

Safety Data Sheet according to Reg. 878/2020/EU

ZEROSIL

Safety Data Sheet dated 9/3/2026 version 1

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

1.1. Product identifier

Mixture identification:

Trade name: ZEROSIL

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

Recommended use: Professional; Industrial; Consumer

Uses advised against: No other uses are foreseen besides those below identified.

Use description: Silicone remover

1.3. Details of the supplier of the safety data sheet

Company: FILA Solutions S.p.A. SB

Via Garibaldi, 58

35018 San Martino di Lupari (PD)

ITALIA

tel. +39.049.9467300

fax +39.049.9460753

Responsible: sds@filasolutions.com

1.4. Emergency telephone number

UNITED KINGDOM: NHS Direct 111 (In England, Scotland North Ireland) 08454647 (Wales); IRELAND 018092166

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Flam. Liq. 3	Flammable liquid and vapour.
Skin Irrit. 2	Causes skin irritation.
Eye Irrit. 2	Causes serious eye irritation.
Skin Sens. 1B	May cause an allergic skin reaction.
STOT SE 3	May cause drowsiness or dizziness.
Asp. Tox. 1	May be fatal if swallowed and enters airways.
Aquatic Acute 1	Very toxic to aquatic life.
Aquatic Chronic 3	Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Pictograms and Signal Words



Danger

Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/clothing and eye/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER.
P331	Do NOT induce vomiting.
P501	Dispose of contents/container in accordance with applicable regulations.

Contains

1-methoxy-2-propanol	
(R)-p-mentha-1,8-diene	
linalool	
pin-2(3)-ene	May produce an allergic reaction.
citral	May produce an allergic reaction.

Regulation (EC) nr 648/2004 (Detergents).

Product contents:

Perfumes	> 30%
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Allergens:

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linalool; 3,7-dimethyl- 1,6-octadien-3-ol; dl-linalool
citral

Dir. 2004/42/EC (VOC directive)

This product contains max 872.45 g/l VOC.

Special provisions according to Annex XVII of REACH and subsequent amendments:

None.

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$.

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

N.A.

3.2. Mixtures

Mixture identification: ZEROSIL

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
≥ 40 -<50 %	1-methoxy-2-propanol	CAS:107-98-2 EC:203-539-1 Index:603-064-00-3	Flam. Liq. 3, H226; STOT SE 3, H336	01-2119457435-35
≥ 40 -<50 %	(R)-p-mentha-1,8-diene	CAS:5989-27-5 EC:227-813-5 Index:601-029-00-7	Aquatic Acute 1, H400; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Flam. Liq. 3, H226; Skin Sens. 1, H317; Aquatic Chronic 3, H412, M-Acute:1	01-2119529223-47
≥ 1 -<2.5 %	linalool	CAS:78-70-6 EC:201-134-4 Index:603-235-00-2	Skin Sens. 1B, H317	01-2119474016-42

≥0.5-<1 % 7-methyl-3-methylenoocta-1,6-diene	CAS:123-35-3 EC:204-622-5	Flam. Liq. 3, H226; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Asp. Tox. 1, H304; Aquatic Chronic 1, H410
≥0.1-<0.25 pin-2(3)-ene %	CAS:80-56-8 EC:201-291-9	Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1, H317, M-Chronic:1, M-Acute:1 Acute Toxicity Estimate: ATE - Oral: 510mg/kg bw
≥0.1-<0.25 citral %	CAS:5392-40-5 EC:226-394-6 Index:605-019-00-3	Skin Irrit. 2, H315; Skin Sens. 1, H317
≥0.1-<0.25 p-mentha-1,4-diene %	CAS:99-85-4 EC:202-794-6	Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Repr. 2, H361
≥0.1-<0.25 2-methoxypropanol %	CAS:1589-47-5 EC:216-455-5 Index:603-106-00-0	Flam. Liq. 3, H226; Eye Dam. 1, H318; Skin Irrit. 2, H315; STOT SE 3, H335; Repr. 1B, H360

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

After contact with skin, wash with soap and plenty of water. If irritation persists, get medical advice/attention. Wash contaminated clothing before using it again.

In case of eyes contact:

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

In case of Ingestion:

Consult a doctor immediately. Do not induce vomiting.

In case of Inhalation:

Bring the subject to open air. In the event of breathing difficulties, get medical advice/attention immediately.

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

May be fatal if swallowed and enters airways ; Causes skin irritation. Causes serious eye irritation.; May cause an allergic skin reaction.; May cause drowsiness or dizziness.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment: If ingested, material may be aspirated into lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

Extinguishing media which must not be used for safety reasons:

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

Excess pressure may form in containers exposed to fire at a risk of explosion. 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

Wear personal protection equipment.
Remove all sources of ignition.
Remove persons to safety.
See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.
Retain contaminated washing water and dispose it.
In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.
Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contaminated clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

The intended uses are indicated in section 1. No further specific uses are foreseen.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Notes
1-methoxy-2-propanol CAS: 107-98-2	MAK	AUSTRIA	187. 00000000	50.00000000	187. 00000000	50.00000000	
	VLEP	BELGIUM	184. 00000000	50.00000000	369. 00000000	100. 00000000	
	TLV	DENMARK	185. 00000000	50.00000000	370. 00000000	100. 00000000	
	OEL - EU		375. 00000000	100. 00000000	568. 00000000	150. 00000000	
	MAK	GERMANY	370. 00000000	100. 00000000	740. 00000000	200. 00000000	
	VLEP	ITALY	375. 00000000	100. 00000000	568. 00000000	150. 00000000	
	OEL	LATVIA	375. 00000000	100. 00000000	568. 00000000	150. 00000000	
	TLV	NORWAY	180. 00000000	50.00000000			
	TLV	ROMANIA	180. 00000000		360. 00000000		
	VLA	SPAIN	375. 00000000	100. 00000000	568. 00000000	150. 00000000	

	MAK	SWITZERLAND	360.00000000	100.00000000	720.00000000	200.00000000	
	ACGIH	UNITED STATES OF AMERICA		50.00000000		100.00000000	A4 - Eye and URT irritant
	WEL	UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND	375.00000000	100.00000000	560.00000000	150.00000000	
(R)-p-mentha-1,8-diene CAS: 5989-27-5	TLV	NORWAY	140.00000000	25.00000000			
	VLA	SPAIN	168.00000000	30.00000000			
pin-2(3)-ene CAS: 80-56-8	VLEP	BELGIUM		20.00000000			
	OEL	NORWAY	140.00000000	25.00000000			
	OEL	SWEDEN	150.00000000	25.00000000	300.00000000	50.00000000	
citral CAS: 5392-40-5	ACGIH			5.000			(IFV), Skin, DSEN, A4 - Body weight eff, URT irr, eye dam

Predicted No Effect Concentration (PNEC) values

	PNEC Limit	Exposure Route	Exposure Frequency	Remark
1-methoxy-2-propanol CAS: 107-98-2	10 mg/l	Fresh Water		
	100 mg/l	Intermittent releases (fresh water)		
	1 mg/l	Marine water		
	52.3 mg/kg	Freshwater sediments		
	5.2 mg/kg	Marine water sediments		
	4.59 mg/kg	Soil		
	100 mg/l	Water		
(R)-p-mentha-1,8-diene CAS: 5989-27-5	3.85			
	14 µg/L	Fresh Water		
	1.4 µg/L	Marine water		
	3.85 mg/L dw	Freshwater sediments		
	0.385 mg/L dw	Marine water sediments		
	0.763 mg/L dw	Soil		

linalool CAS: 78-70-6	133 mg/kg	Secondary poisoning	
	1.8 mg/l	Microorganisms in sewage treatments	
	0.2 mg/l	Fresh Water	
	2 mg/l	Intermittent releases (fresh water)	
	0.02 mg/l	Marine water	
	10 mg/l	Microorganisms in sewage treatments	
	2.22 mg/kg dw	Freshwater sediments	
	0.222 mg/kg dw	Marine water sediments	
pin-2(3)-ene CAS: 80-56-8	0.327 mg/kg dw	Soil	
	7.8 mg/kg	Secondary poisoning	food
	0.606 µg/L	Fresh Water	
	3.03 µg/L	Intermittent releases (fresh water)	
	0.061 µg/L	Marine water	
	0.303 µg/L	Intermittent releases (marine water)	
	0.2 mg/l	Microorganisms in sewage treatments	
	157 µg/kg dw	Freshwater sediments	
citral CAS: 5392-40-5	15.7 µg/kg dw	Marine water sediments	
	31.7 µg/kg dw	Soil	
	8.76 mg/kg	Secondary poisoning	Food
	0.007 mg/l	Fresh Water	
	0.001 mg/l	Marine water	
	1.6 mg/l	Microorganisms in sewage treatments	

	0.125 mg/kg dw	Freshwater sediments
	0.013 mg/kg dw	Marine water sediments
	0.021 mg/kg dw	Soil
p-mentha-1,4-diene CAS: 99-85-4	0.003 mg/l	Fresh Water
	0 mg/l	Marine water
	0.49 mg/kg dw	Freshwater sediments
	0.049 mg/kg dw	Marine water sediments
	0.423 mg/kg dw	Soil

Derived No Effect Level (DNEL) values

	Worker Industrial	Worker Professional	Consumer	Exposure Route	Exposure Frequency	Remark
1-methoxy-2- propanol CAS: 107-98-2			43.6 mg/m3	Human Inhalation	Long Term, systemic effects	
			78 mg/Kg bw/day	Human Dermal	Long Term, systemic effects	
			33 mg/Kg bw/day	Human Oral	Long Term (repeated)	
	553.5 mg/m3	553.5 mg/m3		Human Inhalation	Short Term (acute)	
	369 mg/m3	369 mg/m3		Human Inhalation	Long Term, systemic effects	
	183 mg/Kg bw/day	183 mg/Kg bw/day		Human Dermal	Long Term, systemic effects	
(R)-p-mentha-1,8- diene CAS: 5989-27-5			16.6 mg/m3	Human Inhalation	Long Term (repeated)	
			4.8 mg/Kg bw/day	Human Dermal	Long Term (repeated)	
			4.8 mg/Kg bw/day	Human Oral	Long Term (repeated)	
	66.7 mg/m3	66.7 mg/m3		Human Inhalation	Long Term (repeated)	
	9.5 mg/Kg bw/day	9.5 mg/Kg bw/day		Human Dermal	Long Term (repeated)	
linalool CAS: 78-70-6	2.8 mg/m3	2.8 mg/m3		Human Inhalation	Long Term, systemic effects	

			0.7 mg/m3	Human Inhalation	Long Term, systemic effects
	2.5 mg/kg	2.5 mg/kg		Human Dermal	Long Term, systemic effects
			1.25 mg/kg	Human Dermal	Long Term, systemic effects
			0.2 mg/kg	Human Oral	Long Term, systemic effects
pin-2(3)-ene CAS: 80-56-8	3.8 mg/m3	3.8 mg/m3		Human Inhalation	Long Term, systemic effects
	0.542 mg/Kg bw/day	0.542 mg/Kg bw/day		Human Dermal	Long Term, systemic effects
			0.674 mg/m3	Human Inhalation	Long Term, systemic effects
			0.225 mg/Kg bw/day	Human Dermal	Long Term, systemic effects
			0.225 mg/Kg bw/day	Human Oral	Long Term, systemic effects
citral CAS: 5392-40-5	9 mg/m3	9 mg/m3		Human Inhalation	Long Term, systemic effects
	1.7 mg/Kg bw/day	1.7 mg/Kg bw/day		Human Dermal	Long Term, systemic effects
	140 µg/cm ²	140 µg/cm ²		Human Dermal	Long Term, local effects
			2.7 mg/m3	Human Inhalation	Long Term, systemic effects
			1 mg/Kg bw/day	Human Dermal	Long Term, systemic effects
			140 µg/cm ²	Human Dermal	Long Term, local effects
			0.6 mg/Kg bw/day	Human Dermal	Long Term, systemic effects
p-mentha-1,4-diene CAS: 99-85-4	2.939 mg/m3	2.939 mg/m3	0.725 mg/m3	Human Inhalation	Long Term, systemic effects
	0.833 mg/Kg bw/day	0.833 mg/Kg bw/day	0.417 mg/Kg bw/day	Human Dermal	Long Term, systemic effects
			0.417 mg/Kg bw/day	Human Oral	Long Term, systemic effects

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

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

Protection for hands:

Protect hands with category III work gloves (ref. Standard EN 374). For the final choice of the material of the work gloves it is necessary to consider: compatibility, degradation, breakage time and permeation. In the case of preparations, the resistance of work gloves to chemical agents must be checked before use as it is not foreseeable. Gloves have a wear time that depends on the duration and method of use. Recommended material: Nitrile, minimum 0.38 mm thick or equivalent protective barrier material with

a high level performance for conditions of use in continuous contact, with a minimum permeability time of 480 minutes in accordance with the CEN standard EN 420 and EN 374.

Respiratory protection:

In case of exceeding the threshold value (e.g. TLV-TWA) of the substance or of one or more of the substances present in the product, it is recommended to wear a mask with type A filter whose limit of use will be defined by the manufacturer (ref. standard EN 14387). If there are gases or vapors of a different nature and/ or gases or vapors with particles (aerosols, fumes, mists, etc.), combined filters must be provided. The use of respiratory protection means is necessary in case the technical measures adopted are not sufficient to limit the exposure of the worker to the threshold values taken into consideration. The protection offered by the masks is however limited. In the event that the substance in question is odorless or its olfactory threshold is higher than the relative TLV-TWA and in the event of an emergency, wear an open-circuit compressed air breathing apparatus (ref. Standard EN 137) or a self-contained breathing apparatus. outdoor air (ref. EN 138 standard). For the correct choice of the respiratory protection device, refer to the EN 529 standard. Activities with large dispersion that lead to a probable consistent release of aerosols (e.g. use with spray application with airless system) are reserved for PROFESSIONAL USE ONLY. Use additional protective measures: Use an approved, air-fed, positive pressure-operated respirator. Air-fed respirators, with an exhaust bottle, may be appropriate when oxygen levels are inadequate, if gas/ vapor hazards are low, and if the capacity/ values of the air purifying filters can be exceeded. For high airborne concentrations, also use waterproof clothing to protect the skin and protect the face.

Thermal Hazards:

N.A.

Environmental exposure controls:

N.A.

Hygienic and Technical measures

N.A.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State Liquid

Appearance and colour: Viscous Transparent colourless

Odour: Like: lemon

pH: N.A. (not soluble in water)

Kinematic viscosity: $\leq 20,5 \text{ mm}^2/\text{sec}$ (40 °C)

Melting point / freezing point: N.A.

Initial boiling point and boiling range: N.A.

Flash point: 30 °C (86 °F)

Upper/lower flammability or explosive limits: N.A.

Vapour density: N.A. (FILA04)

Vapour pressure: N.A. (FILA07)

Relative density: 0.88 kg/l

Solubility in water: Immiscible

Solubility in oil: N.A.

Partition coefficient (n-octanol/water): N.A.

Auto-ignition temperature: N.A. (FILA04)

Decomposition temperature: N.A. (N.D.)

Flammability: ; Non-flammable.

Particle characteristics:

Particle size: N.A.

VOC content (g/L) in the product (2010/75/UE) 872.45

VOC content % in the product (2010/75/UE) 98.92

9.2. Other information

(Not explosive)

(not oxidizing)

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Product is stable under normal conditions of use and storage.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

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

10.5. Incompatible materials

Avoid contact with combustible materials. The product could catch fire.

10.6. Hazardous decomposition products

Due to thermal decomposition or in case of fire, gases and vapors can be released that are potentially harmful to health.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	The product is classified: Skin Irrit. 2(H315)
c) serious eye damage/irritation	The product is classified: Eye Irrit. 2(H319)
d) respiratory or skin sensitisation	The product is classified: Skin Sens. 1B(H317)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	The product is classified: STOT SE 3(H336)
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	The product is classified: Asp. Tox. 1(H304)

Toxicological information on main components of the mixture:

1-methoxy-2-propanol	a) acute toxicity	LD50 Oral Rat = 4016 mg/kg	
		LD50 Skin Rat > 2000 mg/kg bw	
	c) serious eye damage/irritation	Eye Irritant Rabbit	
(R)-p-mentha-1,8-diene	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg bw	femmina
		LD50 Skin Rabbit > 5000 mg/kg bw	
	b) skin corrosion/irritation	Skin Irritant	
linalool	a) acute toxicity	LD50 Oral Rat = 2790 mg/kg	
		LD50 Oral Mouse = 2200 mg/kg	
		LD50 Skin Rabbit = 5610 mg/kg	
	b) skin corrosion/irritation	Skin Irritant	
	c) serious eye damage/irritation	Eye Irritant	
7-methyl-3-methyleneocta-1,6-diene	a) acute toxicity	LD50 Oral Mouse > 3380 mg/kg bw	
		LD50 Skin Rabbit > 5000 mg/kg bw	
	b) skin corrosion/irritation	Skin Irritant Human Positive	
	c) serious eye damage/irritation	Eye Irritant Rabbit Yes	
pin-2(3)-ene	a) acute toxicity	ATE - Oral : 510 mg/kg bw	
		LD50 Oral Rat > 500 mg/kg bw	
		LD50 Skin Rat > 2000 mg/kg bw	
	b) skin corrosion/irritation	Skin Irritant Human Positive	in vitro
	d) respiratory or skin sensitisation	Skin Sensitization Positive	

citral	a) acute toxicity	LD50 Oral Mouse 6800 mg/kg bw LD50 Skin Rat > 2000 mg/kg bw
	b) skin corrosion/irritation	Skin Irritant Rabbit
	c) serious eye damage/irritation	Eye Irritant Rabbit
	d) respiratory or skin sensitisation	Skin Sensitization Guinea pig
p-mentha-1,4-diene	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg bw LD50 Skin Rat > 2000 mg/kg bw

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration $\geq 0.1\%$

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

Harmful to aquatic life with long lasting effects.

List of Eco-Toxicological properties of the product

The product is classified: Aquatic Acute 1(H400), Aquatic Chronic 3(H412)

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
1-methoxy-2-propanol	CAS: 107-98-2 - EINECS: 203-539-1 - INDEX: 603-064-00-3	a) Aquatic acute toxicity : EC50 Fish Pimephales promelas = 20800 mg/L 96h a) Aquatic acute toxicity : EC50 Daphnia 23300 mg/L 48h a) Aquatic acute toxicity : EC50 Algae Selenastrum capricornutum > 1000 mg/L - 7 days
(R)-p-mentha-1,8-diene	CAS: 5989-27-5 - EINECS: 227-813-5 - INDEX: 601-029-00-7	a) Aquatic acute toxicity : LC50 Fish Pimephales promelas = 720 µg/L 96h OCSE 203 a) Aquatic acute toxicity : EC50 Daphnia Magna = 0.85 mg/L 24h a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 0.32 mg/L 72h
linalool	CAS: 78-70-6 - EINECS: 201-134-4 - INDEX: 603-235-00-2	a) Aquatic acute toxicity : LC50 Fish = 27.8 mg/L 96h OECD 203 a) Aquatic acute toxicity : EC50 Daphnia = 59 mg/L 48h OECD TG 202 a) Aquatic acute toxicity : EC50 Algae = 156.7 mg/L 96h
7-methyl-3-methylenoocta-1,6-diene	CAS: 123-35-3 - EINECS: 204-622-5	a) Aquatic acute toxicity : LC50 Fish = 1.3 mg/L 96h a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 1.47 mg/L 48h a) Aquatic acute toxicity : EC50 Algae Pseudokirchneriella subcapitata = 0.342 mg/L 72h
pin-2(3)-ene	CAS: 80-56-8 - EINECS: 201-291-9	a) Aquatic acute toxicity : LC50 Fish Cyprinus carpio = 0.27 mg/L 96h OECD 203 a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 0.475 mg/L 48h

OECD 202

a) Aquatic acute toxicity : NOEC Algae Pseudokirchneriella subcapitata = 0.131 mg/L OECD 201

citral

CAS: 5392-40-5
- EINECS: 226-394-6 - INDEX: 605-019-00-3

a) Aquatic acute toxicity : LC50 Fish Leuciscus idus = 6.78 mg/L 96h OECD 203

a) Aquatic acute toxicity : EC50 Daphnia Daphnia magna = 6.8 mg/L 48h

a) Aquatic acute toxicity : EC50 Algae Scenedesmus subspicatus = 103.84 mg/L 72h

p-mentha-1,4-diene

CAS: 99-85-4 - EINECS: 202-794-6

a) Aquatic acute toxicity : EC50 Fish = 2.792 mg/L 96h

a) Aquatic acute toxicity : EC50 Daphnia = 10.189 mg/L 48h

a) Aquatic acute toxicity : EC50 Algae > 10.82 mg/L 72h

12.2. Persistence and degradability

Component	Persistence/Degradability:	Test	Duration Value
1-methoxy-2-propanol	Readily biodegradable		
(R)-p-mentha-1,8-diene	Readily biodegradable	OECD 301D	28 days 80.000
linalool	Readily biodegradable	OECD 301D	28 days 64.200
7-methyl-3-methylocta-1,6-diene	Readily biodegradable	OECD 301D	28 days
pin-2(3)-ene	Readily biodegradable	OECD 301D	28 days 68.000
citral	Readily biodegradable	OECD TG 301 F	28 days 88.000
p-mentha-1,4-diene	Readily biodegradable		

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

Component	Mobility in soil
1-methoxy-2-propanol	Mobile

12.5. Results of PBT and vPvB assessment

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$.

12.6 Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7 Other adverse effects

N.A.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

Waste code:

Waste Code:

Code	Description
	Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations. Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

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

SECTION 14: Transport information

14.1. UN number or ID number

1993

14.2. UN proper shipping name

ADR-Shipping Name: FLAMMABLE LIQUID, N.O.S. (having a flash-point below 23 °C and viscous according to 2.2.3.1.4) (vapour pressure at 50 °C more than 110 kPa, boiling point of more than 35 °C) (1-methoxy-2-propanol - (R)-p-mentha-1,8-diene)

IATA-Technical name: FLAMMABLE LIQUID, N.O.S. (1-methoxy-2-propanol - (R)-p-mentha-1,8-diene)

IMDG-Technical name: FLAMMABLE LIQUID, N.O.S. (1-methoxy-2-propanol - (R)-p-mentha-1,8-diene)

14.3. Transport hazard class(es)

ADR-Class: 3

IATA-Class: 3

IMDG-Class: 3

14.4. Packing group

ADR-Packing Group: III

IATA-Packing group: III

IMDG-Packing group: III

14.5. Environmental hazards

Toxic Component most present: (R)-p-mentha-1,8-diene

Toxic Ingredients Qty: 0.25

High Toxicity Ingredients Qty: 48.55

Marine pollutant: Yes

Environmental Pollutant: Yes

IMDG-EMS: F-E, S-E

14.6. Special precautions for user

Road and Rail (ADR-RID) :

ADR exempt:

ADR-Label: 3

ADR - Hazard identification number: -

ADR-Special Provisions: 274 601

ADR-Transport category (Tunnel restriction code): 3 (E)

Air (IATA) :

IATA-Passenger Aircraft: 355

IATA-Cargo Aircraft: 366

IATA-Label: 3

IATA-Subsidiary hazards: -

IATA-Erg: 3L

IATA-Special Provisioning: A3

Sea (IMDG) :

IMDG-Stowage Code: Category A

IMDG-Stowage Note: -

IMDG-Subsidiary hazards: -

IMDG-Special Provisioning: 223 274 955

14.7. Maritime transport in bulk according to IMO instruments

N.A.

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) n. 2018/699 (ATP 11 CLP)
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)
 Regulation (EU) n. 2017/776 (ATP 10 CLP)
 Regulation (EU) n. 2018/699 (ATP 11 CLP)
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 Regulation (EU) n. 2019/521 (ATP 12 CLP)
 Regulation (EU) n. 2020/217 (ATP 14 CLP)
 Regulation (EU) n. 2020/1182 (ATP 15 CLP)
 Regulation (EU) n. 2021/643 (ATP 16 CLP)
 Regulation (EU) n. 2020/878

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3, 40

Restrictions related to the substances contained: 30, 75

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

	Lower-tier threshold (tonnes)	Upper-tier threshold (tonnes)
Product belongs to category: P5c	5000	50000
Product belongs to category: E1	100	200

Regulation (EU) No 649/2012 (PIC regulation)

No substances listed

German Water Hazard Class.

Class 3: extremely hazardous.

SVHC Substances:

No data available

Dir. 2004/42/EC (VOC directive)

(ready to use)

Volatile Organic compounds - VOCs = 98.92 %

Volatile Organic compounds - VOCs = 872.45 g/L

Dir. 2010/75/EC (VOC directive)

Volatile Organic compounds - VOCs = 98.92 %

Volatile Organic compounds - VOCs = 872.45 g/L

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

1-methoxy-2-propanol

citral

SECTION 16: Other information

Code	Description
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.

H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H360	May damage fertility or the unborn child.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Code	Hazard class and hazard category	Description
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.10/1	Asp. Tox. 1	Aspiration hazard, Category 1
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.4.2/1B	Skin Sens. 1B	Skin Sensitisation, Category 1B
3.7/1B	Repr. 1B	Reproductive toxicity, Category 1B
3.7/2	Repr. 2	Reproductive toxicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity — single exposure, Category 3
4.1/A1	Aquatic Acute 1	Acute aquatic hazard, category 1
4.1/C1	Aquatic Chronic 1	Chronic (long term) aquatic hazard, category 1
4.1/C2	Aquatic Chronic 2	Chronic (long term) aquatic hazard, category 2
4.1/C3	Aquatic Chronic 3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
2.6/3	On basis of test data
3.2/2	Calculation method
3.3/2	Calculation method
3.4.2/1B	Calculation method
3.8/3	Calculation method
3.10/1	Calculation method
4.1/A1	Calculation method
4.1/C3	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).
CAV: Poison Center
CE: European Community
CLP: Classification, Labeling, Packaging.
CMR: Carcinogenic, Mutagenic and Reprotoxic
COD: Chemical Oxygen Demand
COV: Volatile Organic Compound
CSA: Chemical Safety Assessment
CSR: Chemical Safety Report
DMEL: Derived Minimal Effect Level
DNEL: Derived No Effect Level.
DPD: Dangerous Preparations Directive
DSD: Dangerous Substances Directive
EC50: Half Maximal Effective Concentration
ECHA: European Chemicals Agency
EINECS: European Inventory of Existing Commercial Chemical Substances.
ES: Exposure Scenario
GefStoffVO: Ordinance on Hazardous Substances, Germany.
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
IARC: International Agency for Research on Cancer
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
IC50: half maximal inhibitory concentration
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.