Security data sheet

Product:	UV643
Manufacturer:	PERMABOND ENGINEERING ADHESIVES
Product group:	KLEBSTOFF
Article group:	UV- AUSHÄRTENDER KLEBSTOFF
Download:	14.11.2026

PERMABOND UV643

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Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Product name **Permabond UV643**

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
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1.4. Emergency telephone number

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

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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:

Acute toxicity, category 4	H302	Harmful if swallowed.
Serious eye damage, category 1	H318	Causes serious eye damage.
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Hazardous to the aquatic environment, acute toxicity, category 1	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment, chronic toxicity, category 1	H410	Very 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:

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice / attention.

Contains:
N,N-DIMETHYLACRYLAMIDE
CAPROLACTONE ACRYLATE
ISOBORNYL ACRYLATE
[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE
2-HYDROXYETHYL ACRYLATE
PHENYL BIS(2,4,6-TRIMETHYLBENZOYL)-PHOSPHINEOXIDE

The product is classified both in acute and long-term aquatic hazard categories: it is possible to use only hazard statement H410 on the label.

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		30 ≤ x < 60	**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, Skin Sens. 1B H317**
EC	*220-237-5*		**LD50 Oral: 280 mg/kg, LD50 Dermal: 720 mg/kg**
CAS	*2680-03-7*		

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

REACH Reg. *01-2119971262-39-XXXX*
[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE
INDEX 1 ≤ x < 3 **Eye Dam. 1 H318, Aquatic Chronic 3 H412**
EC *219-784-2*
CAS *2530-83-8*
REACH Reg. *01-2119513212-58-XXXX*
CAPROLACTONE ACRYLATE
INDEX 1 ≤ x < 5 **Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317**
EC *600-970-0*
CAS *110489-05-9*
PHENYL BIS(2,4,6-TRIMETHYLBENZOYL)-PHOSPHINEOXIDE
INDEX 0,1 ≤ x < 1 **Skin Sens. 1 H317, Aquatic Chronic 4 H413**
EC *423-340-5*
CAS *162881-26-7*
REACH Reg. *01-2119900459-37-XXXX*
2-HYDROXYETHYL ACRYLATE
INDEX *607-072-00-8* 0,1 ≤ x < 0,2 **Acute Tox. 3 H311, Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Acute 1 H400 M=1, Aquatic Chronic 3 H412, Classification note according to Annex VI to the CLP Regulation: D**
EC *212-454-9* **Skin Sens. 1 H317: ≥ 0,2%**
CAS *818-61-1* **LD50 Oral: 540 mg/kg, ATE Dermal: 300 mg/kg**
REACH Reg. *01-2119459345-34-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

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 immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. 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. Get medical advice/attention.

Rescuer 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 symptoms occur, whether acute or delayed, consult a doctor.

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

SECTION 5. Firefighting measures ... / >>

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.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory references:

DNK	Danmark	BEK nr 291 af 19/03/2024 (Historisk) Bekendtgørelse om grænseværdier for stoffer og materialer (kemiske agenser) i arbejdsmiljøet
EST	Eesti	Ohtlike kemikaalide ja neid sisaldavate materjalide kasutamise töötervishoiu ja tööohutuse nõuded ning töökeskkonna keemiliste ohutegurite piirnormid 2024
LTU	Lietuva	Jsakymas dėl lietuvos higienos normos hn 23:2011 „cheminių medžiagų profesinio poveikio ribiniai dydžiai. Matavimo ir poveikio vertinimo bendrieji reikalavimai“ patvirtinimo
LVA	Latvija	Grozījumi Ministru kabineta 2007. gada 15. maija noteikumos Nr. 325 "Darba aizsardzības prasības saskarē ar ķīmiskajām vielām darba vietās" Oficiālāās publikāācijas Nr.: 2024/65.2
NLD	Nederland	Regeling van de Minister van Sociale Zaken en Werkgelegenheid van 13 mei2024, nr. 2024-0000092805, tot wijziging van deArbeidsomstandighedenregeling in verband met de implementatie vanRichtlijn 2022/431
RUS	Россия	ПОСТАНОВЛЕНИЕ от 13 февраля 2018 г. N 25 ОБ УТВЕРЖДЕНИИ ГИГИЕНИЧЕСКИХ НОРМАТИВОВ ГН 2.2.5.3532-18 "ПРЕДЕЛЬНО ДОПУСТИМЫЕ КОНЦЕНТРАЦИИ (ПДК) ВРЕДНЫХ ВЕЩЕСТВ В ВОЗДУХЕ РАБОЧЕЙ ЗОНЫ"
SWE	Sverige	Arbetsmiljöverkets föreskrifter och allmänna råd (AFS 2023:14) om gränsvärden för luftvägsexponering i arbetsmiljön

PHENYL BIS(2,4,6-TRIMETHYLBENZOYL)-PHOSPHINEOXIDE

Predicted no-effect concentration - PNEC

Normal value in fresh water	8	mg/l
Normal value in marine water	8	mg/l
Normal value for fresh water sediment	712	mg/kg
Normal value for marine water sediment	712	mg/kg
Normal value for the terrestrial compartment	20	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				1,5 mg/kg/d				
Inhalation				1,93 mg/m3				7,84 mg/m3
Skin				1,5 mg/kg/d				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
	2	
Normal value for fresh water sediment	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

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

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

2-HYDROXYETHYL ACRYLATE

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	DNK	5	1	10	2	SKIN
TLV	EST	5	1	10	2	SKIN
RD	LTU	5	1	10	2	SKIN
RV	LVA	0,5				
TGG	NLD		0,05			
ПДК	RUS	0,5		1,5		п
NGV/KGV	SWE	5	1	10 (C)	2 (C)	SKIN

[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE

Predicted no-effect concentration - PNEC

Normal value in fresh water	0,45	mg/l
Normal value in marine water	0,045	mg/l
Normal value for fresh water sediment	1,6	mg/kg/d
Normal value for marine water sediment	0,16	mg/kg/d
Normal value for water, intermittent release	0,45	mg/l
Normal value of STP microorganisms	8,2	mg/l
Normal value for the terrestrial compartment	0,063	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
Oral				5 mg/kg bw/d				
Inhalation		26400 mg/m3		17 mg/m3		26400 mg/m3		70.5 mg/m3
Skin				5 mg/kg bw/d				10 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, permeability

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

time.
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 ISO 16321).
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
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. 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).
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		pale yellow		
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		10000 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

The following materials may react with the product: Strong oxidizing agents, Reducing agents, strong acids and bases.

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

Stable under normal conditions of storage and use.
Protect from direct sunlight.
Avoid contact with acids and oxidizing agents.

10.5. Incompatible materials

See the reactivity section.

10.6. Hazardous decomposition products

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

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

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:	1018,92 mg/kg
ATE (Dermal) of the mixture:	>2000 mg/kg

ISOBORNYL ACRYLATE

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

SECTION 11. Toxicological information ... / >>

N,N-DIMETHYLACRYLAMIDE
LD50 (Dermal): 720 mg/kg
LD50 (Oral): 280 mg/kg

[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE
LD50 (Dermal): 4250 mg/kg Rabbit - New Zealand white
LD50 (Oral): 8025 mg/kg Rat - Wistar
LC50 (Inhalation vapours): 5,3 mg/l Rat - Fischer 344

PHENYL BIS(2,4,6-TRIMETHYLBENZOYL)-PHOSPHINEOXIDE
LD50 (Dermal): > 2000 mg/kg
LD50 (Oral): > 2000 mg/kg

2-HYDROXYETHYL ACRYLATE
LD50 (Dermal): > 1000 mg/kg Rabbit
ATE (Dermal): 300 mg/kg estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)
LD50 (Oral): 540 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

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 highly toxic for aquatic organisms. In the long term, it has negative effects on the aquatic environment.

12.1. Toxicity

SECTION 12. Ecological information ... / >>

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

[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE

LC50 - for Fish	55 mg/l/96h Cyprinus carpio
EC50 - for Crustacea	324 mg/l/48h Simocephalus vetulus

PHENYL BIS(2,4,6-TRIMETHYLBENZOYL)-PHOSPHINEOXIDE

LC50 - for Fish	> 9 mg/l/96h OECD 203
EC50 - for Crustacea	> 1175 mg/l/48h OECD 201

2-HYDROXYETHYL ACRYLATE

LC50 - for Fish	44,8 mg/l/96h Pimephales promelas

12.2. Persistence and degradability

ISOBORNYL ACRYLATE
NOT rapidly degradable

N,N-DIMETHYLACRYLAMIDE
NOT rapidly degradable

[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE
NOT rapidly degradable

2-HYDROXYETHYL ACRYLATE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

[3-(2,3-EPOXYPROPOXY) PROPYL] TRIMETHOXYSILANE

Partition coefficient: n-octanol/water	-2,6

2-HYDROXYETHYL ACRYLATE

Partition coefficient: n-octanol/water	-0,17

12.4. Mobility in soil

2-HYDROXYETHYL ACRYLATE

Partition coefficient: soil/water	-0,029

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.
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.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: UN 3082

ADR / RID: In accordance with Special Provision 375, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to ADR provisions.

IMDG: In accordance with Section 2.10.2.7 of IMDG Code, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IMDG Code provisions.

IATA: In accordance with SP A197, this product, when is packed in receptacles of a capacity ≤ 5Kg or 5L, is not submitted to IATA dangerous goods regulations.

14.2. UN proper shipping name

ADR / RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOBORNYL ACRYLATE; 2-HYDROXYETHYL ACRYLATE)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOBORNYL ACRYLATE; 2-HYDROXYETHYL ACRYLATE)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ISOBORNYL ACRYLATE; 2-HYDROXYETHYL ACRYLATE)

14.3. Transport hazard class(es)

ADR / RID: Class: 9 Label: 9

IMDG: Class: 9 Label: 9

IATA: Class: 9 Label: 9

14.4. Packing group

ADR / RID, IMDG, IATA: III

SECTION 14. Transport information ... / >>

14.5. Environmental hazards

ADR / RID: Environmentally Hazardous

IMDG: Marine Pollutant

IATA: Environmentally Hazardous

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 90	Limited Quantities: 5 lt	Tunnel restriction code: (-)
	Special provision: 274, 335, 375, 601, 650		
IMDG:	EMS: F-A, S-F	Limited Quantities: 5 lt	
IATA:	Cargo:	Maximum quantity: 450 L	Packaging instructions: 964
	Passengers:	Maximum quantity: 450 L	Packaging instructions: 964
	Special provision:	A97, A158, A197, A215	

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: E1

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

Product
Point 3
Contained substance
Point 75

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:
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.

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)
WGK 2: Hazard to waters

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. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
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 3	Hazardous to the aquatic environment, chronic toxicity, category 3
Aquatic Chronic 4	Hazardous to the aquatic environment, chronic toxicity, category 4
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.
H317	May cause an allergic skin reaction.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

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
- 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

SECTION 16. Other information ... / >>

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)
23. Delegated Regulation (UE) 2023/707
24. Delegated Regulation (UE) 2023/1434 (XIX Atp. CLP)
25. Delegated Regulation (UE) 2023/1435 (XX Atp. CLP)
26. Delegated Regulation (UE) 2024/197 (XXI Atp. CLP)
27. Delegated Regulation (UE) 2024/2564 (XXII 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 to previous review:
The following sections were modified:
02 / 03 / 08 / 14.