Safety Data Sheet

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

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

1.1 Product identifier

Product name	Polyurea HYB C.A

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

Intended use
Component A for waterproofing hybrid polyurea

1.3 Details of the supplier of the safety data sheet

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

1.4 Emergency telephone number

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

Section 2 Hazards identification

2.1 Classification of the substance or mixture

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

Hazard classification		
Acute toxicity, category 4	H302	Harmful if swallowed.
Skin corrosion, category 1C	H314	Causes severe skin burns and eye damage.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Serious eye damage, category 1	H318	Causes serious eye damage.
Hazardous to the aquatic environment, chronic toxicity, category 2	H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms

Section 2

Signal word
Danger

Hazard statements	
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements	
P260	Do not breathe spray, vapours.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P391	Collect spillage.

Contains
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia
Aliphatic Amine Polymer
Glyceryl Poly(Oxypropylene) Triamine
MALEIC ANHYDRIDE

VOC (Directive 2004/42/EC)	
Two-pack reactive performance coatings for specific end use such as floors.	
Volatile organic compounds - ready to use	129 g/l
VOC subcategory limit	500 g/l

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

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Concentration	17.9 ≤ x < 27.8 %
CAS number	9046-10-0
EC number	618-561-0
Hazard classification	▪ Skin Corr. 1C; H314 ▪ Eye Dam. 1; H318 ▪ Aquatic Chronic 3; H412

DIETHYLENE GLYCOL

Concentration	13.4 ≤ x < 20.8 %
CAS number	111-46-6
EC number	203-872-2
INDEX number	603-140-00-6
Registration Number	01-2119457857-21-xxxx

Section 3

Hazard classification	▪ Acute Tox. 4; H302
ATE (Oral)	500 mg/kg

diethylmethylbenzenediamine

Concentration	5 ≤ x < 10 %
CAS number	68479-98-1
EC number	270-877-4
INDEX number	612-130-00-0
Registration Number	01-2119486805-25-xxxx
Hazard classification	▪ Acute Tox. 4; H302 ▪ Acute Tox. 4; H312 ▪ Eye Irrit. 2; H319 ▪ STOT RE 2; H373 ▪ Aquatic Acute 1; H400 ▪ Aquatic Chronic 1; H410
M Factor (acute)	1
M Factor (chronic)	1
Classification note according to Annex VI to the CLP Regulation:	C
LD50 (Oral):	738 mg/kg
LD50 (Dermal):	2,000 mg/kg

Aliphatic Amine Polymer

Concentration	2.55 ≤ x < 5 %
Hazard classification	▪ Acute Tox. 4; H302 ▪ Acute Tox. 4; H312 ▪ Skin Corr. 1A; H314 ▪ Eye Dam. 1; H318 ▪ Acute Tox. 4; H332 ▪ STOT SE 3; H335
LD50 (Oral):	1,170 mg/kg
LD50 (Dermal):	1,870 mg/kg
ATE (Inhalation - vapours)	11 mg/l

Glyceryl Poly(Oxypropylene) Triamine

Concentration	2.16 ≤ x < 3.3 %
CAS number	64852-22-8
Hazard classification	▪ Skin Corr. 1C; H314 ▪ Eye Dam. 1; H318

ETHYL ACETATE

Concentration	0.55 ≤ x < 1 %
CAS number	141-78-6
EC number	205-500-4
INDEX number	607-022-00-5
Registration Number	01-2119475103-46-xxxx
Hazard classification	▪ Flam. Liq. 2; H225 ▪ Eye Irrit. 2; H319 ▪ STOT SE 3; H336
Additional classification	EUH066
Substance with a community workplace exposure limit.	

Section 3

XYLENE

Concentration	0.0144 ≤ x < 0.062 %
CAS number	1330-20-7
EC number	215-535-7
INDEX number	601-022-00-9
Registration Number	01-2119488216-32-xxxx
Hazard classification	▪ Flam. Liq. 3; H226 ▪ Asp. Tox. 1; H304 ▪ Acute Tox. 4; H312 ▪ Skin Irrit. 2; H315 ▪ Acute Tox. 4; H332 ▪ STOT SE 3; H335 ▪ STOT RE 2; H373 ▪ Aquatic Chronic 3; H412
Classification note according to Annex VI to the CLP Regulation:	C
Substance with a community workplace exposure limit.	

2-METHOXY-1-METHYLETHYL ACETATE

Concentration	0.0144 ≤ x < 0.062 %
CAS number	108-65-6
EC number	203-603-9
INDEX number	607-195-00-7
Registration Number	01-2119475791-29-xxxx
Hazard classification	▪ Flam. Liq. 3; H226 ▪ STOT SE 3; H336
Substance with a community workplace exposure limit.	

ETHYLBENZENE

Concentration	0.0054 ≤ x < 0.0234 %
CAS number	100-41-4
EC number	202-849-4
INDEX number	601-023-00-4
Registration Number	01-2119489370-35-xxxx
Hazard classification	▪ Flam. Liq. 2; H225 ▪ Asp. Tox. 1; H304 ▪ Acute Tox. 4; H332 ▪ STOT RE 2; H373 ▪ Aquatic Chronic 3; H412
Substance with a community workplace exposure limit.	

2-BUTOXYETHANOL

Concentration	0.0054 ≤ x < 0.0234 %
CAS number	111-76-2
EC number	203-905-0
INDEX number	603-014-00-0
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Irrit. 2; H315 ▪ Eye Irrit. 2; H319 ▪ Acute Tox. 3; H331
Substance with a community workplace exposure limit.	

Section 3

MALEIC ANHYDRIDE

Concentration	0.0054 ≤ x < 0.0234 %
CAS number	108-31-6
EC number	203-571-6
INDEX number	607-096-00-9
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Corr. 1B; H314 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318 ▪ Resp. Sens. 1; H334 ▪ STOT RE 1; H372 (respiratory system: lower respiratory tract) by the inhalation route
Specific concentration limits	▪ Skin Sens. 1A; H317: ≥ 0.001 %
Additional classification	EUH071

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. Rinse your mouth with running water. Do not give anything by mouth to an unconscious person. Get medical advice/attention.
INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuers protection

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

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.
DELAYED EFFECTS: Poisoning symptoms can appear even hours after exposure: it is therefore appropriate to keep the injured person under observation in the hours following the accident.

4.3 Indication of any immediate medical attention and special treatment needed

Immediately call a poison center/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
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

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)
8A – Combustible corrosive substances

2-METHOXY-1-METHYLETHYL ACETATE

Store in an inert atmosphere, sheletered from moisture because it hydrolises easily.

7.3 Specific end use(s)

Information not available.

Section 8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references	
ACGIH	ACGIH 2025
European Union-OEL	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
Ireland-OELV	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Malta-TLV	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L.424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L.424.22)

XYLENE

	TWA		STEL		CEILING		Remarks	
	mg/m³	**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**		
ACGIH		20					--	
European Union-OEL	221	50	442	100			Skin	
Ireland-OELV	221	50	442	100			Skin	
Malta-TLV	221	50	442	100			Skin	

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	658 mg/l
Normal value in fresh water	327 mg/l
Normal value for fresh water sediment	1,246 mg/kg
Normal value in marine water	327 mg/l
Normal value for marine water sediment	1,246 mg/kg
Normal value for the terrestrial compartment	231 mg/kg

Health - Derived no-effect level - DNEL / DMEL	**Local effect**	**Systemic effect**
Workers, short-term, inhalation	442 mg/m³	442 mg/m³
Workers, long-term, dermal		212 mg/kg bw/d
Workers, long-term, inhalation	221 mg/kg	221 mg/kg

Section 8

DIETHYLENE GLYCOL

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
Ireland-OELV	100	23					--	

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	10,000 mg/l
Normal value in fresh water	10,000 mg/l
Normal value for the terrestrial compartment	1,530 mg/kg
Normal value for water, intermittent release	199,500 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal	0 mg/kg	53,000 mg/kg
Workers, long-term, dermal	0 mg/kg	106,000 mg/kg

2-METHOXY-1-METHYLETHYL ACETATE

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
European Union-OEL	275	50	550	100			Skin	
Ireland-OELV	275	50	550	100			Skin	
Malta-TLV	275	50	550	100			Skin	

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	100 mg/l
Normal value in fresh water	0.635 mg/l
Normal value for fresh water sediment	3.29 mg/kg
Normal value in marine water	0.064 mg/l
Normal value for marine water sediment	0.329 mg/kg
Normal value for the terrestrial compartment	0.29 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, short-term, inhalation	550 mg/m³	
Workers, long-term, dermal		796 mg/kg bw/d
Workers, long-term, inhalation		275 mg/m³

ETHYLBENZENE

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
ACGIH	87	20					--	
European Union-OEL	442	100	884	200			Skin	
Ireland-OELV	442	100	884	200			Skin	
Malta-TLV	442	100	884	200			Skin	

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	96 mg/l
Normal value in fresh water	1 mg/l
Normal value for fresh water sediment	137 mg/kg
Normal value in marine water	1 mg/l
Normal value for marine water sediment	137 mg/kg
Normal value for the terrestrial compartment	268 mg/kg

Section 8

Predicted no-effect concentration - PNEC	
Normal value for the food chain (secondary poisoning)	20 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, short-term, inhalation	293 mg/m³	
Workers, long-term, dermal		180 mg/kg bw/d
Workers, long-term, inhalation		77 mg/m³

2-BUTOXYETHANOL

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
ACGIH	97	20					--	
European Union-OEL	98	20	246	50			Skin	
Ireland-OELV	98	20	246	50			Skin	
Malta-TLV	98	20	246	50			Skin	

ETHYL ACETATE

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
ACGIH	1,441	400					--	
European Union-OEL	734	200	1,468	400			--	
Ireland-OELV		200		400			--	
Malta-TLV	734	200	1,468	400			--	

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	650 mg/l
Normal value in fresh water	0.24 mg/l
Normal value for fresh water sediment	1.15 mg/kg/d
Normal value in marine water	0.024 mg/l
Normal value for marine water sediment	0.115 mg/kg/d
Normal value for the terrestrial compartment	0.148 mg/kg/d
Normal value for the food chain (secondary poisoning)	200 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, inhalation	734 mg/m³	734 mg/m³
Consumers, long-term, dermal	Not available	37 mg/kg bw/d
Consumers, long-term, inhalation	367 mg/m³	367 mg/m³
Consumers, long-term, oral	Not available	4.5 mg/kg bw/d
Workers, short-term, inhalation	1,468 mg/m³	1,468 mg/m³
Workers, long-term, dermal	Not available	63 mg/kg bw/d
Workers, long-term, inhalation	734 mg/m³	734 mg/m³

MALEIC ANHYDRIDE

	TWA		STEL		CEILING		Remarks	
	mg/m³	ppm	mg/m³	ppm	mg/m³	ppm		
ACGIH	0.01	0.0025					Inhalation	
Ireland-OELV		0.01					Inhalation	Vapour

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	446 mg/l
Normal value in fresh water	38 mg/l

Section 8

Predicted no-effect concentration - PNEC	
Normal value for fresh water sediment	296 mg/kg
Normal value in marine water	4 mg/l
Normal value for marine water sediment	3 mg/kg
Normal value for the terrestrial compartment	37 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, short-term, inhalation	0.2 mg/m³	0.2 mg/m³
Workers, long-term, inhalation	0.081 mg/m³	0.081 mg/m³

diethylmethylbenzenediamine

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	17 mg/l
Normal value in fresh water	
Normal value for fresh water sediment	
Normal value in marine water	
Normal value for marine water sediment	
Normal value for the terrestrial compartment	
Normal value for the food chain (secondary poisoning)	2 mg/kg
Normal value for water, intermittent release	

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal		1 mg/kg bw/d
Consumers, long-term, inhalation		100 µg/m³
Consumers, long-term, oral		
Workers, long-term, dermal		1 mg/kg bw/d
Workers, long-term, inhalation		130 µg/m³

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	7.5 mg/l
Normal value in fresh water	0.015 mg/l
Normal value for fresh water sediment	0.132 mg/kg
Normal value in marine water	0.0014 mg/l
Normal value for marine water sediment	0.125 mg/kg
Normal value for the terrestrial compartment	0.018 mg/kg
Normal value for the food chain (secondary poisoning)	6.93 mg/kg

Aliphatic Amine Polymer

Predicted no-effect concentration - PNEC	
Normal value in fresh water	42 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, short-term, inhalation		0.5 mg/m³
Workers, long-term, dermal		1.5 mg/kg/d
Workers, long-term, inhalation		0.25 mg/m³

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.
When choosing risk management measures and operating conditions, consult the exposure scenarios attached.
Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344/EN ISO 13034). Wash body with soap and water after removing protective clothing.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).
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.

RISK MANAGEMENT MEASURES
Workplaces must be regularly inspected by trained personnel such as for example the safety officer.
The operators must be adequately trained.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid	
Colour	grey	
Odour	Ammonia	
Odour threshold	Not applicable	
Melting point / freezing point	Not available	
Initial boiling point	> 180 °C (> 356 °F)	
Flammability	not flammable	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	130 °C (266 °F)	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	not soluble in water	
Kinematic viscosity	> 20.5 mm^2/s	

Solubility	partially soluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1.07 g/cm³	
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Total solids 250°C	0 %	
VOC (Directive 2004/42/EC)	12.072 % – 129 g/l	

Section 10 Stability and reactivity

10.1 Reactivity

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

2-METHOXY-1-METHYLETHYL ACETATE

Stable in normal conditions of use and storage
With the air it may slowly develop peroxides that explode with an increase in temperature.

2-BUTOXYETHANOL

Decomposes under the effect of heat

ETHYL ACETATE

ETHYL ACETATE: decomposes slowly into acetic acid and ethanol under the effect of light, air and water.

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.

XYLENE

Stable in normal conditions of use and storage
Reacts violently with: strong oxidants, strong acids, nitric acid, perchlorates
May form explosive mixtures with: air

2-METHOXY-1-METHYLETHYL ACETATE

May react violently with: oxidising substances, strong acids, alkaline metals

ETHYLBENZENE

Reacts violently with: strong oxidants
Attacks various types of plastic materials
May form explosive mixtures with: air

2-BUTOXYETHANOL

May react dangerously with: aluminium, oxidising agents

Forms peroxides with: air

ETHYL ACETATE

Risk of explosion on contact with: alkaline metals, hydrides, oleum
May react violently with: fluorine, strong oxidising agents, chlorosulphuric acid, potassium tert-butoxide
Forms explosive mixtures with: air
ETHYL ACETATE: risk of explosion on contact with: metals, alkalis, hydrides. oleum. can react violently with: fluoride, strong oxidising agents, chlorosulfuric acid, potassium tert-butoxide. Forms explosive mixtures with the air.

10.4 Conditions to avoid

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

2-BUTOXYETHANOL

Avoid exposure to: sources of heat, naked flames

ETHYL ACETATE

Avoid exposure to: light, sources of heat, naked flames
ETHYL ACETATE: avoid exposure to light, sources of heat and naked flames.

10.5 Incompatible materials

2-METHOXY-1-METHYLETHYL ACETATE

Incompatible with: oxidising substances, strong acids, alkaline metals

ETHYL ACETATE

Incompatible with: acids, bases, strong oxidants, chlorosulphuric acid
ETHYL ACETATE: acids and bases, strong oxidising agents; aluminium and some plastics, nitrates and chlorosulphuric acid.

10.6 Hazardous decomposition products

ETHYLBENZENE

May develop: methane, styrene, hydrogen, ethane

2-BUTOXYETHANOL

May develop: hydrogen

Section 11 Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

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

11.1.1 Metabolism, toxicokinetics, mechanism of action and other information

2-METHOXY-1-METHYLETHYL ACETATE

The main route of entry is the skin, whereas the respiratory route is less important due to the low vapour pressure of the product.

11.1.2 Information on likely routes of exposure

XYLENE

WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air.

2-METHOXY-1-METHYLETHYL ACETATE

WORKERS: inhalation; contact with the skin.

ETHYLBENZENE

WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; contact with the skin of products containing the substance.

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

XYLENE

Toxic effect on the central nervous system (encephalopathy); irritating for the skin, conjunctiva, cornea and respiratory apparatus.

2-METHOXY-1-METHYLETHYL ACETATE

Above 100 ppm causes irritation of the eye, nose and oropharynx mucous membranes. At 1000 ppm, disturbance of equilibrium and severe eye irritation can be noticed. Clinical and biological examinations carried out on exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation with direct contact. No chronic effects on humans have been reported (INCR, 2010).

ETHYLBENZENE

As the counterparts of benzene, may have an acute effect on the central nervous system, with depression, narcosis, often preceded by dizziness and associated with headache (Ispesl). Is irritating for skin, conjunctiva and respiratory tract.

11.1.4 Interactive effects

XYLENE

Intake of alcohol interferes with the metabolism of the substance, inhibiting it. Ethanol consumption (0.8 g/kg) before a 4-hour exposure to xylene vapours (145 and 280 ppm) causes a 50% reduction in the excretion of methyl hippuric acid, whereas the concentration of xylenes in the blood increases approx. 1.5-2 times. At the same time there is an increase in the secondary side effects of the ethanol. The metabolism of the xylenes is increased by phenobarbital and 3-methyl-colantrene type enzyme inducers. Aspirin and xylenes mutually inhibit their conjugation with the glycine, which results in a decrease in urinary excretion of methyl hippuric acid. Other industrial products can interfere with the metabolism of xylenes.

11.1.5 ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture	> 20 mg/l
ATE (Oral) of the mixture	> 2,000 mg/kg
ATE (Dermal) of the mixture	> 2,000 mg/kg

XYLENE

LD50 (Oral):	3,523 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	4,350 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	26 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Dermal)	1,100 mg/kg	estimate from table 3.1.2 of Annex I of the CLP
ATE (Inhalation - vapours)	11 mg/l	estimate from table 3.1.2 of Annex I of the CLP

DIETHYLENE GLYCOL

LD50 (Oral):	12,565 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	11,890 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	> 4.6 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Oral)	500 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)

2-METHOXY-1-METHYLETHYL ACETATE

LD50 (Oral):	8,530 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 5,000 mg/kg	Species/guidelines: Rat

ETHYLBENZENE

LD50 (Oral):	3,500 mg/kg	Species/guidelines: Rat

LD50 (Dermal):	15,354 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	17.2 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

2-BUTOXYETHANOL

LD50 (Oral):	1,200 mg/kg	Species/guidelines: Guinea pig
LC50 (Inhalation vapours):	3 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

ETHYL ACETATE

LD50 (Oral):	4,934 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	> 22.5 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

MALEIC ANHYDRIDE

LD50 (Oral):	400 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	610 mg/kg	Species/guidelines: Rat

diethylmethylbenzenediamine

LD50 (Oral):	738 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	2,000 mg/kg	Species/guidelines: Rat

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

LD50 (Oral):	2,885 mg/kg	Species/guidelines: OECD Guideline 401. Rat
LD50 (Dermal):	2,979.7 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	> 0.74 mg/l	Exposure duration: 4 hours Species/guidelines: OECD Guideline 403. Rat

Aliphatic Amine Polymer

LD50 (Oral):	1,170 mg/kg	
LD50 (Dermal):	1,870 mg/kg	
LC50 (Inhalation vapours):	4.9 mg/l	Exposure duration: 4 hours
ATE (Inhalation - vapours)	11 mg/l	estimate from table 3.1.2 of Annex I of the CLP (figure used for calculation of the acute toxicity estimate of the mixture)

11.1.6 SKIN CORROSION/IRRITATION

Corrosive for the skin

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

XYLENE

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC).
The US Environmental Protection Agency (EPA) affirms that "the data is inadequate for an assessment of the carcinogenic potential".

ETHYLBENZENE

Classified in Group 2B (possible human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 2000).
Classified in Group D (not classifiable as a human carcinogen) by the US Environmental Protection Agency (EPA) - (US EPA file on-line 2014).

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

Target organs

MALEIC ANHYDRIDE

(respiratory system: lower respiratory tract)

Route of exposure

MALEIC ANHYDRIDE

by the inhalation route

11.1.14 ASPIRATION HAZARD

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

11.2 Information on other hazards

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

Section 12 Ecological information

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

12.1 Toxicity

DIETHYLENE GLYCOL

EC50 - for Crustacea	62.63 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	75.2 mg/l	Exposure duration: 96 hours Species/guidelines: Pimephales promelas
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l	Species/guidelines: growth rate

ETHYL ACETATE

EC50 - for Crustacea	165 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna

LC50 - for Fish	230 mg/l	Exposure duration: 96 hours Species/guidelines: Pimephales promelas
Chronic NOEC for Crustacea	2.4 mg/l	Species/guidelines: Daphnia pulex
Chronic NOEC for Algae / Aquatic Plants	> 100 mg/l	Species/guidelines: Scenedesmus subspicatus

diethylmethylbenzenediamine

EC50 - for Crustacea	500 µg/l	Exposure duration: 48 hours
Chronic NOEC for Algae / Aquatic Plants	54 mg/l	

Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia

EC50 - for Crustacea	80 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	772.14 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhyncus mykiss
EC50 - for Algae / Aquatic Plants	15 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchenriella subcapitata
Chronic NOEC for Crustacea	7.64 mg/l	

12.2 Persistence and degradability

XYLENE

Solubility in water	100 ≤ x ≤ 1,000 mg/l	
Degradability	Rapidly degradable	

DIETHYLENE GLYCOL

Solubility in water	1,000 ≤ x ≤ 10,000 mg/l	
Degradability	Rapidly degradable	

2-METHOXY-1-METHYLETHYL ACETATE

Solubility in water	> 10,000 mg/l	
Degradability	Rapidly degradable	

ETHYLBENZENE

Solubility in water	1,000 ≤ x ≤ 10,000 mg/l	
Degradability	Rapidly degradable	

2-BUTOXYETHANOL

Solubility in water	1,000 ≤ x ≤ 10,000 mg/l	
Degradability	Rapidly degradable	

ETHYL ACETATE

Solubility in water	80 ≤ x ≤ 83.1 g/l	
Degradability	Rapidly degradable	

MALEIC ANHYDRIDE

Solubility in water	> 10,000 mg/l	
Degradability	Inherently degradable	

diethylmethylbenzenediamine

Solubility in water	23 g/l	
Degradability	NOT rapidly degradable	

12.3 Bioaccumulative potential

XYLENE

Bioconcentration factor	25.9
Partition coefficient n-octanol/water	3.12 LogKow

DIETHYLENE GLYCOL

Bioconcentration factor	100
Partition coefficient n-octanol/water	-1.98 LogKow

2-METHOXY-1-METHYLETHYL ACETATE

Partition coefficient n-octanol/water	1.2 LogKow

ETHYLBENZENE

Partition coefficient n-octanol/water	3.6 LogKow

2-BUTOXYETHANOL

Partition coefficient n-octanol/water	0.81 LogKow

ETHYL ACETATE

Bioconcentration factor	30
Partition coefficient n-octanol/water	0.68 LogKow

MALEIC ANHYDRIDE

Partition coefficient n-octanol/water	-2.78 LogKow

diethylmethylbenzenediamine

Partition coefficient n-octanol/water	1.38 LogKow

12.4 Mobility in soil

XYLENE

Partition coefficient soil/water	0.436 LogKoc

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.

Section 13

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

Hazardous waste classification - Reg. (UE) 1357/2014
HP 6 – Acute Toxicity
HP 8 – Corrosive
HP 14 – Ecotoxic

Section 14 Transport information

14.1 UN number or ID number

ADR / RID	IMDG	IATA
UN 1760	UN 1760	UN 1760

14.2 UN proper shipping name

ADR / RID	CORROSIVE LIQUID, N.O.S. (Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia – Aliphatic Amine Polymer)
IMDG	CORROSIVE LIQUID, N.O.S. (Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia – Aliphatic Amine Polymer – diethylmethylbenzenediamine)
IATA	CORROSIVE LIQUID, N.O.S. (Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia – Aliphatic Amine Polymer)

14.3 Transport hazard class(es)

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

14.4 Packing group

ADR / RID	IMDG	IATA
III	III	III

14.5 Environmental hazards

ADR / RID	Environmentally Hazardous	
IMDG	Marine Pollutant	

Section 14

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			
Hazard identification No. - Kemler	80	Limited Quantities	5 L
Tunnel restriction code	(E)	Special provisions	274
IMDG			
EmS	F-A, S-B	Limited Quantities	
IATA			
Maximum quantity (Cargo)	60 L	Packaging instructions (Cargo)	856
Maximum quantity (Passengers)	5 L	Packaging instructions (Passengers)	852
Special provisions	A3, A803		

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

Section 15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:

E2

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

	Restrictions	Registration Number EU
Product restrictions	3, 40	
Contained substance		
	75	

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

Not applicable

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

Substances subject to authorisation (Annex XIV REACH)	Authorisation Number	Sunset date	Registration Number EU
None			

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

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

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

None

Healthcare controls

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

VOC (Directive 2004/42/EC)

Two-pack reactive performance coatings for specific end use such as floors.

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

WGK3 – Severe 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
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
Asp. Tox. 1	Aspiration hazard, category 1
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Corr. 1A	Skin corrosion, category 1A
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1A	Skin sensitization, category 1A
STOT RE 1	Specific target organ toxicity - repeated exposure, category 1
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

Section 16

Text of hazard (H) indications mentioned in section 2-3 of the sheet:	
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
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.

Legend

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

General Bibliography

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I ATP CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II ATP CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III ATP CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV ATP CLP) of the European Parliament

Section 16

General Bibliography

8. Regulation (EU) 944/2013 (V ATP CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI ATP CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII ATP CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII ATP CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX ATP CLP)
13. Regulation (EU) 2017/776 (X ATP CLP)
14. Regulation (EU) 2018/669 (XI ATP CLP)
15. Regulation (EU) 2019/521 (XII ATP CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII ATP CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV ATP CLP)
19. Delegated Regulation (EU) 2020/1182 (XV ATP CLP)
20. Delegated Regulation (EU) 2021/643 (XVI ATP CLP)
21. Delegated Regulation (EU) 2021/849 (XVII ATP CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII ATP CLP)
23. Delegated Regulation (EU) 2023/707
24. Delegated Regulation (EU) 2023/1434 (XIX ATP CLP)
25. Delegated Regulation (EU) 2023/1435 (XX ATP CLP)
26. Delegated Regulation (EU) 2024/197 (XXI ATP CLP)
27. Delegated Regulation (EU) 2024/2564 (XXII ATP CLP)
28. Regulation (EU) 2024/2865
29. Delegated Regulation (EU) 2025/1222 (XXIII ATP CLP)

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

Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Calculation methods for classification

Chemical and physical hazards:
Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.