Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 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 **Permabond UV639**

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

Intended use **Adhesive**

Identified Uses	Industrial	Professional	Consumer
Use	✓	✓	-

1.3. Details of the supplier of the safety data sheet

Name **Permabond Engineering Adhesives**
Full address **Niederkasseler Lohweg 18**
District and Country **40547 Düsseldorf**
Germany
Tel. +44 (0)1962 711 661

e-mail address of the competent person responsible for the Safety Data Sheet **info.europe@permabond.com**

Supplier:

Permabond Engineering Adhesives Ltd
Wessex Way, Colden Common,
Winchester, Hampshire SO21 1WP, UK
tel: +44 (0)1962 711 661
mail: info.europe@permabond.com

1.4. Emergency telephone number

For urgent inquiries refer to **+44 (0)1962 711 661 (8.00 am-5.00 pm Mon-Fri)**

CHEMTREC UK: +(44)-870-8200418
CHEMTREC Ireland: +(353)-19014670
CHEMTREC Australia: +(61)-290372994
CHEMTREC New Zealand: +(64)-98010034

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 and indication:

Reproductive toxicity, category 1B	H360Df	May damage the unborn child. Suspected of damaging fertility.
Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Serious eye damage, category 1	H318	Causes serious eye damage.
Specific target organ toxicity - single exposure, category 3	H335	May cause respiratory irritation.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

SECTION 2. Hazards identification ... / >>

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:

H360Df	May damage the unborn child. Suspected of damaging fertility.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract. Restricted to professional users.

Precautionary statements:

P202	Do not handle until all safety precautions have been read and understood.
P273	Avoid release to the environment.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352	In case of contact with the skin: wash abundantly with soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Contains: TETRAHYDROFURFURYL ACRYLATE
N,N-DIMETHYLACRYLAMIDE
ISOBORNYL ACRYLATE
2-HYDROXYETHYL METHACRYLATE

2.3. Other hazards

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

The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification (EC) 1272/2008 (CLP)
ISOBORNYL ACRYLATE		
INDEX	20 ≤ x < 25	**Eye Irrit. 2 H319, Skin Irrit. 2 H315, STOT SE 3 H335, Skin Sens. 1A H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 1 H410 M=1**
EC 227-561-6		
CAS 5888-33-5		
REACH Reg. 01-2119957862-25-XXXX		
N,N-DIMETHYLACRYLAMIDE		
INDEX	14 ≤ x < 30	**Acute Tox. 3 H301, Acute Tox. 3 H311, Eye Dam. 1 H318**
EC 220-237-5		**LD50 Oral: 280 mg/kg, LD50 Dermal: 720 mg/kg**
CAS 2680-03-7		
REACH Reg. 01-2119971262-39-XXXX		

SECTION 3. Composition/information on ingredients ... / >>

TETRAHYDROFURFURYL ACRYLATE

INDEX		10 ≤ x < 25	**Repr. 1B H360Df, Acute Tox. 4 H302, Skin Corr. 1C H314, Eye Dam. 1 H318, Skin Sens. 1B H317, Aquatic Chronic 2 H411, EUH071**
EC	*219-268-7*		**LD50 Oral: 928 mg/kg**
CAS	*2399-48-6*		
REACH Reg.	*01-2120738396-46-xxxx*		

2-HYDROXYETHYL METHACRYLATE

INDEX		10 ≤ x < 30	**Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317**
EC	*212-782-2*		
CAS	*868-77-9*		
REACH Reg.	*01-2119490169-29-XXXX*		

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE

INDEX		2,5 ≤ x < 5	**Skin Sens. 1B H317, Aquatic Chronic 2 H411**
EC	*282-810-6*		
CAS	*84434-11-7*		
REACH Reg.	*01-2119987994-10-XXXX*		

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

Skin: Wash the skin thoroughly with soap and water. If symptoms arise, request medical assistance
Eyes: Make sure you have removed any contact lenses before rinsing your eyes. Wash Readyly and abundantly the eyes with water keeping the eyelids open.
Continue to rinse for at least 15 minutes. Consult a doctor if the discomfort continues.
Ingestion: rinse the mouth with water thoroughly. Make a abundant quantity of water drink.
Do not cause vomiting. Consult a doctor.
Inhalation: move the subject exposed in the open air. Consult a doctor in case of serious symptoms or persistent.

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

Contact with the skin: skin irritation. Mild dermatitis, allergic rash.
Contact with eyes: irritating and can cause redness and pain.

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

Note for the doctor no specific recommendation. Symptomatic treatment.

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 DUE TO EXPOSURE IN THE EVENT OF FIRE
Avoid breathing combustion products, carbon monoxide (CO), carbon dioxide (CO2), and nitric oxides (NOx).

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

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 6.1C

7.3. Specific end use(s)

Adhesive

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

NOR	Norge	Forskrift om endring i forskrift om tiltaksverdier og grenseverdier for fysiske og kjemiske faktorer i arbeidsmiljøet samt smitterisikogrupper for biologiske faktorer (forskrift om tiltaks- og grenseverdier), 21. august 2018 nr. 1255

SECTION 8. Exposure controls/personal protection ... / >>

2-HYDROXYETHYL METHACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	NOR	11	2	11	2	

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,482	mg/l
Normal value in marine water	0,0482	mg/l
Normal value for fresh water sediment	3,79	mg/kg
Normal value for marine water sediment	3,79	mg/kg
Normal value for fresh water, intermittent release	1	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,476	mg/kg

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
Oral				0.83 mg/kg/d				0.83 mg/kg/d
Inhalation				2.9 mg/m3				4.9 mg/m3
Skin				0.83 mg/kg/d				1.3 mg/kg/d

ISOBORNYL ACRYLATE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,00092	mg/l
Normal value in marine water	0,00009	mg/l
Normal value for fresh water sediment	2 0,145	mg/kg
Normal value for marine water sediment	0,0145	mg/kg
Normal value of STP microorganisms	2	mg/l
Normal value for the terrestrial compartment	0,0285	mg/kg

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
Oral				0.83 mg/kg bw/d				
Skin				0.83 mg/kg bw/d				1.39 mg/kg bw/d

N,N-DIMETHYLACRYLAMIDE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,12	mg/l
Normal value in marine water	0,012	mg/l
Normal value for fresh water sediment	0,509	mg/kg
Normal value for marine water sediment	0,051	mg/kg
Normal value of STP microorganisms	18	mg/l
Normal value for the terrestrial compartment	0,031	mg/kg

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
Oral				0,0147 mg/kg/d				
Inhalation				0,051 mg/m3				0,207 mg/m3
Skin				0,179 mg/kg/d				0,357 mg/kg/d

SECTION 8. Exposure controls/personal protection ... / >>

TETRAHYDROFURFURYL ACRYLATE		
Predicted no-effect concentration - PNEC		
Normal value in fresh water	392	mg/l
Normal value in marine water	0,00039	mg/l
Normal value for fresh water sediment	2 206	mg/kg/d
Normal value for marine water sediment	21	mg/kg/d
Normal value of STP microorganisms	2637	mg/l
Normal value for the terrestrial compartment	18	mg/kg/d

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE		
Predicted no-effect concentration - PNEC		
Normal value in fresh water	1	mg/l
Normal value in marine water	0,0001	mg/l
Normal value for fresh water sediment	0,24	mg/kg/d
Normal value for marine water sediment	0,024	mg/kg/d
Normal value for water, intermittent release	0,0353	mg/l
Normal value for the terrestrial compartment	0,047	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								5,88 mg/m3
Skin								1,7 mg/kg bw/d

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 ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

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.
The following should be considered when choosing work glove material (see standard EN 374): 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).
In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental absorption.
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.
Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties		Value	Information
Appearance		liquid	
Colour		colourless	
Odour		characteristic	
Melting point / freezing point		not available	
Initial boiling point		not available	
Flammability		not available	
Lower explosive limit		not available	
Upper explosive limit		not available	
Flash point	>	100 °C	
Auto-ignition temperature		not available	
Decomposition temperature		not available	
pH		not available	Reason for missing data:substance/mixture is non-soluble (in water)
Kinematic viscosity		not available	
Dynamic viscosity		~ 1950 mPa.s	Temperature: 25 °C
Solubility		not available	
Partition coefficient: n-octanol/water		not available	
Vapour pressure		not available	
Density and/or relative density		1	
Relative vapour density		not available	
Particle characteristics		not applicable	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

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

10.5. Incompatible materials

Strong reducing and oxidizing agents.

10.6. Hazardous decomposition products

By thermal decomposition, carbon monoxide, carbon dioxide and ed
other unidentified organic compounds.

SECTION 11. Toxicological information

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

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:	745,81 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

Corrosive to the respiratory tract.

2-HYDROXYETHYL METHACRYLATE

LD50 (Dermal):	> 5000 mg/kg
LD50 (Oral):	> 5000 mg/kg

ISOBORNYL ACRYLATE

LD50 (Dermal):	> 3000 mg/kg
LD50 (Oral):	4350 mg/kg

N,N-DIMETHYLACRYLAMIDE

LD50 (Dermal):	720 mg/kg
LD50 (Oral):	280 mg/kg

TETRAHYDROFURFURYL ACRYLATE

LD50 (Oral):	928 mg/kg

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE

LD50 (Dermal):	> 2000 mg/kg
LD50 (Oral):	> 5000 mg/kg

SKIN CORROSION / IRRITATION

Corrosive for the skin

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

SECTION 11. Toxicological information ... / >>

May damage the unborn child - Suspected of damaging fertility

STOT - SINGLE EXPOSURE

May cause respiratory irritation

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

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

This product is dangerous for the environment and is toxic for aquatic organisms. In the long term, it have negative effects on acquatic environment.

12.1. Toxicity

2-HYDROXYETHYL METHACRYLATE

LC50 - for Fish	> 100 mg/l/96h
EC50 - for Crustacea	380 mg/l/48h
EC50 - for Algae / Aquatic Plants	836 mg/l/72h

ISOBORNYL ACRYLATE

LC50 - for Fish	0,704 mg/l/96h
EC50 - for Algae / Aquatic Plants	1,98 mg/l/72h
Chronic NOEC for Fish	0,431 mg/l
Chronic NOEC for Crustacea	0,092 mg/l
Chronic NOEC for Algae / Aquatic Plants	0,405 mg/l

N,N-DIMETHYLACRYLAMIDE

LC50 - for Fish	> 120 mg/l/96h
EC50 - for Crustacea	> 120 mg/l/48h
EC50 - for Algae / Aquatic Plants	> 400 mg/l/72h

TETRAHYDROFURFURYL ACRYLATE

LC50 - for Fish	7,32 mg/l/96h
EC50 - for Crustacea	37,7 mg/l/48h
EC50 - for Algae / Aquatic Plants	3,92 mg/l/72h

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE

LC50 - for Fish	1,89 mg/l/96h
EC50 - for Crustacea	2,26 mg/l/48h
EC50 - for Algae / Aquatic Plants	1,01 mg/l/72h
Chronic NOEC for Fish	> 1,29 mg/l

12.2. Persistence and degradability

2-HYDROXYETHYL METHACRYLATE
Rapidly degradable

ISOBORNYL ACRYLATE
NOT rapidly degradable

N,N-DIMETHYLACRYLAMIDE
NOT rapidly degradable

SECTION 12. Ecological information ... / >>

TETRAHYDROFURFURYL ACRYLATE
NOT rapidly degradable

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE
NOT rapidly degradable

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

ETHYL PHENYL(2,4,6-TRIMETHYLBENZOYL)PHOSPHINATE
Partition coefficient: soil/water 3,37

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 ≥ 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

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.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

08 04 09* stickers and sealed sealing, containing organic solvents or other dangerous substances

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 1760

14.2. UN proper shipping name

ADR / RID: CORROSIVE LIQUID, N.O.S. (TETRAHYDROFURFURYL ACRYLATE)
IMDG: CORROSIVE LIQUID, N.O.S. (TETRAHYDROFURFURYL ACRYLATE; ISOBORNYL ACRYLATE)
IATA: CORROSIVE LIQUID, N.O.S. (TETRAHYDROFURFURYL ACRYLATE)

SECTION 14. Transport information ... / >>

14.3. Transport hazard class(es)

ADR / RID:	Class: 8	Label: 8	
IMDG:	Class: 8	Label: 8	
IATA:	Class: 8	Label: 8	

14.4. Packing group

ADR / RID, IMDG, IATA: III

14.5. Environmental hazards

ADR / RID:	Environmentally Hazardous	
IMDG:	Marine Pollutant	
IATA:	Environmentally Hazardous	

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 80 Special provision: 274	Limited Quantities: 5 L	Tunnel restriction code: (E)
IMDG:	EMS: F-A, S-B	Limited Quantities: 5 L	
IATA:	Cargo: Passengers: Special provision:	Maximum quantity: 60 L Maximum quantity: 5 L A3, A803	Packaging instructions: 856 Packaging instructions: 852

14.7. Maritime transport in bulk according to IMO instruments

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/EU: E2

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006
Product
Point 3

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors
not applicable

Substances in Candidate List (Art. 59 REACH)
On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)
None

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

SECTION 15. Regulatory information ... / >>

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:

Repr. 1B	Reproductive toxicity, category 1B
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1C	Skin corrosion, category 1C
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
H360Df	May damage the unborn child. Suspected of damaging fertility.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 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: 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

SECTION 16. Other information ... / >>

- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- 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 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) 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 (UE) 2020/217 (XIV Atp. CLP)
19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
22. Delegated Regulation (UE) 2022/692 (XVIII 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.