Safety Data Sheet

Complies with Annex II of REACH - Regulation (EU) 2020/878

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

1.1. Product identifier

Code:	**0030160**
Name	**SOLVALL**
Chemical name and synonyms	**SOLVALL**

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

Sector of use	**SU22 – Professional uses**
Product category	**PC35 – Washing and cleaning products (including solvent-based products)**
Description/Usage	**Solvent-based wax-removing/film-removing cleaner**

1.3. Information about the supplier of the safety data sheet

Business name	**MARBEC SRL**
Address	**VIA CROCE ROSSA 5/i**
Locality and State	**51037 MONTALE (PISTOIA)** **ITALY**
	tel. +039 0573/959848
	fax
e-mail of the competent person, responsible for the safety data sheet	**info@marbec.it**

1.4. Emergency telephone number

For urgent information please contact

MARBEC srl
+390573959848 8.30am-1pm 2pm-6pm or +393348578502
Telephone number of Poison Control Centers active 24 hours a day
IRCSS Maugeri Foundation –
Pavia 0039-0382-24444
CAV Ospedali Riuniti –
Bergamo 0039-800-883300
CAV Niguarda Ca` Granda Hospital –
Milan 0039-02-66101029
CAV Careggi Hospital - Florence 0039-055-7947819
CAV Gemelli Polyclinic –
Rome 0039-06-3054343
CAV Policlinico Umberto I –
Rome 0039-06 49978000
CAV Cardarelli Hospital –
Naples 0039-081 5453333
CAV Verona Integrated Hospital Company - Verona 800011858

SECTION 2. Hazard Identification

2.1. Substance or mixture classification

The product is classified as dangerous pursuant to the provisions of Regulation (EC) 1272/2008 (CLP) (and subsequent amendments and adjustments).
The product therefore requires a safety data sheet compliant with the provisions of Regulation (EU) 2020/878.
Any additional information regarding risks to health and/or the environment is reported in the sections. 11 and 12 of this sheet.

Hazard classification and indications:

Flammable liquid, category 3	H226	Flammable liquid and vapour.
Aspiration hazard, category 1	H304	May be fatal if swallowed and enters airways.
Eye irritation, category 2	H319	Causes serious eye irritation.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

2.2. Label elements

Hazard labeling pursuant to Regulation (EC) 1272/2008 (CLP) and subsequent amendments and adjustments.

Hazard pictograms:

Warnings: Danger

Hazard Statements:

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary advice:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P331	DO NOT induce vomiting.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P312	Call a POISON CENTRE / doctor / . . . if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Contains:
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"
1-methoxy-2-propanol

Product not intended for the uses foreseen by Directive 2004/42/EC.

2.3. Other dangers

Based on available data, the product does not contain PBT or vPvB substances in percentages ≥ 0.1%.

The product does not contain substances with properties that interfere with the endocrine system in concentrations ≥ 0.1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
DIMETHYL ADIPATE DIMETHYL GLUTARATE DIMETHYL SUCCINATE		
CAS -	9 ≤ x < 30	
CE 906-170-0		
INDEX -		
REACH Reg. 01-2119475445-32		
Dimethyl-2-methyl glutarate		
CAS 14035-94-0	9 ≤ x < 30	
THERE IS		
INDEX -		
REACH Reg. 01-0000017895-56		
DIPROPYLENE GLYCOL MONOMETHYL ETHER		
CAS 34590-94-8	9 ≤ x < 30	Substance with a community workplace exposure limit.
CE 252-104-2		
INDEX -		
REACH Reg. 01-2119450011-60-xxxx		
1-METHOXY-2-PROPANOL		
CAS 107-98-2	9 ≤ x < 20	Flam. Liq. 3 H226, STOT SE 3 H336
CE 203-539-1		
INDEX 603-064-00-3		
REACH Reg. 01-2119457435-35		
BENZYL ALCOHOL		
CAS 100-51-6	3 ≤ x < 9	Acute Tox. 4 H302, Acute Tox. 4 H332, Eye Irrit. 2 H319
CE 202-859-9		LD50 Oral: 1620 mg/kg, ATE Vapor inhalation: 11 mg/l
INDEX 603-057-00-5		
REACH Reg. 01-2119492630-38-xxxx		
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"		
CAS -	3 ≤ x < 9	Flam. Liq. 3 H226, Asp. Tox. 1 H304, STOT SE 3 H336, EUH066
CE 919-857-5		Wait. Tox. 1 H304: ≥ 1%

INDEX -

REACH Reg. 01-2119463258-33

2-BUTHOXYETHANOL

CAS 111-76-2	3 ≤ x < 9	Acute Tox. 3 H331, Acute Tox. 4 H302, Eye Irrit. 2 H319, Skin Irrit. 2 H315
CE 203-905-0		LD50 Oral: >1200 mg/kg, LC50 Inhalation vapors: 3 mg/l/4h
INDEX 603-014-00-0		
REACH Reg. 01-2119475108-36-0005		

Alcohols, C11-13-branched, ethoxylated (>2.5 mol EO)

CAS 68439-54-3	1 ≤ x < 3	Acute Tox. 4 H302, Eye Dam. 1 H318
THERE IS		LD50 Oral: >300 mg/kg
INDEX -		

ETHANOLAMINE

CAS 141-43-5	0.5 ≤ x < 1	Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1B H314, Eye Dam. 1 H318, STOT SE 3 H335
CE 205-483-3		STOT SE 3 H335: ≥ 5%
INDEX 603-030-00-8		LD50 Oral: 1515 mg/kg, ATE Dermal: 1100 mg/kg, ATE Vapor inhalation: 11 mg/l
REACH Reg. 01-2119486455-28		

The complete text of the hazard indications (H) is shown in section 16 of the sheet.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

NOTE: The dearomatized white spirit in this product is a UVCB complex (PrC3), CAS na, EC 919-857-5, n. INDEX: na ("C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic" complex and variable combination of paraffinic, cyclic and aromatic hydrocarbons, having carbon numbers predominantly in the C9-C11 range and point boiling point in the range 130°C - 210°C). Some manufacturers provide the following related CAS: 64742-48-9.
Applicable Note P of Annex 1. Benzene concentration < 0.1 & by weight.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove any contact lenses. Wash immediately and abundantly with water for at least 15 minutes, opening the eyelids wide. Consult a doctor if the problem persists.

SKIN: Take off contaminated clothing. Shower immediately. Call a doctor immediately. Wash the contaminated garments before reusing them.

INHALATION: Move the subject to fresh air. If breathing stops, give artificial respiration. Call a doctor immediately.

INGESTION: Call a doctor immediately. Do not induce vomiting. Do not administer anything that is not expressly authorized by your doctor.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

INGESTION: do not induce vomiting to avoid the risk of aspiration. Transport the injured person to hospital immediately. Don't wait for symptoms to appear. In case of spontaneous vomiting, keep your head down to avoid the risk of aspiration of the vomit into your lungs.

4.2. Main symptoms and effects, both acute and delayed

There is no specific information on the symptoms and effects caused by the product.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

If accidentally ingested, the product can enter the lungs due to its low viscosity and cause the rapid development of serious lung lesions (keep under medical supervision for 48 hours).
Notes to physician: Treat symptomatically.

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

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

If accidentally ingested, the product can enter the lungs due to its low viscosity and cause the rapid development of serious lung lesions (keep under medical supervision for 48 hours).
Notes to physician: Treat symptomatically.

SECTION 5. Fire fighting measures

5.1. Fire fighting

SUITABLE EXTINGUISHING MEANS
The extinguishing media are: carbon dioxide, foam, chemical powder. For product leaks and spills that have not ignited, water spray can be used to disperse flammable vapors and protect those trying to stop the leak.

UNSUITABLE EXTINGUISHING MEANS
Do not use water jets. Water is not effective in extinguishing fires however it can be used to cool closed containers exposed to flames preventing explosions.

5.2. Special hazards arising from the substance or mixture

DANGERS DUE TO EXPOSURE IN THE EVENT OF FIRE
Overpressure can be created in containers exposed to fire with risk of explosion. Avoid breathing combustion products.

5.3. Recommendations for fire fighters

GENERAL INFORMATIONS
Cool the containers with jets of water to avoid decomposition of the product and the development of substances potentially dangerous to health. Always wear full fire protection equipment. Collect extinguishing water that must not be discharged into sewers. Dispose of the contaminated water used for extinguishing and the residue of the fire according to current regulations.

EQUIPMENT
Normal fire-fighting clothing, such as an open circuit compressed air breathing apparatus (EN 137), flame retardant suit (EN469), flame retardant gloves (EN 659) and fire fighter boots (HO A29 or A30).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Stop the leak if there is no danger.
Wear appropriate protective equipment (including personal protective equipment referred to in section 8 of the safety data sheet) to prevent contamination of skin, eyes and personal clothing. These indications are valid both for workers and for emergency interventions.

Keep unequipped people away. Use explosion-proof equipment. Eliminate any sources of ignition (cigarettes, flames, sparks, etc.) or heat from the area where the leak occurred.

6.2. Environmental precautions

Prevent the product from entering sewers, surface waters and groundwater.

6.3. Methods and materials for containment and cleanup

Suck up the spilled product into a suitable container. Evaluate the compatibility of the container to be used with the product, checking section 10. Absorb the remainder with inert absorbent material.
Provide sufficient ventilation of the area affected by the leak. Disposal of contaminated material must be carried out in accordance with the provisions of point 13.

6.4. Reference to other sections

Any information regarding personal protection and disposal is reported in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for Safe Handling

Keep away from heat, sparks and open flames, do not smoke or use matches or lighters. Without adequate ventilation, vapors can accumulate on the ground and ignite even remotely, if triggered, with the risk of backfire. Avoid the accumulation of electrostatic charges. Do not eat, drink or smoke during use. Remove contaminated clothing and protective equipment before entering eating areas. Avoid dispersing the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool, well-ventilated place, away from heat sources, open flames, sparks and other sources of ignition. Store containers away from any incompatible materials, checking section 10.

Storage class TRGS 510 (Germany):
3

7.3. Specific end uses

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Normative requirements:

DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
EXP	Spain	Professional exposure limits for chemical agents in Spain 2021
BETWEEN	France	Value limits of professional exposure to chemical agents in France. ED 984 - INRS
ITA	Italy	Legislative Decree 9 April 2008, n.81
PRT	Portugal	Decree-Lei n.º 1/2021 of 6 January, indicative professional exposure limit values for chemical agents. Legislative Decree no. 35/2020 of 13 July, protection of workers against risks linked to exposure during work with cancerous or mutagenic agents
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	TLV-ACGIH CPR TLV	ACGIH 2021

ACGIH TLVs and BEIs –
Appendix H

DIMETHYL ADIPATE DIMETHYL GLUTARATE DIMETHYL SUCCINATE

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	0.018	mg/l

Reference value in sea water	0.0018	mg/l
Reference value for sediments in fresh water	0.16	mg/kg/d
Reference value for sediments in sea water	0.016	mg/kg/d
Reference value for water, intermittent release	0.18	mg/l
Reference value for STP microorganisms	10	mg/l
Reference value for the terrestrial compartment	9	mg/kg/d

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Inhalation			5 mg/m3	VND			8.3 mg/m3	VND

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	310	50	310	50	
MAK	DEU	310	50	310	50	
VLA	EXP	308	50			SKIN
VLEP	BETWEEN	308	50			SKIN
VLEP	ITA	308	50			SKIN
VLE	PRT	308	50			SKIN
WEL	GBR	308	50			SKIN
OEL	EU	308	50			SKIN

1-METHOXY-2-PROPANOL

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
VLA	EXP	375	100	568	150	SKIN
VLEP	BETWEEN	188	50	375	100	SKIN
VLEP	ITA	375	100	568	150	SKIN
VLE	PRT	375	100	568	150	
WEL	GBR	375	100	560	150	SKIN
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH		184	50	368	100	

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Oral			VND	3.3 mg/kg bw/d				
Inhalation			VND	43.9 mg/m3	553.5 mg/m3	VND		369 mg/m3
Dermal			VND	18.1 mg/kg bw/d		VND		50.6 mg/kg bw/d

BENZYL ALCOHOL

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	22	5	44	10	SKIN	11

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	1	mg/l
Reference value in sea water	0.1	mg/l
Reference value for sediments in fresh water	5.27	mg/kg
Reference value for sediments in sea water	0.527	mg/kg
Reference value for water, intermittent release	2,3	mg/l
Reference value for STP microorganisms	39	mg/l
Reference value for the terrestrial compartment	0.45	mg/kg/d

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Oral		20 mg/kg bw/d		4 mg/kg bw/d				
Inhalation		27 mg/m3		5.4 mg/m3		110 mg/m3		22 mg/m3
Dermal		20 mg/kg bw/d		4 mg/kg bw/d		40 mg/kg bw/d		8 mg/kg bw/d

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
CPR TLV		1200	197			

Predicted no-effect concentration on the environment - PNEC	
Reference value in fresh water	NPI
Reference value in sea water	NPI
Reference value for sediments in fresh water	NPI
Reference value for sediments in sea water	NPI
Reference value for water, intermittent release	NPI
Reference value for STP microorganisms	NPI
Reference value for the food chain (secondary poisoning)	NPI
Reference value for the terrestrial compartment	NPI
Reference value for the atmosphere	NPI

Health - Derived no effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Oral				125 mg/kg bw/d				
Inhalation				185 mg/m3 24h				871 mg/m3 8h
Dermal				125 mg/kg bw/d				208 mg/kg bw/d

2-BUTHOXYETHANOL

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations	
		mg/m3	ppm	mg/m3	ppm		
AGW	DEU	49	10	98 (C)	20 (C)	SKIN	
MAK	DEU	49	10	98	20	SKIN	Hinweis
VLA	EXP	98	20	245	50	SKIN	
VLEP	BETWEEN	49	10	246	50	SKIN	
VLEP	ITA	98	20	246	50	SKIN	
VLE	PRT	98	20	246	50	SKIN	
WEL	GBR	123	25	246	50	SKIN	
OEL	EU	98	20	246	50	SKIN	
TLV-ACGIH		97	20				

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	8.8	mg/l
Reference value in sea water	0.88	mg/l
Reference value for sediments in fresh water	34.6	mg/kg
Reference value for sediments in sea water	3.46	mg/kg
Reference value for water, intermittent release	9.1	mg/l
Reference value for STP microorganisms	463	mg/l
Reference value for the food chain (secondary poisoning)	20	mg/kg
Reference value for the terrestrial compartment	2.33	mg/kg

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Oral		26.7 mg/kg bw/d		6.3 mg/kg bw/d				
Inhalation	147 mg/m3	426 mg/m3		59 mg/m3	246 mg/m3	1091 mg/m3		98 mg/m3
Dermal				38 mg/kg bw/d				

ETHANOLAMINE

Threshold limit value

Guy	State	TWA/8h		STEL/15min		Notes / Observations
		mg/m3	ppm	mg/m3	ppm	
AGW	DEU	0.5	0.2	0.5	0.2	SKIN
MAK	DEU	0.51	0.2	0.51	0.2	
VLA	EXP	2.5	1	7.5	3	SKIN
VLEP	BETWEEN	2.5	1	7.6	3	SKIN
VLEP	ITA	2.5	1	7.6	3	SKIN
VLE	PRT	2.5	1	7.6	3	SKIN
WEL	GBR	2.5	1	7.6	3	SKIN
OEL	EU	2.5	1	7.6	3	SKIN
TLV-ACGIH		7.5	3	15	6	

Predicted no-effect concentration on the environment - PNEC		
Reference value in fresh water	0.085	mg/l

Reference value in sea water	0.0085	mg/l
Reference value for sediments in fresh water	0.425	mg/kg
Reference value for sediments in sea water	0.0425	mg/kg
Reference value for water, intermittent release	0.025	mg/l
Reference value for STP microorganisms	100	mg/l
Reference value for the land compartment	0.035	mg/kg

Health - Derived No Effect Level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Exhibition Street	Acute rooms	Acute systemic	Chronic premises	Chronic systemic	Acute rooms	Acute systemic	Chronic premises	Chronic systemic
Oral				3.75 mg/kg/d				
Inhalation			2 mg/m3				3.3 mg/m3	
Dermal				0.24 mg/kg/d				1 mg/kg/d

Legend:

(C) = CEILING ; INALAB = Inhalable Fraction; RESPIR = Respirable Fraction; TORAC = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available; NEA = no expected exposure; NPI = no hazard identified.

8.2. Exposure controls

Considering that the use of adequate technical measures should always take priority over personal protective equipment, ensure good ventilation in the workplace through effective local extraction.
When choosing personal protective equipment, ask your chemical suppliers for advice if necessary.
Personal protective equipment must bear the CE marking which certifies their compliance with current regulations.

Provide emergency shower with eyecup.

HAND PROTECTION
Protect your hands with category III work gloves (ref. standard EN 374).
For the final choice of work glove material, the following must be considered: compatibility, degradation, breaking time and permeation.
In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is unpredictable. The gloves have a wear time that depends on the duration and method of use.

SKIN PROTECTION
Wear work clothes with long sleeves and safety footwear for professional category I use (ref. Regulation 2016/425 and standard EN ISO 20344). Wash with soap and water after removing protective clothing.

Consider providing anti-static clothing if the work environment presents a risk of explosiveness.

EYE PROTECTION
We recommend wearing airtight protective glasses (ref. standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) of the substance or one or more of the substances present in the product is exceeded, it is recommended to wear a mask with a type A filter whose class (1, 2 or 3) must be chosen in relation to the limit concentration of use. (ref. standard EN 14387). If gases or vapors of a different nature and/or gases or vapors with particles (aerosols, fumes, mists, etc.) are present, combined filters must be provided.
The use of respiratory protection means is necessary if the technical measures adopted are not sufficient to limit the worker's exposure to the threshold values taken into consideration. However, the protection offered by masks is limited.
In the event that the substance considered is odorless or its olfactory threshold is higher than the relevant TLV-TWA and in case of emergency, wear an open-circuit compressed air breathing apparatus (ref. standard EN 137) or a self-contained breathing apparatus external air (ref. EN 138 standard). For the correct choice of respiratory protection device, refer to the EN 529 standard.

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from production processes, including those from ventilation equipment, should be controlled for compliance with environmental protection legislation.
Do not release into the environment. Storage facilities must be equipped with appropriate systems to prevent soil and water contamination in the event of leaks or spills. Prevent the release of undissolved substances or recover them from wastewater. Do not distribute sludge generated by industrial water treatment on natural soils. Sludge generated from industrial water treatment must be incinerated, kept under containment or treated.
Other information Minimize exposure to mists/vapours/aerosols. Before accessing the storage tanks and starting any type of intervention in a confined space, carry out adequate reclamation, check the atmosphere and check the oxygen content and the degree of flammability.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Property	Value	Information
Physical State	liquid	
Color	yellowish	
Odor	characteristic	
Melting or freezing point	Not available	
Initial boiling point	Not available	
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	40°C	
Auto-ignition temperature	Not available	
pH	Not applicable	Reason for missing data: the substance/mixture is not soluble (in water)
Kinematic viscosity	Not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapor pressure	Not available	
Density and/or Relative density	0.99 kg/litre	
Relative vapor density	Not available	
Characteristics of the particles	Not applicable	

9.2. More information

9.2.1. Information regarding physical hazard classes

Information not available

9.2.2. Other safety features

VOC (Directive 2010/75/EU)	95.15% - 942.00 g/litre
Explosive properties	not explosive
Oxidizing properties	non-oxidizing

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular dangers of reaction with other substances under normal conditions of use.

10.2. Chemical stability

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

10.3. Possibility of dangerous reactions

Vapors can form explosive mixtures with air.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

May react violently with: strong oxidizing agents.

1-METHOXY-2-PROPANOL

May react dangerously with: strong oxidizing agents, strong acids.

BENZYL ALCOHOL

May react dangerously with: hydrobromic acid, iron, oxidizing agents, sulfuric acid. Risk of explosion on contact with: phosphorus trichloride.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Vapors can form explosive mixtures with air. Contact with strong oxidants (such as peroxides and chromates) may cause a fire hazard. A mixture with nitrates or other strong oxidants (such as chlorates, perchlorates and liquid oxygen) can generate an explosive mass. Sensitivity to heat, friction and shock cannot be assessed in advance.

2-BUTHOXYETHANOL

May react dangerously with: aluminium, oxidising agents. Forms peroxides with: air.

ETHANOLAMINE

May react dangerously with: acrylonitrile, chloroepoxypropane, chlorosulfuric acid, hydrogen chloride, iron-sulphur compounds, acetic acid, acetic anhydride, mesityl oxide, nitric acid, sulfuric acid, strong acids, vinyl acetate, cellulose nitrate.

10.4. Conditions to avoid

Avoid overheating. Avoid the accumulation of electrostatic charges. Avoid any source of ignition.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

Due to thermal decomposition or in the event of fire, gases and vapors potentially harmful to health can be released.

2-BUTHOXYETHANOL

Can develop: hydrogen.

ETHANOLAMINE

May develop: nitrogen oxides, carbon oxides.

SECTION 11. Toxicological information

11.1. Information on the hazard classes defined in Regulation (EC) no. 1272/2008

In the absence of experimental toxicological data on the product itself, any health hazards of the product were assessed based on the properties of the substances contained, according to the criteria established by the reference legislation for classification. Therefore, consider the concentration of the individual dangerous substances possibly mentioned in section. 3, to evaluate the toxicological effects resulting from exposure to the product.
Acute effects: contact with eyes causes irritation; Symptoms may include: redness, edema, pain and tearing. Ingestion can cause health problems, including abdominal pain with burning, nausea and vomiting.
The product contains very volatile substances that can cause significant depression of the central nervous system (CNS), with effects such as drowsiness, dizziness, loss of reflexes, narcosis.

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Local effects. Product information:
Skin contact. Symptoms: Redness. Repeated exposure may cause dryness or cracking of the skin. Eye contact: Contact with eyes may cause irritation.
Inhalation: Inhalation of vapors may cause drowsiness and dizziness. May cause irritation. Inhalation of vapors can cause headache, nausea, vomiting and changes in consciousness.
Ingestion: if accidentally ingested, the product can enter the lungs due to its low viscosity and cause the rapid development of serious lung lesions (keep under medical supervision for 48 hours). Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause central nervous system depression.
Other adverse effects
Vapor concentrations above recommended exposure levels are irritating to the eyes and respiratory tract, may cause headache and dizziness, have an anesthetic effect and cause other effects on the central nervous system. Repeated and/or prolonged skin contact with low viscosity materials can degrease the skin with possible development of irritation and dermatitis. Small quantities of liquid, aspirated into the lungs if swallowed or vomited, can cause chemical pneumonitis or pulmonary edema.

Metabolism, kinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

1-METHOXY-2-PROPANOL
WORKERS: inhalation; contact with the skin.
POPULATION: ingestion of contaminated food or water; inhalation of ambient air; contact with the skin of products containing the substance.

Immediate, delayed and chronic effects resulting from short- and long-term exposures

1-METHOXY-2-PROPANOL
The main route of entry is the skin, while the respiratory route is less important, given the low vapor pressure of the product. Above 100 ppm there is irritation of the ocular, nasal and oropharyngeal mucous membranes. At 1000 ppm, balance disturbances and severe eye irritation are noted. The clinical and biological tests carried out on the exposed volunteers revealed no anomalies. Acetate produces greater skin and eye irritation upon direct contact. No chronic effects on humans are reported.

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation - vapours) of the mixture:	> 20 mg/l
ATE (Oral) of the mixture:	>2000 mg/kg
ATE (Dermal) of the mixture:	Not classified (no relevant component)

DIMETHYL ADIPATE DIMETHYL GLUTARATE DIMETHYL SUCCINATE

LD50 (Dermal):	> 2000 mg/kg rat
LD50 (Oral):	> 5000 mg/kg rat
LC50 (Vapour inhalation):	> 11 mg/l/4h rat

Dimethyl-2-methyl glutarate

LD50 (Dermal):	> 2000 mg/kg rat
LC50 (Vapour inhalation):	> 5.6 mg/l/4h rat

1-METHOXY-2-PROPANOL

LD50 (Dermal):	> 2000 mg/kg Rabbit
LD50 (Oral):	4016 mg/kg Rat
LC50 (Vapour inhalation):	> 7000 mg/l/4h Rat

BENZYL ALCOHOL

LD50 (Dermal):	2000 mg/kg Rabbit
LD50 (Oral):	1620 mg/kg Rat
LC50 (Vapour inhalation):	> 4178 mg/l/4h Rat
STA (Vapour inhalation):	11 mg/l estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

LD50 (Dermal):	> 2000 mg/kg
LD50 (Oral):	> 5000 mg/kg
LC50 (Vapour inhalation):	> 9300 mg/l/4h

2-BUTHOXYETHANOL

LD50 (Dermal):	> 2000 mg/kg Guinea pig (OECD - guideline 402)
LD50 (Oral):	> 1200 mg/kg Guinea pig
LC50 (Vapour inhalation):	3 mg/l/4h Rat

Ethoxylated aliphatic alcohol 7 moles

LD50 (Dermal):	> 2000 mg/kg rabbit
LD50 (Oral):	> 300 mg/kg rat

ETHANOLAMINE

LD50 (Dermal):	2504 mg/kg rat
STA (Cutaneous):	1100 mg/kg estimated from table 3.1.2 of Annex I of CLP (data used to calculate the estimate of the acute toxicity of the mixture)
LD50 (Oral):	1515 mg/kg rat
LC50 (Vapour inhalation):	1.48 mg/l/4h rat

SKIN CORROSION / SKIN IRRITATION

It does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Repeated exposure may cause dryness and cracking of the skin. Slightly irritating to the skin in case of prolonged exposure.

SERIOUS EYE DAMAGE / EYE IRRITATION

Causes serious eye irritation

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

EYE CONTACT: May cause mild, short-term eye discomfort. Based on test data for materials similar in structure to OECD Guideline 405.

RESPIRATORY OR SKIN SENSITIZATION

It does not meet the classification criteria for this hazard class

Respiratory sensitization

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

It is assumed that it is not a respiratory sensitiser.

Skin sensitization

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

It is assumed that it is not a skin sensitizer according to OECD 406 guidelines.

MUTAGENICITY ON GERM CELLS

It does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

The mutagenic potential of the substance has been extensively studied in a range of in-vivo and in-vitro assays. Genetic toxicity: negative. It is assumed not to be a germ cell mutagen. Based on test data for materials of similar structure to OECD guidelines 471 473 474 476 478 479.

CARCINOGENICITY

It does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

This product is not classified as carcinogenic. It is assumed that it does not cause cancer. Based on test data for materials similar in structure to OECD Guideline 453.

REPRODUCTION TOXICITY

It does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

No information available. It is assumed not to be a reproductive toxicant. Based on test data for materials of similar structure to OECD guidelines 414 421 422.

Harmful effects on sexual function and fertility

Information not available

Harmful effects on the development of offspring

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

The results of the studies on the substance relating to developmental toxicity, dictated by the OECD guidelines and those of the screening studies in the same area did not reveal toxicity in rats.

Effects on or through breastfeeding

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Lactation: It is assumed that it is not harmful to breast-fed infants.

SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE

May cause drowsiness or dizziness

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Single exposure: May cause drowsiness and dizziness. This substance does not meet the EU criteria for classification.

Target organs

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Central nervous system

Route of exposure

Information not available

SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE

It does not meet the classification criteria for this hazard class

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Repeated Exposure: Expected not to cause damage to organs following prolonged and repeated exposure. Based on test data for materials of similar structure to OECD guidelines 408 413 422. No known effects based on information provided.

Target organs

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Central nervous system.

Route of exposure

Information not available

DANGER IN CASE OF ASPIRATION

Toxic by aspiration

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

The fluid can enter the lungs and cause damage (chemical pneumonia, potentially fatal).

11.2. Information about other hazards

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

SECTION 12. Ecological information

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics"

Use according to good working practices, avoiding dispersing the product into the environment. Notify the competent authorities if the product has reached waterways or sewers or if it has contaminated the soil or vegetation. C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic (EC 919-857-5) : Based on the ecological information below and based on the criteria indicated by the regulations on hazardous substances, this substance is not classified dangerous for the environment.

12.1. Toxicity

1-METHOXY-2-PROPANOL
The product is most likely not harmful to aquatic organisms. The correct introduction of low concentrations into a biological purification plant should not compromise the degradation activity of the activated sludge.

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic (EC 919-857-5): Below is a summary of the most representative studies of the Registration Dossier. Aquatic toxicity:
Endpoint: Invertebrates - Short term (Daphnia magna)
Result: EL50 (48 h): >1000 mg/L (mobility); EL50 (24 h): >1000 mg/L (mobility)
Comments: Key study (C9-C11, <2% aromatics) - OECD Guideline 202 - SRC (1995)
Endpoint: Invertebrates - Short term (Chaetogammarus marinus)
Result: LL50 (48 h): > 1000 mg/L (mortality); LL50 (24 h): >1000 mg/L (mortality)
Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 202 - TNO (1992)
Endpoint: Invertebrates - Long term (Daphnia magna)
Result: NOELR (21 days): 0.23 mg/L (reproduction)
Comments: Supporting study (C9-C11 <2 % aromatics) (Q)SAR Modeled data - CONCAWE (2010)
Endpoint: Algae (Pseudokirchnerella subcapitata) Growth inhibition
Result: EC50 (72 h): > 1000 mg/L (Growth); EC50 (72 h): > 1000 mg/L (biomass); NOELR (72 h): 3 mg/L (Cell number); NOELR (72 h): 100 mg/L (Growth)
Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 201 - SRC (1995)
Endpoint: Fish - Short term (Oncorhynchus mykiss)
Result: LL50 (24h):>1000 mg/L; LL0 (24h):1000 mg/L; LL50 (48h): >1000 mg/L; LL0 (48 h):1000 mg/L; LL50 (72): >1000 mg/L; LL0 (72 h) mg/L: Comments: Key study (C9-C11 <2 % aromatics) OECD Guideline 203 - SRC (1995).
2-BUTHOXYETHANOL
Aquatic toxicity assessment (supplier): the product is most likely not harmful to aquatic organisms. There is a high probability that the product is not chronically harmful to aquatic organisms. The correct introduction of low concentrations into a biological purification plant should not compromise the degradation activity of the activated sludge. Terrestrial Toxicity Assessment (Supplier): Study scientifically not justified.

2-BUTHOXYETHANOL

LC50 - Pisces	1474 mg/l/96h oncorhynchus mykiss
EC50 - Crustaceans	1550 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	1840 mg/l/72h pseudokirchneriella subcapitata
Chronic NOEC Fish	> 100 mg/l brachydanio rerio
Chronic NOEC Crustaceans	100 mg/l daphnia magna

ETHANOLAMINE

LC50 - Pisces	349 mg/l/96h cyprinus carpio
EC50 - Crustaceans	65 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	2.5 mg/l/72h pseudokirchneriella subcapitata

BENZYL ALCOHOL

LC50 - Pisces	460 mg/l/96h Pimephales promelas
EC50 - Crustaceans	230 mg/l/48h daphnia magna
EC50 - Algae / Aquatic Plants	770 mg/l/72h Pseudokircheneriella subcapitata

1-METHOXY-2-PROPANOL

LC50 - Pisces	> 6800 mg/l/96h leuciscus idus
EC50 - Crustaceans	23300 mg/l/48h daphnia magna

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

LC50 - Pisces	> 1000 mg/l/96h
EC50 - Crustaceans	> 1000 mg/l/48h
EC50 - Algae / Aquatic Plants	> 1000 mg/l/72h

Ethoxylated aliphatic alcohol 7 moles

LC50 - Pisces	5 mg/l/96h
EC50 - Crustaceans	5 mg/l/48h
EC50 - Algae / Aquatic Plants	5 mg/l/72h
Chronic NOEC Algae / Aquatic Plants	10 mg/kg OECD 208 method

Dimethyl-2-methyl glutarate

LC50 - Pisces	56 mg/l/96h Oncorhynchus mykiss
EC50 - Crustaceans	> 100 mg/l/48h Daphnia magna
EC50 - Algae / Aquatic Plants	> 60 mg/l/72h Pseudokirchneriella subcapitata

12.2. Persistence and degradability

1-METHOXY-2-PROPANOL
Evaluation of biodegradability and elimination (H2O): easily biodegradable (according to OECD criteria). Disposal considerations: 90-100% (28 days) (OECD 301E/92/96/EEC, C 4-B) (aerobic, municipal water treatment plant effluent). In water, hydrolytic stability was not determined but rapid biodegradability was found (96% degraded in 28 days). OECD 301E tests. Atmospheric vapor photodegraded rapidly (half-life <1 day)
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic (EC 919-857-5):
Abiotic Degradability: Hydrolysis: This substance is resistant to hydrolysis. Therefore, this process will not contribute to a measurable loss of degradation of the substance in the environment.

Biotic Degradability: Based on available studies and the properties of C9-C16 hydrocarbons, this substance is considered inherently biodegradable.
Method: Non-adapted microorganisms OECD Guideline 301 F
Result: Readily biodegradable 80% (28 days)
Comments : Key study Reliable without restrictions (C9-C11, <2% aromatics)
Source : Shell (1997).

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

2-BUTHOXYETHANOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

ETHANOLAMINE

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

BENZYL ALCOHOL

Rapidly degradable

1-METHOXY-2-PROPANOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclic, <2% aromatics”

Inherently degradable

Ethoxylated aliphatic alcohol 7 moles

Rapidly degradable

Dimethyl-2-methyl glutarate

Rapidly degradable

DIMETHYL ADIPATE DIMETHYL GLUTARATE DIMETHYL SUCCINATE

Rapidly degradable

12.3. Bioaccumulative potential

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatics (EC 919-857-5): Standard tests for this endpoint are not applicable to UVCB substances.

DIPROPYLENE GLYCOL MONOMETHYL ETHER

Partition coefficient: n-octanol/water	0.0043

2-BUTHOXYETHANOL

Partition coefficient: n-octanol/water	0.81

BCF	3.16 (calculated QSAR value). This substance is not expected to bioaccumulate

ETHANOLAMINE

Partition coefficient: n-octanol/water	-2.3

BENZYL ALCOHOL

Partition coefficient: n-octanol/water	1.1

1-METHOXY-2-PROPANOL

Partition coefficient: n-octanol/water	< 1

12.4. Mobility in soil

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatics (EC 919-857-5): Koc absorption: Standard tests for this endpoint are not applicable to substances
UVCB.
2-BUTHOXYETHANOL
Transport evaluation between environmental departments (supplier): the substance does not evaporate into the atmosphere from the water surface. Absorption to the solid phase of the soil is not predictable. Scientifically unjustified study. Stability in water: immediate hydrolysis is not expected; contains no functional groups which are believed to be hydrolysable in water. Stability in soil: expected low adsorption into soil particles.

ETHANOLAMINE

Partition coefficient: soil/water	-0.5646

12.5. Results of PBT and vPvB assessment

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic (EC 919-857-5): Comparison with the criteria of Annex XIII of the REACh Regulation
Evaluation of persistence: some hydrocarbon structures contained in this substance present characteristics of P (Persistent) or vP (very Persistent).
Evaluation of bioaccumulation potential: the structure of most of the hydrocarbons contained in this substance DOES NOT present characteristics of vB (very Bioaccumulative) however some components have characteristics of B (Bioaccumulative).
Toxicity assessment: For hydrocarbon structures that showed P and B characteristics, toxicity was assessed but no relevant component meets the toxicity criteria with the exception of anthracene which has been confirmed as a PBT. Because anthracene is not present, the product is not considered PBT/vPvB.
Based on available data, the product does not contain PBT or vPvB substances in percentages ≥ 0.1%.

12.6. Endocrine disrupting properties

C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclic, <2% aromatic (EC 919-857-5): Dispersion into the environment may lead to contamination of environmental matrices
(air, soil, subsoil, surface and groundwater). Use according to good working practice, avoiding dispersing the products into the environment
Based on available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with effects on the environment being evaluated.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal Considerations

13.1. Waste treatment methods

Reuse if possible. Product residues are to be considered hazardous special waste. The dangerousness of waste that partly contains this product must be assessed based on current legislative provisions.
Disposal must be entrusted to a company authorized to manage waste, in compliance with national and possibly local regulations.
Transport of waste may be subject to ADR.

CONTAMINATED PACKAGING
Contaminated packaging must be sent for recovery or disposal in compliance with national waste management regulations.

SECTION 14. Transportation Information

14.1. UN number or ID number

ADR/RID, IMDG, IATA:	1993

14.2. Official UN shipping name

ADR / RID:	FLAMMABLE LIQUID, NOS (hydrogenated heavy naphtha, 1-methoxy-2-propanol)
IMDG:	FLAMMABLE LIQUID, NOS (hydrogenated heavy naphtha, 1-methoxy-2-propanol)
IATA:	FLAMMABLE LIQUID, NOS (hydrogenated heavy naphtha, 1-methoxy-2-propanol)

14.3. Transport hazard classes

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group

ADR/RID, IMDG, IATA:	III

14.5. Dangers for the environment

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for users

ADR / RID:	HIN - Kemler: 30 Special Provision:-	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
IMDG:	EMS: F-E, S-E	Limited Quantities: 5 L	

IATA:	Cargo:	Maximum quantity: 220 L	Packaging Instructions: 366
	Pass.:	Maximum quantity: 60 L	Packaging Instructions: 355
	Special Provision:	A3	

14.7. Maritime transport in bulk in accordance with IMO acts

Information not relevant

SECTION 15. Regulatory information

15.1. Health, safety and environmental laws and regulations specific to the substance or mixture

Seveso category - Directive 2012/18/EU: P5c

Restrictions relating to the product or substances contained according to Annex XVII Regulation (EC) 1907/2006

Product

Point 3 - 40

Substances contained

Point 75

Regulation (EU) 2019/1148 - relating to the placing on the market and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

Based on available data, the product does not contain SVHC substances in percentages ≥ 0.1%.

Substances subject to authorization (Annex XIV REACH)

None

Substances subject to export notification requirements Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Sanitary checks

Workers exposed to this chemical agent dangerous to health must be subjected to health surveillance carried out in accordance with the provisions of the art. 41 of Legislative Decree 81 of 9 April 2008 unless the risk to the safety and health of the worker has been assessed as irrelevant, in accordance with the provisions of art. 224 paragraph 2.

15.2. Chemical safety assessment

A chemical safety assessment has been developed for the following substances contained in the mixture:
Dipropylene glycol monomethyl ether, 1-methoxy 2-propanol, C9-C11 hydrocarbons, n-alkanes, isoalkanes, cyclics, <2% aromatics, 2-butoxyethanol, Benzyl alcohol, Ethanolamine

SECTION 16. Other information

Text of the hazard statements (H) mentioned in sections 2-3 of the sheet:

Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Wait. Tox. 1	Aspiration hazard, category 1
Skin Corr. 1B	Skin corrosion, category 1B
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
STOT IF 3	Specific target organ toxicity - single exposure, category 3
H226	Flammable liquid and vapour.
H331	Toxic if inhaled.
H302	Harmful if ingested.
H312	Harmful in contact with skin.
H304	It can be lethal if ingested and enters the respiratory tract.
H314	It causes serious skin burns and serious eye injuries.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May irritate the respiratory tract.
H336	May cause drowsiness or dizziness.

LEGEND:
- ADR: European Agreement for the transport of dangerous goods by road
- CAS: Chemical Abstract Service Number
- CE: Identification number in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived no-effect level
- EC50: Concentration that gives effect to 50% of the population subject to testing
- EmS: Emergency Schedule
- GHS: Globally Harmonized System for the Classification and Labeling of Chemical Products
- IATA DGR: Regulations for the transport of dangerous goods of the International Air Transport Association
- IC50: Immobilization concentration of 50% of the population subject to testing
- IMDG: International Maritime Code for the Transport of Dangerous Goods
- IMO: International Maritime Organization
- INDEX: Identification number in Annex VI of CLP
- LC50: Lethal concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational exposure level
- PBT: Persistent, bioaccumulating and toxic according to REACH
- PEC: Predictable environmental concentration

- PEL: Predictable level of exposure
- PNEC: Predictable no-effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulations for the international transport of dangerous goods by train
- STA: Acute Toxicity Estimate
- TLV: Threshold limit value
- TLV CEILING: Concentration that must not be exceeded during any moment of occupational exposure.
- TWA: Weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic compound
- vPvB: Very persistent and very bioaccumulating according to REACH
- WGK: Aquatic hazard class (Germany).

GENERAL BIBLIOGRAPHY:
1. Regulation (EC) 1907/2006 of the European Parliament (REACH)
2. Regulation (EC) 1272/2008 of the European Parliament (CLP)
3. Regulation (EU) 2020/878 (Annex II of the REACH Regulation)
4. Regulation (EC) 790/2009 of the European Parliament (I Atp. CLP)
5. Regulation (EU) 286/2011 of the European Parliament (II Atp. CLP)
6. Regulation (EU) 618/2012 of the European Parliament (III Atp. CLP)
7. Regulation (EU) 487/2013 of the European Parliament (IV Atp. CLP)
8. Regulation (EU) 944/2013 of the European Parliament (V Atp. CLP)
9. Regulation (EU) 605/2014 of the European Parliament (VI Atp. CLP)
10. Regulation (EU) 2015/1221 of the European Parliament (VII Atp. CLP)
11. Regulation (EU) 2016/918 of the European Parliament (VIII Atp. CLP)
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 (EU) 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)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- NI Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA Agency website
- Database of SDS models of chemical substances - Ministry of Health and Istituto Superiore di Sanità

Note for the user:
The information contained in this sheet is based on the knowledge available to us at the date of the latest version. The user must ensure the suitability and completeness of the information in relation to the specific use of the product.
This document should not be interpreted as a guarantee of any specific property of the product.
Since the use of the product does not fall under our direct control, it is the user's obligation to observe the laws and regulations in force regarding hygiene and safety under his own responsibility. We do not assume responsibility for improper use.
Provide adequate training to personnel assigned to the use of chemical products.
CLASSIFICATION CALCULATION METHODS
Chemical-physical hazards: The classification of the product was derived from the criteria established by the CLP Regulation Annex I Part 2. The methods of evaluation of the chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on the calculation methods in Annex I of CLP Part 3, unless otherwise indicated in section 11.
Environmental hazards: The classification of the product is based on the calculation methods set out in Annex I of CLP Part 4, unless otherwise indicated in section 12.

Changes compared to the previous revision
Changes have been made to the following sections:
03/11/16.