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

1.1. Product identifier

Pirom Öl/Solmer SA

Item No. 33785000

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

Hänseler AG
Industriestrasse 35
9100 Herisau

Telephone no.	0041 (0)71 353 58 58
E-mail address of person responsible for this SDS	sdb@haenseler.ch

1.4. Emergency telephone number

Switzerland :145 / Abroad +41 (0)44 251 51 51

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1	H317
Repr. 2	H361d
Aquatic Chronic 2	H411

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Danger

Hazard statements

H315	Causes skin irritation.
H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P501.3	Disposal in compliance with local and national regulations.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains: Methyl salicylate; Bornan-2-one; (R)-p-mentha-1,8-diene; dipentene; (1S)-beta-Pinene; 1,8-Cineole; 3,7-Dimethyl-1,6-octadien-3-ol; alpha-Pinene, not specified; citral; (1S)-alpha-Pinene

Reduced labeling (<= 125 ml)

Hazard pictograms

Signal word

Danger

Hazard statements

H318	Causes serious eye damage.
H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.

Precautionary statements

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P501.3	Disposal in compliance with local and national regulations.

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

Hazardous ingredients

Methyl salicylate

CAS No.	119-36-8				
EINECS no.	204-317-7				
Registration no.	01-2119515671-44-0000				
Concentration	>=	34	<	35	%

Classification (Regulation (EC) No. 1272/2008)

Acute Tox. 4	H302
Skin Sens. 1B	H317
Repr. 2	H361d
Aquatic Chronic 3	H412

	Eye Dam. 1	H318			
ATE	oral	887	mg/kg		
ATE	inhalative, Vapors	0.7	mg/l		

L-menthol

CAS No.	2216-51-5				
EINECS no.	218-690-9				
Registration no.	01-2119458866-21-0022				
Concentration	>=	10	<	25	%
Classification (Regulation (EC) No. 1272/2008)					
	Skin Irrit. 2	H315			
	Eye Irrit. 2	H319			

1,8-Cineole

CAS No.	470-82-6				
EINECS no.	207-431-5				
Concentration	>=	10	<	25	%
Classification (Regulation (EC) No. 1272/2008)					
	Flam. Liq. 3	H226			
	Skin Sens. 1B	H317			

White oils

CAS No.	8042-47-5				
EINECS no.	232-455-8				
Registration no.	01-2119487078-27-XXXX				
Concentration	>=	10	<	25	%
Classification (Regulation (EC) No. 1272/2008)					
	None				
ATE	dermal	2’000	mg/kg		

Bornan-2-one

CAS No.	76-22-2				
EINECS no.	200-945-0				
Registration no.	01-2119966156-31-XXXX				
Concentration	>=	3	<	8.4	%
Classification (Regulation (EC) No. 1272/2008)					
	Flam. Sol. 1	H228			
	Acute Tox. 4	H302			
	Acute Tox. 4	H332			
	Skin Irrit. 2	H315			
	Eye Dam. 1	H318			
	STOT SE 2	H371			Lungs; Route of exposure: inhalative
ATE	oral	1’310	mg/kg		
cATpE	inhalative, Dust/Mist	1.5	mg/l		

dipentene

CAS No.	138-86-3				
EINECS no.	205-341-0				
Concentration	>=	2.5	<	10	%
Classification (Regulation (EC) No. 1272/2008)					
	Flam. Liq. 3	H226			
	Skin Irrit. 2	H315			
	Skin Sens. 1	H317			
	Aquatic Acute 1	H400			

Aquatic Chronic 1	H410	

Additional remarks:
CLP Regulation (EC) No 1272/2008, Annex VI, Note C

(R)-p-mentha-1,8-diene

CAS No. 5989-27-5
EINECS no. 227-813-5
Concentration >= 1 < 10 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Irrit. 2	H315
Skin Sens. 1B	H317
Aquatic Acute 1	H400
Aquatic Chronic 3	H412

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	M = 1

(1S)-beta-Pinene

CAS No. 18172-67-3
EINECS no. 242-060-2
Concentration >= 1 < 2.5 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Irrit. 2	H315
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	M = 1
Aquatic Chronic 1	M = 1

p-mentha-1,4-diene

CAS No. 99-85-4
EINECS no. 202-794-6
Concentration >= 1 < 2.5 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Repr. 2	H361
Aquatic Chronic 2	H411

p-Isopropyl toluene

CAS No. 99-87-6
EINECS no. 202-796-7
Concentration >= 0.1 < 0.77 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Acute Tox. 3	H331
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

cATpE	inhalative, Dust/Mist	0.5	mg/l
cATpE	inhalative, Vapors	3	mg/l

alpha-Pinene, not specified

CAS No. 80-56-8
EINECS no. 201-291-9
Concentration >= 0.25 < 1 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Irrit. 2	H315
Skin Sens. 1B	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410
Acute Tox. 4	H302

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	M = 1
Aquatic Chronic 1	M = 1

citral

CAS No. 5392-40-5
EINECS no. 226-394-6
Concentration >= 0.1 < 1 %
Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315
Eye Irrit. 2	H319
Skin Sens. 1	H317

7-Methyl-3-methylenocta-1,6-dien

CAS No. 123-35-3
EINECS no. 204-622-5
Concentration >= 0.1 < 1 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Irrit. 2	H315
Eye Irrit. 2	H319
Aquatic Acute 1	H400
Aquatic Chronic 2	H411

Concentration limits (Regulation (EC) No. 1272/2008)
M = 1

(1S)-alpha-Pinene

CAS No. 7785-26-4
EINECS no. 232-077-3
Concentration >= 0.1 < 0.25 %
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Irrit. 2	H315
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

3,7-Dimethyl-1,6-octadien-3-ol

CAS No. 78-70-6
EINECS no. 201-134-4

Concentration >= 0.1 < 1 %
Classification (Regulation (EC) No. 1272/2008)
Skin Irrit. 2 H315
Eye Irrit. 2 H319
Skin Sens. 1B H317

Further ingredients

ethanol
CAS No. 64-17-5
EINECS no. 200-578-6
Registration no. 01-2119457610-43-0098
Concentration >= 1 < 10 %
Advice: [3]
Classification (Regulation (EC) No. 1272/2008)
Flam. Liq. 2 H225

water
CAS No. 7732-18-5
EINECS no. 231-791-2
Concentration < 1 %
Advice: [4]

(R)-5-isopropyl-2-methylcyclohexa-1,3-diene
CAS No. 4221-98-1
EINECS no. 224-167-6
Concentration < 1 %
Advice: [4]
Classification (Regulation (EC) No. 1272/2008)
H226
H304

3,7-dimethylocta-1,3,6-triene
CAS No. 13877-91-3
EINECS no. 237-641-2
Concentration < 1 %
Advice: [4]
Classification (Regulation (EC) No. 1272/2008)
Flam. Liq. 3 H226
Asp. Tox. 1 H304
Aquatic Chronic 3 H412

p-mentha-1,3-diene
CAS No. 99-86-5
EINECS no. 202-795-1
Concentration < 1 %
[4]
Classification (Regulation (EC) No. 1272/2008)
Asp. Tox. 1
Flam. Liq. 3
Acute Tox. 4
Aquatic Chronic 2

p-mentha-1,4(8)-diene
CAS No. 586-62-9
EINECS no. 209-578-0

Concentration < 1 %
[4]
Classification (Regulation (EC) No. 1272/2008)
Asp. Tox. 1
Flam. Liq. 3
Aquatic Chronic 2

beta-Pinene, not specified
CAS No. 127-91-3
EINECS no. 204-872-5
Concentration < 1 %
[4]
Classification (Regulation (EC) No. 1272/2008)

Flam. Liq. 3	H226
Asp. Tox. 1	H304
Skin Sens. 1	H317
Aquatic Acute 1	H400
Aquatic Chronic 1	H410

Concentration limits (Regulation (EC) No. 1272/2008)

Aquatic Acute 1	M = 1
Aquatic Chronic 1	M = 1

Note
[3] Substance with occupational exposure limits
[4] Voluntary information

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

If unconscious place in recovery position and seek medical advice.

After inhalation

Remove the casualty into fresh air and keep him calm. In the event of symptoms take medical treatment.

After skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, soaked clothing immediately and dispose of safely.

After eye contact

In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Take medical treatment.

After ingestion

Rinse mouth thoroughly with water. Summon a doctor immediately. Do not induce vomiting.

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

Hints for the physician / treatment

Symptomatic treatment (decontamination, vital functions), no specific antidote known.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide, Dry chemical extinguisher, Foam

Non suitable extinguishing media

Full water jet, Extinguishing measures to suit surroundings

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Carbon monoxide (CO); Developpment of toxic gases

5.3. Advice for firefighters

Special protective equipment for fire-fighting

Use self-contained breathing apparatus.

Other information

Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Do not inhale vapours. Keep away sources of ignition.

6.2. Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Pick up with absorbent material (eg sand, kieselgur, acid binder, universal binder, sawdust). Take up mechanically and collect in suitable container for disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin and eyes. Provide good ventilation of working area (local exhaust ventilation if necessary). Keep away sources of ignition. Procure extinguisher

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Use glass containers. Keep tightly closed in a dry and cool place. Protect from exposure to light.

Storage classes

Storage class according to TRGS 510	12	Non-combustible liquids
Storage category (Switzerland)	8	Caustic and corrosive substances

Further information on storage conditions

Keep container tightly closed and dry in a cool, well-ventilated place. Protect from light.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

ethanol

List	SUVA			
Type	MAK			
Value	960	mg/m³	500	ppm(V)
Short term exposure limit	1920	mg/m³	1000	ppm(V)

Pregnancy group: S Remarks: SSc; Formal; INRS NIOSH

(R)-p-mentha-1,8-diene

List	SUVA

Type	MAK			
Value	40	mg/m³	7	ppm(V)
Short term exposure limit	80	mg/m³	14	ppm(V)

Pregnancy group: S Remarks: S SSc; LeberKT AN

White oils

List	SUVA	
Type	MAK	
Value	5	mg/m³

Pregnancy group: S Remarks: SSc; Lunge; DFG, NIOSH

Derived No/Minimal Effect Levels (DNEL/DMEL)

Methyl salicylate

Type of value	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Acute		
Route of exposure	inhalative		
Mode of action	Systemic effects		
Concentration	285	mg/m³	

Type of value	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Long term		
Route of exposure	dermal		
Mode of action	Systemic effects		
Concentration	6	mg/kg/d	

Type of value	Derived No Effect Level (DNEL)		
Reference group	Worker		
Duration of exposure	Long term		
Route of exposure	inhalative		
Mode of action	Systemic effects		
Concentration	17.5	mg/m³	

Type of value	Derived No Effect Level (DNEL)		
Reference group	General Population		
Duration of exposure	Acute		
Route of exposure	inhalative		
Mode of action	Systemic effects		
Concentration	213	mg/m³	

Type of value	Derived No Effect Level (DNEL)		
Reference group	General Population		
Duration of exposure	Acute		
Route of exposure	oral		
Mode of action	Systemic effects		
Concentration	5	mg/kg/d	

Type of value	Derived No Effect Level (DNEL)		
Reference group	General Population		
Duration of exposure	Long term		
Route of exposure	oral		
Mode of action	Systemic effects		
Concentration	1	mg/kg/d	

Type of value	Derived No Effect Level (DNEL)		
Reference group	General Population		
Duration of exposure	Long term		

Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	4	mg/m³

Type of value	Derived No Effect Level (DNEL)	
Reference group	General Population	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	3	mg/kg/d

ethanol

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	dermal	
Mode of action	Systemic effects	
Concentration	343	mg/kg/d

Type of value	Derived No Effect Level (DNEL)	
Reference group	Worker	
Duration of exposure	Long term	
Route of exposure	inhalative	
Mode of action	Systemic effects	
Concentration	950	mg/m³

Predicted No Effect Concentration (PNEC)

Methyl salicylate

Type of value	PNEC	
Type	Freshwater	
Concentration	20	µg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0.002	mg/l

Type of value	PNEC	
Type	Soil	
Concentration	0.35	mg/kg

Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	140	mg/l

ethanol

Type of value	PNEC	
Type	Freshwater	
Conditions	Long term	
Concentration	0.96	mg/l

Type of value	PNEC	
Type	Saltwater	
Concentration	0.79	mg/l

Type of value	PNEC

Type	Freshwater sediment	
Concentration	3.6	mg/kg
Type of value	PNEC	
Type	Marine sediment	
Concentration	2.9	mg/kg
Type of value	PNEC	
Type	Freshwater	
Conditions	Intermittend	
Concentration	2.75	mg/l
Type of value	PNEC	
Type	Sewage treatment plant (STP)	
Concentration	580	mg/l

8.2. Exposure controls

General protective and hygiene measures

Keep away from food-stuffs, beverages and feed-stocks. Remove contaminated, soaked clothing immediately and dispose of safely. Wash hands and face before breaks and after work. After contact with skin, wash immediately with plenty of water and soap.

Respiratory protection

Provide good ventilation of working area (local exhaust ventilation if necessary). Do not breathe vapours, dust or aerosol.

Hand protection

The glove material must be sufficient impermeable and resistant to the substance. Check the tightness before wear. Gloves should be well cleaned before being removed, then stored in a well ventilated location.

Appropriate Material Gloves / resistant to chemicals

Hand protection must comply with EN 374.

Eye protection

Safety glasses with side protection shield

Body protection

Clothing as usual in the chemical industry.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Colour	yellowish
Odour	characteristic

Boiling point or initial boiling point and boiling range

Value	223	
Remarks	Information refers to the main component.	
Source	GESTIS-Stoffdatenbank	

Flash point

Value	°C	
Remarks	Not applicable	

Vapour pressure

Value	13		Pa
Temperature	20	°C	

Remarks	Information refers to the main component.
Source	GESTIS-Stoffdatenbank

Density and/or relative density

Value	appr. 0.98
Remarks	Relative Density according specification

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions when stored and handled according to prescribed instructions.

10.2. Chemical stability

Stable under recommended storage and handling conditions (see section 7).

10.3. Possibility of hazardous reactions

No decomposition if stored and applied as directed.

10.4. Conditions to avoid

Keep away from sources of heat and ignition.

10.5. Incompatible materials

Reactions with acids, alkalies and oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide

SECTION 11: Toxicological information

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

Acute oral toxicity

ATE	2’247.459	mg/kg
Method	calculated value according to GHS (e.g see UN GHS)	
Remarks	Based on available data, the classification criteria are not met.	

Acute oral toxicity (Components)

Methyl salicylate

Species	rat	
LD50	887	mg/kg
Method	OECD 401	

7-Methyl-3-methylenocta-1,6-dien

Species	Rats (male/female)	
LD50	> 11390	mg/kg

7-Methyl-3-methylenocta-1,6-dien

Species	Rats (male/female)	
LOAEL	250	mg/kg

L-menthol

Species	rat	
LD50	2500	mg/kg

ethanol

Species	rat	
LD50	7060	mg/kg
Source	Toxicology and Applied Pharmacology. Vol. 16, Pg. 718, 1970.	

ethanol

Species	rat

LD50		10470	mg/kg
(R)-p-mentha-1,8-diene			
Species	rat		
LD50		4400	mg/kg
(R)-p-mentha-1,8-diene			
Species	mouse		
NOAEL		1650	mg/kg
(R)-p-mentha-1,8-diene			
Species	mouse		
LOAEL		3300	mg/kg
alpha-Pinene, not specified			
Species	rat		
		3700	mg/kg
Bornan-2-one			
Species	mouse		
LD50		1310	mg/kg
citral			
Species	Rats (male/female)		
LD50		6800	mg/kg
citral			
Species	rat (female)		
LOAEL		335	mg/kg
citral			
Species	rat (male)		
LOAEL		345	mg/kg
White oils			
Species	rat		
LD50		5000	
Method	OECD 401		
1,8-Cineole			
Species	rat		
LD50		2840	mg/kg
Source	RTECS		

Acute dermal toxicity

ATE	>	10’000	mg/kg
Method	calculated value according to GHS (e.g see UN GHS)		
Remarks	Based on available data, the classification criteria are not met.		

Acute dermal toxicity (Components)

Methyl salicylate			
Species	rabbit		
LD50	>	5000	mg/kg
Source	IUCLID		
7-Methyl-3-methylenocta-1,6-dien			
Species	rabbit		
LD50	>	5000	mg/kg
L-menthol			
Species	rabbit		
LD50	>	5000	mg/kg
ethanol			
Species	rabbit		
LD50		15800	mg/kg
ethanol			

NOAEL		8232	mg/kg
(R)-p-mentha-1,8-diene			
Species	rabbit		
LD50	>	5000	mg/kg
alpha-Pinene, not specified			
Species	rabbit		
LD50	>	5000	mg/kg
Bornan-2-one			
Species	rabbit		
LD50	>	5000	mg/kg
citral			
Species	Rats (male/female)		
	>	2000	mg/kg
White oils			
Species	rat		
LD50		2000	mg/kg
Method	OECD 402		

Acute inhalational toxicity

ATE		2.045	mg/l
Administration/Form	Vapors		
Method	calculated value according to GHS (e.g see UN GHS)		
ATE		14.5519	mg/l
Administration/Form	Dust/Mist		
Method	calculated value according to GHS (e.g see UN GHS)		
Remarks	Based on available data, the classification criteria are not met.		

Acute inhalative toxicity (Components)

Methyl salicylate				
Species	rat			
LC50	>	0.7		mg/l
Duration of exposure		7	h	
Administration/Form	Vapors			
Methyl salicylate				
Species	rat			
NOEL		0.7		mg/l
Duration of exposure		28	d	
Administration/Form	Vapors			
7-Methyl-3-methylenocta-1,6-dien				
Remarks	No data available.			
ethanol				
Species	rat			
LC50		30000		mg/m³
Duration of exposure		4	h	
Administration/Form	Vapors			
(R)-p-mentha-1,8-diene				
Remarks	No data available.			
Bornan-2-one				
LC50		1.5		mg/l
citral				
Remarks	No data available.			
White oils				
Species	rat			
LC50		5000		mg/l

Method OECD 403

Skin corrosion/irritation

evaluation irritant
Remarks The classification criteria are met.

Skin corrosion/irritation (Components)

Methyl salicylate
Species rabbit
evaluation slightly irritant
Method OECD 404

7-Methyl-3-methylenocta-1,6-dien
Species rabbit
Observation Period 24 h
evaluation irritant

L-menthol
evaluation irritant

ethanol
evaluation non-irritant

(R)-p-mentha-1,8-diene
Species rabbit
Duration of exposure 4 h
evaluation irritant
Method OECD 404

alpha-Pinene, not specified
Species Human
evaluation irritant

citral
Species rabbit
evaluation irritant
Remarks Irritating to skin.

Serious eye damage/irritation

evaluation corrosive
Remarks The classification criteria are met.

Serious eye damage/irritation (Components)

Methyl salicylate
Species rabbit
Duration of exposure 5 min
Method OECD 491
Remarks Risk of serious damage to eyes.

7-Methyl-3-methylenocta-1,6-dien
Species rabbit
evaluation irritant

L-menthol
evaluation irritant - risk of serious damage to eyes

ethanol
evaluation irritant

(R)-p-mentha-1,8-diene
Species rabbit
evaluation non-irritant
Method OECD 405
Remarks No effect of irritation known

citral

Species	rabbit
evaluation	irritant
Method	OECD 405
Remarks	Irritates the eyes.

Sensitization

evaluation	May cause sensitization by skin contact.
Remarks	The classification criteria are met.

Sensitization (Components)

Methyl salicylate

evaluation	May cause allergic skin reactions.
Source	ECHA

7-Methyl-3-methylenocta-1,6-dien

Species	mouse
evaluation	non-sensitizing
Method	OECD 429

L-menthol

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

ethanol

evaluation	non-sensitizing

(R)-p-mentha-1,8-diene

Species	mouse
evaluation	sensitizing
Method	OECD 429
Remarks	May cause sensitization by skin contact.

citral

Species	mouse
evaluation	sensitizing
Method	OECD 429

Subacute, subchronic, chronic toxicity (Components)

7-Methyl-3-methylenocta-1,6-dien

Remarks	Not applicable

(R)-p-mentha-1,8-diene

Remarks	No data available.

Mutagenicity

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

Mutagenicity (Components)

Methyl salicylate

Species	Salmonella typhimurium
evaluation	No mutagenicity in the Ames-test.
Method	OECD 471

Methyl salicylate

Species	mammal, species unspecified
evaluation	No mutagenicity according to various in vitro tests.
Method	OECD 473

7-Methyl-3-methylenocta-1,6-dien

Species	Salmonella typhimurium
evaluation	No mutagenicity in the Ames-test.
Method	Ames test

7-Methyl-3-methylenocta-1,6-dien

Species	mouse
evaluation	No mutagenicity in the micronucleus test.

Remarks negative

L-menthol

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

ethanol

evaluation No mutagenicity in the Ames-test.

(R)-p-mentha-1,8-diene

Species mouse
evaluation No experimental information on genotoxicity in vitro available.
Method OECD 476
Remarks negative

(R)-p-mentha-1,8-diene

Species rat (male)
evaluation No experimental indications on genotoxicity in vivo found.
Remarks negative

(R)-p-mentha-1,8-diene

Species hamster
evaluation No experimental information on genotoxicity in vitro available.
Method OECD 479

(R)-p-mentha-1,8-diene

Species Salmonella typhimurium
evaluation No experimental information on genotoxicity in vitro available.
Method OECD 471
Remarks negative

citral

Species hamster
evaluation No experimental information on genotoxicity in vitro available.
Remarks negative

citral

Species mouse
Remarks negative

Reproductive toxicity

evaluation Suspected of damaging the unborn child.
Remarks The classification criteria are met.

Reproduction toxicity (Components)

Methyl salicylate

Remarks Possible risk of congenital malformation in the fetus.

7-Methyl-3-methylenocta-1,6-dien

Species rat
evaluation Can cause malformations.

L-menthol

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

(R)-p-mentha-1,8-diene

Remarks No data available.

citral

Remarks No data available.

Carcinogenicity

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

Carcinogenicity (Components)

7-Methyl-3-methylenocta-1,6-dien

Remarks No data available.

L-menthol

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

(R)-p-mentha-1,8-diene

Species	rat
Remarks	May cause cancer.
Source	RTECS

(R)-p-mentha-1,8-diene

Species	mouse
Remarks	Based on available data, the classification criteria are not met.
Source	RTECS

citral

Remarks	No data available.

Specific Target Organ Toxicity (STOT)

Single exposure

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

Repeated exposure

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

Specific Target Organ Toxicity (STOT) (Components)

L-menthol

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

(R)-p-mentha-1,8-diene

Remarks	Not applicable

citral

Remarks	Not applicable

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties with respect to humans

The product does not contain a substance that has endocrine disrupting properties with respect to humans.

SECTION 12: Ecological information

12.1. Toxicity

Fish toxicity (Components)

7-Methyl-3-methylenocta-1,6-dien

Remarks	No data available.

L-menthol

LC50	22	mg/l

ethanol

Species	golden orfe (Leuciscus idus)		
LC50	8140		mg/l
Duration of exposure	96	h	

(R)-p-mentha-1,8-diene

Species	Fathead minnow (Pimephales promelas)		
LC50	0.72		mg/l
Duration of exposure	96	h	
Method	OECD 203		

Bornan-2-one

LC50	35	mg/l

Duration of exposure	96	h		

citral

Species	golden orfe (Leuciscus idus)			
LC50	6.78			mg/l
Duration of exposure	96	h		
Method	DIN 38412 T.15			

White oils

Species	golden orfe (Leuciscus idus)			
LC50	> 1000			mg/l
Duration of exposure	96	h		

1,8-Cineole

Species	Fathead minnow (Pimephales promelas)			
LC50	102			mg/l
Duration of exposure	96	h		

Daphnia toxicity (Components)

7-Methyl-3-methylenocta-1,6-dien

Remarks	No data available.

ethanol

Species	Daphnia magna			
EC50	9000	to	14000	mg/l
Duration of exposure	48	h		

(R)-p-mentha-1,8-diene

Species	Daphnia magna			
	0.307			mg/l
Duration of exposure	48	h		
Method	OECD 202			

alpha-Pinene, not specified

Species	Daphnia magna			
EC50	41			mg/l
Duration of exposure	48	h		

citral

Species	Daphnia magna			
EC50	6.8			mg/l
Duration of exposure	48	h		

White oils

Species	Daphnia magna			
LL50	> 100			mg/l
Duration of exposure	48	h		

Algae toxicity (Components)

Methyl salicylate

Species	Desmodesmus subspicatus			
ErC50	1.6			mg/l
Duration of exposure	72	h		

Methyl salicylate

Species	Desmodesmus subspicatus			
NOEC	0.79			mg/l
Duration of exposure	72	h		
Method	OECD 201			

7-Methyl-3-methylenocta-1,6-dien

Remarks	No data available.

(R)-p-mentha-1,8-diene

Species	Raphidocelis subcapitata

		0.32			mg/l
Duration of exposure		72	h		
Method	OECD 201				
(R)-p-mentha-1,8-diene					
Species	Raphidocelis subcapitata				
		0.174			mg/l
Duration of exposure		72	h		
Method	OECD 201				
citral					
Species	Desmodesmus subspicatus				
EC50			to	103.8	mg/l
Duration of exposure	-	72	h		

Bacteria toxicity (Components)

7-Methyl-3-methylenocta-1,6-dien					
Remarks	No data available.				
(R)-p-mentha-1,8-diene					
Species	activated sludge				
EC50		3.94			mg/l
Method	OECD 209				
citral					
Remarks	No data available.				

12.2. Persistence and degradability

Physico-chemical eliminability (Components)

(R)-p-mentha-1,8-diene	
Remarks	No data available.
citral	
Remarks	No data available.

Biodegradability (Components)

Methyl salicylate					
Value		98.4			%
Duration of test		28	d		
evaluation	Readily biodegradable				
Method	OECD 301 B				
7-Methyl-3-methylenocta-1,6-dien					
Value		76			%
Duration of test		28	d		
evaluation	Readily biodegradable				
ethanol					
Value		94			%
evaluation	Readily biodegradable				
(R)-p-mentha-1,8-diene					
Value		71			%
evaluation	Readily biodegradable				
alpha-Pinene, not specified					
Value		62			%
Duration of test		28	d		
evaluation	Readily biodegradable				
Method	OECD 301 B				
citral					
Value		85	to	95	%
evaluation	Readily biodegradable				

Method OECD 301C

White oils

evaluation not readily degradable

Ready degradability (Components)

7-Methyl-3-methylenocta-1,6-dien

(R)-p-mentha-1,8-diene

citral

Chemical oxygen demand (COD) (Components)

ethanol

Value	0.93	to	1.67	mg/g

(R)-p-mentha-1,8-diene

Remarks No data available.

citral

Remarks No data available.

Biochemical oxygen demand (BOD5) (Components)

(R)-p-mentha-1,8-diene

Remarks No data available.

citral

Remarks No data available.

12.3. Bioaccumulative potential

Octanol/water partition coefficient (log Pow) (Components)

7-Methyl-3-methylenocta-1,6-dien

log Pow	5.285	
Temperature	25	°C

ethanol

log Pow -0.31

(R)-p-mentha-1,8-diene

log Pow 4.2

citral

log Pow	2.9	
Temperature	25	°C

White oils

pOW > 3.5

Bioconcentration factor (BCF) (Components)

ethanol

BCF 0.66

citral

Remarks No data available

12.4. Mobility in soil

Mobility in soil (Components)

White oils

The product is insoluble and floats on water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

The product contains no PBT substances

The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Disposal in compliance with local and national regulations.

Disposal recommendations for packaging

Dispose of as unused product.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee	Air transport ICAO/IATA
14.1. UN number or ID number	3082	3082	3082
14.2. UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dipentene, (R)-p-mentha-1,8-diene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dipentene, (R)-p-mentha-1,8-diene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (dipentene, (R)-p-mentha-1,8-diene)
14.3. Transport hazard class(es)	9	9	9
Label			
14.4. Packing group	III	III	III
Remarks	The product is not subject to any other provisions of ADR provided packaging of not more than 5 l / 5 kg	The product can be transported in accordance with IMDG Code paragraph 2.10.2.7, provided packaging not more than 5 l / 5 kg.	The product is not subject to any other provisions of IATA provided packaging of not more than 5 l / 5 kg (A197)
Limited Quantity	5 l	5 l	
Transport category	3		
14.5. Environmental hazards	-		
Tunnel restriction code	-		

SECTION 15: Regulatory information

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

Water Hazard Class (Germany)

Water Hazard Class (Germany)	WGK 3
Remarks	Derivation of WGK according to Annex 1 No. 5.2 AwSV

Other information

The product does not contain substances according to Candidate List for inclusion in Annex XIV of Regulation (EC) No. 1907/2006 (REACH) with a content of >= 0.1% w/w.

SECTION 16: Other information

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

Classification (Regulation (EC) No. 1272/2008)

Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 2	H361d	Calculation method
Aquatic Chronic 2	H411	Calculation method

Hazard statements listed in Chapter 2/3

H226	Flammable liquid and vapour.
H228	Flammable solid.
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.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H371	May cause damage to organs.
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.

CLP categories listed in Chapter 2/3

Acute Tox. 3	Acute toxicity, Category 3
Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage, Category 1
Eye Irrit. 2	Eye irritation, Category 2
Flam. Liq. 3	Flammable liquid, Category 3
Flam. Sol. 1	Flammable solid, Category 1
None	None
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin irritation, Category 2
Skin Sens. 1	Skin sensitization, Category 1
Skin Sens. 1B	Skin sensitization, Category 1B

STOT SE 2	Specific target organ toxicity - single exposure, Category 2

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.