			226 mg/m3	226 mg/m3			192 mg/m3	192 mg/m3

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.
VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

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.

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.

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). 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, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (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. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	pasty liquid	
Colour	various	
Odour	characteristic	
Odour threshold	Not applicable	
pH	Not applicable	Reason for missing data: not soluble in water
Melting point / freezing point	Not available	

Initial boiling point	Not available
Boiling range	Not available
Flash point	230 °C
Evaporation Rate	Not available
Flammability of solids and gases	not applicable
Lower inflammability limit	Not available
Upper inflammability limit	Not available
Lower explosive limit	Not available
Upper explosive limit	Not available
Vapour pressure	1 mbar (20 °C)
Vapour density	Not available
Relative density	1,45 g/ml
Solubility	insoluble
Partition coefficient: n-octanol/water	Not available
Auto-ignition temperature	> 450 °C
Decomposition temperature	Not available
Viscosity	>20,5 mm ² /sec (40°C)
Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

Kinematic viscosity (40 °C) >0,5 m²/s

SECTION 10. Stability and reactivity

10.1. Reactivity

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

TOLUENE

Avoid exposure to: light.

10.2. Chemical stability

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

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

Avoid exposure to: high temperatures.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Bis-(N-Methylbenzamido)-methylethoxysilan

Reacts violently with: water.

Reacts with: alcohols,amines,acids.

TOLUENE

Risk of explosion on contact with: fuming sulphuric acid,nitric acid,silver perchlorate,nitrogen dioxide,non-metal halogenates,acetic acid,organic nitrocompounds.May form explosive mixtures with: air.May react dangerously with: strong oxidising agents,strong acids,sulphur.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

strong acids,strong bases,oxidising agents,reducing agents.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

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.

Bis-(N-Methylbenzamido)-methylethoxysilan
CAS 16230-35-6: Ingestion, LD50 (rat oral) > 2.840 mg/kg .

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium
CAS: 83877-91-2: Ingestion, LD50 (rat oral) > 5.000 mg/kg .

Bis-(N-Methylbenzamido)-methylethoxysilan
CAS 16230-35-6: Ingestion, LD50 (rat oral) > 2.840 mg/kg .

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium
CAS: 83877-91-2: Ingestion, LD50 (rat oral) > 5.000 mg/kg .

11.1. Information on toxicological effects TOLUENE

It has a toxic effect on the central and peripheral nervous system (with encephalopathies and polyneuritis). Irritating to the skin, conjunctivae, cornea and respiratory apparatus.

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:
Not classified (no significant component)
ATE (Oral) of the mixture:
>2000 mg/kg
ATE (Dermal) of the mixture:
Not classified (no significant component)

TOLUENE
LD50 (Oral) 5580 mg/kg bw Rat
LD50 (Dermal) 5000 mg/kg bw Rabbit
LC50 (Inhalation) 25,7 mg/l/4h Rat (air)

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium
LD50 (Oral) > 2000 mg/kg Rat
LD50 (Dermal) > 2000 mg/kg Rabbit
LC50 (Inhalation) > 18180 mg/kg Rat

Bis-(N-Methylbenzamido)-methylethoxysilan

LD50 (Oral) 500 mg/kg bw Rat

LD50 (Dermal) 2000 mg/kg bw Rat

Polydimethylsiloxane with hydroxyl groups

LD50 (Oral) > 2009 mg/kg Rat

LD50 (Dermal) > 2009 mg/kg Rat

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class Viscosity: >20,5 mm²/sec (40°C)

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.

12.1. Toxicity

TOLUENE

EC50 - for Crustacea

3,78 mg/l/48h Crangon franciscorum

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

LC50 - for Fish

275 mg/l/96h Leuciscus idus

EC50 - for Crustacea

> 29 mg/l/48h Daphnia magna

EC50 - for Algae / Aquatic Plants

4 mg/l/72h

Bis-(N-Methylbenzamido)-methylethoxysilan

LC50 - for Fish

100 mg/l/96h Danio rerio

EC50 - for Crustacea

100 mg/l Daphnia magna

EC50 - for Algae / Aquatic Plants

100 mg/l/72h Pseudokirchneriella subcapitata

Chronic NOEC for Algae / Aquatic Plants

25 mg/l Pseudokirchneriella subcapitata

Polydimethylsiloxane with hydroxyl groups

LC50 - for Fish

> 1000 mg/l/96h Fish

EC50 - for Algae / Aquatic Plants

> 100000 mg/l/72h Algae

12.2. Persistence and degradability

TOLUENE

Solubility in water

573 - 587 mg/l

Rapidly degradable

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

Solubility in water

> 10000 mg/l

Rapidly degradable

Bis-(N-Methylbenzamido)-methylethoxysilan

Solubility in water

35864 mg/l 20 °C

Rapidly degradable

12.3. Bioaccumulative potential

TOLUENE

Partition coefficient: n-octanol/water

2,73

BCF

90

bis(ethyl acetoacetato-O1',O3)bis(2-methylpropan-1-olato)titanium

Partition coefficient: n-octanol/water

1 Log Kow

Bis-(N-Methylbenzamido)-methylethoxysilan

Partition coefficient: n-octanol/water

0,95 Log Kow 20 °C

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. 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.

CONTAMINATED PACKAGING

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

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

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. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Seveso Category - Directive 2012/18/EC: None

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

Product

Point 3 - 40

Substances in Candidate List (Art. 59 REACH)

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

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

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.

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:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Repr. 2	Reproductive toxicity, category 2
Acute Tox. 4	Acute toxicity, category 4
Asp. Tox. 1	Aspiration hazard, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Eye Dam. 1	Serious eye damage, category 1
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1B	Skin sensitization, category 1B
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H361d	Suspected of damaging the unborn child.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H373	May cause damage to organs through prolonged or repeated exposure.
H318	Causes serious eye damage.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- 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 NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 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 STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation

- 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) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 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) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII 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.