

Safety Data Sheet

according to Regulation (EC) No 1907/2006

MacBrite

Revision date: 10.08.2023

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

1.1. Product identifier

MacBrite

UFI: HV00-70PF-W00K-FPP9

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

Use of the substance/mixture

Polish for lacquers glass metals enamel

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Liedera GmbH & Co KG	
Street:	Wittenberger Str. 120	
Place:	D-06895 Zahna Elster	
Contact person:	Andreas Lieder	Telephone: 01723401861
E-mail:	liederandreas@outlook.de	

1.4. Emergency telephone number:

0049 34922 159790 (24 h)

Further Information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard statements

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P273 Avoid release to the environment.
P501 Dispose of contents/container to local/regional/national/international regulations.

Special labelling of certain mixtures

EUH208 Contains (R)-p-mentha-1,8-diene; D-limonene, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Additional advice on labelling

Labelling for contents according to regulation (EC) No. 648/2004: Refer to chapter 3

2.3. Other hazards

The substances in the mixture (> 0.1%) do not meet the PBT/vPvB criteria according to REACH, annex XIII. This product does not contain a substance (> 0,1%) that has endocrine disrupting properties with respect to humans as no components meets the criteria. This product does not contain a substance (> 0,1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (Regulation (EC) No 1272/2008)	
	Hydrocarbons, C12-C16, iso-alkanes, Cycloalkane, <2% aromatics	5 - < 7 %
	927-676-8	01-2119456377-30
	Asp. Tox. 1; H304 EUH066	
246538-78-3	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	1 - < 3 %
	920-901-0	01-2119456810-40
	Asp. Tox. 1; H304 EUH066	
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene	0.3 - < 0.5 %
	227-813-5	601-096-00-2
	01-2119529223-47	
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1B, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 3; H226 H315 H317 H304 H400 H412	
68439-50-9	Alcohols, C12-14, ethoxylated	0.1 - < 0.2 %
	500-213-3	01-2119487984-16
	Aquatic Acute 1, Aquatic Chronic 2; H400 H411	
34590-94-8	(2-methoxymethylethoxy)-propanol	< 0.1 %
	252-104-2	01-2119450011-60
110-82-7	cyclohexane	< 0.1 %
	203-806-2	601-017-00-1
	Flam. Liq. 2, Skin Irrit. 2, STOT SE 3, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H225 H315 H336 H304 H400 H410	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0,0015 %
	-	613-167-00-5
	Acute Tox. 2, Acute Tox. 2, Acute Tox. 3, Skin Corr. 1B, Eye Dam. 1, Skin Sens. 1A, Aquatic Acute 1, Aquatic Chronic 1; H330 H310 H301 H314 H318 H317 H400 H410 EUH071	

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
	927-676-8	Hydrocarbons, C12-C16, iso-alkanes, Cycloalkane, <2% aromatics	5 - < 7 %
		inhalation: LC50 = >5000 mg/l (vapours); dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 5000 mg/kg	
246538-78-3	920-901-0	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	1 - < 3 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 15000 mg/kg	
5989-27-5	227-813-5	(R)-p-mentha-1,8-diene; D-limonene	0.3 - < 0.5 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=1	
68439-50-9	500-213-3	Alcohols, C12-14, ethoxylated	0.1 - < 0.2 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg Aquatic Acute 1; H400: M=10	
34590-94-8	252-104-2	(2-methoxymethylethoxy)-propanol	< 0.1 %
		dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg	
110-82-7	203-806-2	cyclohexane	< 0.1 %
		inhalation: LC50 = >19,07 mg/l (vapours); dermal: LD50 = >2000 mg/kg; oral: LD50 = >5000 mg/kg	
55965-84-9	-	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)	< 0,0015 %

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inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: ATE = 50 mg/kg; oral: LD50 = 53 mg/kg Skin Corr. 1C; H314: >= 0,6 - 100 Skin Irrit. 2; H315: >= 0,06 - < 0,6 Eye Dam. 1; H318: >= 0,6 - 100 Eye Irrit. 2; H319: >= 0,06 - < 0,6 Skin Sens. 1A; H317: >= 0,0015 - 100 Aquatic Acute 1; H400: M=100 Aquatic Chronic 1; H410: M=100	
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Labelling for contents according to Regulation (EC) No 648/2004

5 % - < 15 % aliphatic hydrocarbons, < 5 % anionic surfactants, < 5 % non-ionic surfactants, perfumes (Limonene, Citral), preservation agents (2-Bromo-2-nitropropane-1,3-diol, Methylchloroisoithiazolinone/methylisothiazolinone).

Further Information

Product does not contain listed SVHC substances > 0.1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

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

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

Gently wash with plenty of soap and water. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse cautiously with water for several minutes. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. In all cases of doubt, or when symptoms persist, seek medical advice.

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

See sections 2 and 11

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

Treat symptomatically.
Observe risk of aspiration if vomiting occurs.

SECTION 5: Firefighting measures**5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO₂). Dry extinguishing powder. Alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Carbon monoxide. Carbon dioxide (CO₂).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

High slip hazard because of leaking or spilled product.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

No special measures are necessary.

6.2. Environmental precautions

Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).
Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Always close containers tightly after the removal of product. When using do not eat, drink or smoke. Wash hands before breaks and after work.

Further information on handling

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place.

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances. Food and animal feedingstuff.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Recommended storage temperature: 20 °C

Protect against: frost. UV-radiation/sunlight. heat. Humidity

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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Occupational exposure limits

CAS No	Substance	ppm	mg/m ³	fib/cm ³	Category	Origin
34590-94-8	(2-Methoxymethylethoxy)-l-propanol	50	308		TWA (8 h)	
1344-28-1	Aluminium oxides, total inhalable dust	-	10		TWA (8 h)	
5392-40-5	Citral (Inhalable Fraction and Vapour)	5	-		TWA (8 h)	
110-82-7	Cyclohexane	200	700		TWA (8 h)	
102-71-6	Triethanolamine	-	5		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene			
Worker DNEL, long-term		inhalation	systemic	66,7 mg/m ³
Worker DNEL, long-term		dermal	systemic	9,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	16,6 mg/m ³
Consumer DNEL, long-term		dermal	systemic	4,8 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	4,8 mg/kg bw/day
68439-50-9	Alcohols, C12-14, ethoxylated			
Worker DNEL, long-term		inhalation	systemic	19,6 mg/m ³
Worker DNEL, long-term		dermal	systemic	187 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	3,48 mg/m ³
Consumer DNEL, long-term		dermal	systemic	66,7 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,33 mg/kg bw/day
102-71-6	2,2',2''-nitrotriethanol			
Consumer DNEL, long-term		oral	systemic	3,3 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	7,5 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	2,66 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	0,4 mg/m ³
Worker DNEL, acute		inhalation	local	1 mg/m ³
Worker DNEL, long-term		dermal	local	0,14 mg/cm ²
Consumer DNEL, long-term		dermal	local	0,07 mg/cm ²
5392-40-5	citral			
Worker DNEL, long-term		inhalation	systemic	9 mg/m ³
Worker DNEL, long-term		dermal	systemic	1,7 mg/kg bw/day
Worker DNEL, long-term		dermal	local	0,14 mg/cm ²
Consumer DNEL, long-term		inhalation	systemic	2,7 mg/m ³
Consumer DNEL, long-term		dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,6 mg/kg bw/day
Consumer DNEL, long-term		dermal	local	0,14 mg/cm ²
34590-94-8	(2-methoxymethylethoxy)-propanol			
Consumer DNEL, long-term		dermal	systemic	121 mg/kg bw/day

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Consumer DNEL, long-term	oral	systemic	36 mg/kg bw/day
Consumer DNEL, long-term	inhalation	systemic	37,2 mg/m ³
Worker DNEL, long-term	dermal	systemic	283 mg/kg bw/day
Worker DNEL, long-term	inhalation	systemic	308 mg/m ³

PNEC values

CAS No	Substance	Value
Environmental compartment		
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene	
Freshwater		0,014 mg/l
Marine water		0,0014 mg/l
Freshwater sediment		3,85 mg/kg
Marine sediment		0,385 mg/kg
Secondary poisoning		133 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,8 mg/l
Soil		0,763 mg/kg
68439-50-9	Alcohols, C12-14, ethoxylated	
Freshwater		0,003 mg/l
Freshwater (intermittent releases)		0 mg/l
Marine water		0 mg/l
Freshwater sediment		0,089 mg/kg
Marine sediment		0,009 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,2 mg/l
Soil		0,016 mg/kg
102-71-6	2,2',2''-nitrilotriethanol	
Freshwater		0,32 mg/l
Marine water		0,032 mg/l
Freshwater sediment		1,7 mg/kg
Marine sediment		0,17 mg/kg
Micro-organisms in sewage treatment plants (STP)		10 mg/l
Soil		0,151 mg/kg
5392-40-5	citral	
Freshwater		0,00678 mg/l
Freshwater (intermittent releases)		0,0678 mg/l
Marine water		0,000678 mg/l
Marine water (intermittent releases)		0,0678 mg/l
Freshwater sediment		0,125 mg/kg
Marine sediment		0,0125 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,6 mg/l
Soil		0,0209 mg/kg
34590-94-8	(2-methoxymethylethoxy)-propanol	
Freshwater		19 mg/l
Marine water		1,9 mg/l
Freshwater sediment		70,2 mg/kg

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Marine sediment	7,02 mg/kg
Micro-organisms in sewage treatment plants (STP)	4168 mg/l
Soil	2,74 mg/kg

8.2. Exposure controls**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses; chemical goggles (if splashing is possible). EN 166

Hand protection

In case of prolonged or frequently repeated skin contact:

Wear suitable gloves.

Suitable material:

FKM (fluororubber). - Thickness of glove material: 0,4 mm

Breakthrough time \geq 8 h

Butyl rubber. - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

CR (polychloroprenes, Chloroprene rubber). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

NBR (Nitrile rubber). - Thickness of glove material: 0,35 mm

Breakthrough time \geq 8 h

PVC (Polyvinyl chloride). - Thickness of glove material: 0,5 mm

Breakthrough time \geq 8 h

The selected protective gloves have to satisfy the specifications of EU Directive EC/2016/425 and the standard EN 374 derived from it.

Before using check leak tightness / impermeability. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Suitable protective clothing: Lab apron.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid
Colour:	white yellowish
Odour:	characteristic
Odour threshold:	not determined

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined

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Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	7,0 - 8,0
Viscosity / kinematic: (at 40 °C)	> 20,5 mm ² /s
Water solubility:	not determined
Solubility in other solvents	not determined
Dissolution rate:	not relevant
Partition coefficient n-octanol/water:	SECTION 12: Ecological information
Dispersion stability:	not relevant
Vapour pressure:	not determined
Density:	not determined
Bulk density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not relevant

9.2. Other information**Information with regard to physical hazard classes**

Explosive properties

none

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

not relevant

Gas:

not relevant

Oxidizing properties

none

Other safety characteristics

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

not determined

Solid content:

not determined

Sublimation point:

not determined

Softening point:

not determined

Pour point:

not determined

Viscosity / dynamic:

not determined

Flow time:

30 - 45 s 4 DIN EN ISO 2431

(at 20 °C)

Further Information

No information available.

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Refer to chapter 10.5.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

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10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11: Toxicological information

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

Toxicokinetics, metabolism and distribution

No data available.

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
	Hydrocarbons, C12-C16, iso-alkanes, Cycloalkane, <2% aromatics				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1995)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1989)	OECD Guideline 402
	inhalation vapour	LC50 >5000 mg/l	Rat.		
246538-78-3	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics				
	oral	LD50 > 15000 mg/kg	Rat	ECHA Dossier	OECD 423
	dermal	LD50 > 5000 mg/kg	Rabbit	ECHA Dossier	OECD 402
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene				
	oral	LD50 > 2000 mg/kg	Rat	ECHA Dossier	OECD 423
	dermal	LD50 > 5000 mg/kg	Rabbit	ECHA Dossier	Read-across
68439-50-9	Alcohols, C12-14, ethoxylated				
	oral	LD50 > 2000 mg/kg	Rat	ECHA Dossier	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	ECHA Dossier	OECD Guideline 402
34590-94-8	(2-methoxymethylethoxy)-propanol				
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier	OECD 401
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	OECD 402
110-82-7	cyclohexane				
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >2000 mg/kg	Rabbit	ECHA Dossier	

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	inhalation (4 h) vapour	LC50 mg/l	>19,07	Rat	ECHA Dossier	
55965-84-9	reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1)					
	oral	LD50	53 mg/kg	Rat.	RTECS	
	dermal	ATE	50 mg/kg			
	inhalation vapour	ATE	0,5 mg/l			
	inhalation dust/mist	ATE	0,05 mg/l			

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Contains (R)-p-mentha-1,8-diene; D-limonene, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

No data available.

11.2. Information on other hazards**Endocrine disrupting properties**

This product does not contain a substance (> 0,1%) that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

No data available.

SECTION 12: Ecological information**12.1. Toxicity**

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
	Hydrocarbons, C12-C16, iso-alkanes, Cycloalkane, <2% aromatics					
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Pseudokirchneriella subcapitata	Study report; company data (1994) OECD Guideline 201
	Fish toxicity	NOEC mg/l	> 1000	28 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010) The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	Study report; company data (2001) OECD Guideline 211
246538-78-3	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics					
	Acute algae toxicity	ErC50 mg/l	> 1000	72 h	Pseudokirchneriella subcapitata	ECHA Dossier OECD 201
	Fish toxicity	NOEC mg/l	0,217	28 d	Oncorhynchus mykiss	ECHA Dossier The aquatic toxicity was estimated by a
	Crustacea toxicity	NOEC	1 mg/l	21 d	Daphnia magna	ECHA Dossier OECD 211

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5989-27-5	(R)-p-mentha-1,8-diene; D-limonene					
	Acute fish toxicity	LC50 mg/l	0,72	96 h	Pimephales promelas	ECHA Dossier OECD 203
	Acute algae toxicity	ErC50 mg/l	0,32	72 h	Pseudokirchneriella subcapitata	ECHA Dossier OECD 201
	Acute crustacea toxicity	EC50 mg/l	0,307	48 h	Daphnia magna	ECHA Dossier OECD 202
	Acute bacteria toxicity	(EC50 mg/l)	209	3 h		ECHA Dossier
68439-50-9	Alcohols, C12-14, ethoxylated					
	Acute fish toxicity	LC50 mg/l	0,423	96 h	Pimephales promelas	ECHA Dossier OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	0,044	72 h	Raphidocelis subcapitata	ECHA Dossier OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,125	48 h	Daphnia magna	ECHA Dossier OECD Guideline 202
	Fish toxicity	NOEC mg/l	0,11 - 0,28	10 d	Lepomis macrochirus	ECHA Dossier
	Crustacea toxicity	NOEC mg/l	0,77	21 d	Daphnia magna	ECHA Dossier
34590-94-8	(2-methoxymethylethoxy)-propanol					
	Acute fish toxicity	LC50 mg/l	>1000	96 h	Poecilia reticulata	ECHA Dossier OECD 203
	Acute algae toxicity	ErC50 mg/l	>1000	72 h	Pseudokirchnerella subcapitata (OECD 201)	ECHA Dossier OECD 201
	Acute crustacea toxicity	EC50 mg/l	1919	48 h	Daphnia magna	ECHA Dossier OECD 202
	Crustacea toxicity	NOEC mg/l	>= 0.5	22 d	Daphnia magna	ECHA Dossier OECD 211
110-82-7	cyclohexane					
	Acute fish toxicity	LC50 mg/l	4,53	96 h	Pimephales promelas	ECHA Dossier
	Acute algae toxicity	ErC50 mg/l	>4,425	72 h	Pseudokirchneriella subcapitata	ECHA Dossier
	Acute crustacea toxicity	EC50	0,9 mg/l	48 h	Daphnia magna	ECHA Dossier

12.2. Persistence and degradability

CAS No	Chemical name				
	Method	Value	d	Source	
	Evaluation				
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene				
	OECD 301D / EEC 92/69 annex V, C.4-E	80 %	28	ECHA Dossier	
	Easily biodegradable (concerning to the criteria of the OECD)				
68439-50-9	Alcohols, C12-14, ethoxylated				
	OECD Guideline 301 F	95%	28	ECHA Dossier	
	Easily biodegradable (concerning to the criteria of the OECD)				
34590-94-8	(2-methoxymethylethoxy)-propanol				
	OECD 301F / ISO 9408 / EEC 92/69 annex V, C.4-D	>60%	28	ECHA Dossier	
	Readily biodegradable (according to OECD criteria).				
110-82-7	cyclohexane				
	OECD 301F / ISO 9408 / EEC 92/69 annex V, C.4-D	77%	28	ECHA Dossier	

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	Easily biodegradable (concerning to the criteria of the OECD)
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12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
246538-78-3	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	>4
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene	4,38
68439-50-9	Alcohols, C12-14, ethoxylated	4,75
34590-94-8	(2-methoxymethylethoxy)-propanol	0,0043

BCF

CAS No	Chemical name	BCF	Species	Source
	Hydrocarbons, C12-C16, iso-alkanes, Cylcoalkane, <2% aromatics	144,3	calculated	Other company data (
246538-78-3	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	144,3	calculated	Other company data (
5989-27-5	(R)-p-mentha-1,8-diene; D-limonene	864,8		ECHA Dossier
68439-50-9	Alcohols, C12-14, ethoxylated	12,7	Pimephales promelas	ECHA Dossier

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1%.

12.7. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Observe in addition any national regulations! Consult the local waste disposal expert about waste disposal.

Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

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150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Inland waterways transport (ADN)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es): No dangerous good in sense of this transport regulation.
14.4. Packing group: No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

refer to chapter 6 - 8

14.7. Maritime transport in bulk according to IMO instruments

not relevant

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 57, Entry 75

2010/75/EU (VOC): not determined

2004/42/EC (VOC): not determined

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (amended by Regulation (EU) No 2020/878)

This mixture is classified as not hazardous according to Regulation (EC) 1272/2008 [CLP].

Regulation (EC) No. 648/2004 (Detergents regulation)

REACH 1907/2006 Appendix XVII, No (mixture): 3

National regulatory information

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Water hazard class (D): 2 - obviously hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

(R)-p-mentha-1,8-diene; D-limonene

Alcohols, C12-14, ethoxylated

(2-methoxymethylethoxy)-propanol

SECTION 16: Other information**Changes**

Rev. 1,0; Initial release: 09.01.2020

Rev. 1,1; 17.01.2020, Revision, Changes in chapter: 3

Rev. 2,0; 18.01.2023, Revision, Changes in chapter: 1-16

Rev. 2,01; 10.08.2023 Changes in chapter: 2

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

CAS: Chemical Abstracts Service

CLP: Classification, Labelling and Packaging of substances and mixtures

DNEL: Derived No Effect Level

d: day(s)

EINECS: European Inventory of Existing Commercial chemical Substances

ELINCS: European List of Notified Chemical Substances

ECHA: European Chemicals Agency

EWC: European Waste Catalogue

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

h: hour

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect concentration

NLP: No-Longer Polymers

N/A: not applicable

OECD: Organisation for Economic Co-operation and Development

PNEC: predicted no effect concentration

PBT: Persistent bioaccumulative toxic

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

REACH: Registration, Evaluation, Authorisation of Chemicals

SVHC: substance of very high concern

TRGS: Technische Regeln für Gefahrstoffe

UN: United Nations

VOC: Volatile Organic Compounds

WGK: Water Hazard Class (Germany)

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Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal 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.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
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.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH071	Corrosive to the respiratory tract.
EUH208	Contains (R)-p-mentha-1,8-diene; D-limonene, reaction mass of 5-chloro-2-methyl-2H-isothiazol-3-one and 2-methyl-2H-isothiazol-3-one (3:1). May produce an allergic reaction.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)