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Oil of cedar leaf, artificial

article number: **3291** Version: **GHS 3.0 en** Replaces version of: 2023-02-03 Version: (GHS 2)

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

1.1 Product identifier

Identification of the substance

Article number

Alternative name(s)

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Oleum Foliorum cedri

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

Relevant identified uses:

Uses advised against:

Laboratory chemical Laboratory and analytical use

Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG Schoemperlenstr. 3-5 D-76185 Karlsruhe Germany

Telephone:+49 (0) 721 - 56 06 0 **Telefax:** +49 (0) 721 - 56 06 149 **e-mail:** sicherheit@carlroth.de **Website:** www.carlroth.de

Competent person responsible for the safety data :Department Health, Safety and Environment sheet:

e-mail (competent person):

sicherheit@carlroth.de

1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
NSW Poisons Information Centre Childrens Hospital	Hawkesbury Road	2145 West- mead, NSW	131126	

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
2.6	Flammable liquid	3	Flam. Liq. 3	H226
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	2	Skin Irrit. 2	H315
3.3	Serious eye damage/eye irritation	2A	Eye Irrit. 2A	H319
3.4S	Skin sensitisation	1	Skin Sens. 1	H317

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.10	Aspiration hazard	1	Asp. Tox. 1	H304

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS02, GHS07, GHS08



Hazard statements

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
H319	Causes serious eye irritation

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat/sparks/open flames/hot surfaces No smoking
P280	Wear protective gloves

Precautionary statements - response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact
	lenses, if present and easy to do. Continue rinsing
P331	Do NOT induce vomiting
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction

Precautionary statements - storage

P403+P235 Store in a well-ventilated place. Keep cool

Hazardous ingredients for labelling:	DL-α-Pinene, (-)-α-Thujone, α-Terpinene, L-(-)-Li- monene, Myrcene, ß-Pinene

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2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
(-)-α-Thujone	CAS No 546-80-5	10-<25	Flam. Liq. 4 / H227 Acute Tox. 4 / H302	(!)	
Fenchone	CAS No 1195-79-5	10 - < 25	Flam. Liq. 3 / H226		
Myrcene	CAS No 123-35-3	1-<5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Irrit. 2A / H319 Skin Sens. 1 / H317 Asp. Tox. 1 / H304		IARC: 2B
Sabinene	CAS No 3387-41-5	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2A / H319 STOT SE 3 / H335		
4-Terpinenol	CAS No 562-74-3	1 - < 5	Flam. Liq. 4 / H227 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2A / H319 STOT SE 3 / H335		
L-(-)-Limonene	CAS No 5989-54-8	1 – < 5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317		C(b)
Camphene	CAS No 79-92-5	1 - < 5	Flam. Sol. 1 / H228 Eye Irrit. 2A / H319		
DL-a-Pinene	CAS No 80-56-8	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Skin Sens. 1A / H317 Asp. Tox. 1 / H304		
α-Terpinene	CAS No 99-86-5	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Sens. 1 / H317 Asp. Tox. 1 / H304		



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Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
(+)-Camphor	CAS No 464-49-3	1-<3	Flam. Sol. 2 / H228 Acute Tox. 4 / H332 Skin Irrit. 2 / H315 Eye Dam. 1 / H318 STOT SE 2 / H371		
y-Terpinene	CAS No 99-85-4	1-<3	Flam. Liq. 3 / H226 Repr. 2 / H361fd		
p-Cymene	CAS No 99-87-6	1-<3	Flam. Liq. 3 / H226 Acute Tox. 3 / H331 Repr. 2 / H361f Asp. Tox. 1 / H304		
ß-Pinene	CAS No 127-91-3	<1	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304		

Notes

C(b): The substance is a specific isomer. The mixture of isomers is mentioned in Part 3 of the Regulation (EC) No 1272/2008 IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer) 2B:

For full text of abbreviations: see SECTION 16

SECTION 4: First aid measures

4.1 Description of first aid measures



General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower. In case of skin irritation, consult a physician.

Following eye contact

Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. In case of eye irritation consult an ophthalmologist.

Following ingestion

Call a physician immediately. Observe aspiration hazard if vomiting occurs.

4.2 Most important symptoms and effects, both acute and delayed

Aspiration hazard, Gastrointestinal complaints, Vomiting, Nausea, Irritation, Allergic reactions

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4.3 Indication of any immediate medical attention and special treatment needed none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings water spray, dry extinguishing powder, BC-powder, carbon dioxide (CO₂)

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

Combustible. Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures



For non-emergency personnel

Do not breathe vapour/spray. Avoid contact with skin and eyes. Avoidance of ignition sources. Provide adequate ventilation.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Danger of explosion.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

Advice on how to clean up a spill

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

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6.4 Reference to other sections

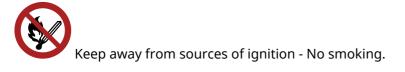
Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Provision of sufficient ventilation. When not in use, keep containers tightly closed.

Measures to prevent fire as well as aerosol and dust generation



Take precautionary measures against static discharge.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs. When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well-ventilated place. Keep container tightly closed.

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ground/bond container and receiving equipment.

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Relevant DNELs of components of the mixture								
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time		
DL-α-Pinene	80-56-8	DNEL	3.8 mg/m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects		

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Relevant DNELs	of compone	ents of th	e mixture			
Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure time
DL-a-Pinene	80-56-8	DNEL	0.542 mg/ kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
L-(-)-Limonene	5989-54-8	DNEL	33.3 mg/ m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects
L-(-)-Limonene	5989-54-8	DNEL	222 μg/ cm²	human, dermal	worker (industry)	acute - local ef- fects
y-Terpinene	99-85-4	DNEL	2.939 mg/ m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects
y-Terpinene	99-85-4	DNEL	0.833 mg/ kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
α-Terpinene	99-86-5	DNEL	2.939 mg/ m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects
a-Terpinene	99-86-5	DNEL	0.833 mg/ kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Camphene	79-92-5	DNEL	110.2 mg/ m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects
Camphene	79-92-5	DNEL	110.2 mg/ m ³	human, inhalat- ory	worker (industry)	acute - systemic effects
Camphene	79-92-5	DNEL	0.21 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Camphene	79-92-5	DNEL	1.25 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
(+)-Camphor	464-49-3	DNEL	17.63 mg/ m ³	human, inhalat- ory	worker (industry)	chronic - systemic effects
(+)-Camphor	464-49-3	DNEL	10 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ß-Pinene	127-91-3	DNEL	5.69 mg/ m³	human, inhalat- ory	worker (industry)	chronic - systemic effects
ß-Pinene	127-91-3	DNEL	0.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
ß-Pinene	127-91-3	DNEL	54 µg/cm²	human, dermal	worker (industry)	chronic - local ef- fects

Relevant PNECs of components of the mixture								
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time		
DL-α-Pinene	80-56-8	PNEC	0.606 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)		
DL-α-Pinene	80-56-8	PNEC	0.061 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)		
DL-α-Pinene	80-56-8	PNEC	0.2 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)		
DL-a-Pinene	80-56-8	PNEC	157 ^{µg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)		



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Relevant PNECs of components of the mixture						
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
DL-α-Pinene	80-56-8	PNEC	15.7 ^{µg} / _{kg}	aquatic organ- isms	marine sediment	short-term (single instance)
DL-α-Pinene	80-56-8	PNEC	31.7 ^{µg} / _{kg}	terrestrial organ- isms	soil	short-term (single instance)
L-(-)-Limonene	5989-54-8	PNEC	5.4 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
L-(-)-Limonene	5989-54-8	PNEC	0.54 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)
L-(-)-Limonene	5989-54-8	PNEC	0.2 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
L-(-)-Limonene	5989-54-8	PNEC	1.322 ^{mg} / kg	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
L-(-)-Limonene	5989-54-8	PNEC	0.132 ^{mg} / _{kg}	aquatic organ- isms	marine sediment	short-term (singl instance)
L-(-)-Limonene	5989-54-8	PNEC	0.262 ^{mg} / _{kg}	terrestrial organ- isms	soil	short-term (singl instance)
γ-Terpinene	99-85-4	PNEC	0.003 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (singl instance)
y-Terpinene	99-85-4	PNEC	0 ^{mg} / _l	aquatic organ- isms	marine water	short-term (singl instance)
y-Terpinene	99-85-4	PNEC	10 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (singl instance)
γ-Terpinene	99-85-4	PNEC	0.49 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (singl instance)
y-Terpinene	99-85-4	PNEC	0.049 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (singl instance)
γ-Terpinene	99-85-4	PNEC	0.423 ^{mg} / _{kg}	terrestrial organ- isms	soil	short-term (singl instance)
Camphene	79-92-5	PNEC	0.001 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (singl instance)
Camphene	79-92-5	PNEC	0 ^{mg} /l	aquatic organ- isms	marine water	short-term (singl instance)
Camphene	79-92-5	PNEC	10 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (singl instance)
Camphene	79-92-5	PNEC	0.026 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (singl instance)
Camphene	79-92-5	PNEC	0.003 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (sing instance)
Camphene	79-92-5	PNEC	0.021 ^{mg} / kg	terrestrial organ- isms	soil	short-term (singl instance)
(+)-Camphor	464-49-3	PNEC	1.71 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (singl instance)
(+)-Camphor	464-49-3	PNEC	0.171 ^{µg} / _l	aquatic organ- isms	marine water	short-term (singl instance)

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Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
(+)-Camphor	464-49-3	PNEC	1 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
(+)-Camphor	464-49-3	PNEC	0.139 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
(+)-Camphor	464-49-3	PNEC	0.017 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (single instance)
(+)-Camphor	464-49-3	PNEC	0.013 ^{mg} / kg	terrestrial organ- isms	soil	short-term (singl instance)
ß-Pinene	127-91-3	PNEC	1.004 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
ß-Pinene	127-91-3	PNEC	0.1 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)
ß-Pinene	127-91-3	PNEC	3.26 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
ß-Pinene	127-91-3	PNEC	0.337 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
ß-Pinene	127-91-3	PNEC	0.034 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (singl instance)
ß-Pinene	127-91-3	PNEC	0.067 ^{mg} / kg	terrestrial organ- isms	soil	short-term (singl instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection



Use safety goggle with side protection.

Skin protection



hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a consider-able reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

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• type of material

NBR (Nitrile rubber)

material thickness

0,4 mm

• breakthrough times of the glove material

>480 minutes (permeation: level 6)

other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

Respiratory protection



Respiratory protection necessary at: Aerosol or mist formation. Type: A (against organic gases and vapours with a boiling point of > 65 $^{\circ}$ C, colour code: Brown).

Environmental exposure controls

Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	yellowish brown
Odour	characteristic
Melting point/freezing point	not determined
Boiling point or initial boiling point and boiling range	not determined
Flammability	flammable liquid in accordance with GHS criteria
Lower and upper explosion limit	not determined
Flash point	51 °C
Auto-ignition temperature	not determined
Decomposition temperature	not relevant
pH (value)	not determined
Kinematic viscosity	not determined
Solubility(ies)	
Water solubility	(practically insoluble)
Partition coefficient	
Partition coefficient n-octanol/water (log value):	this information is not available



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	Vapour pressure	not determined		
	Density and/or relative density			
	Density	0.9 ^g / _{cm³} at 20 °C		
	Relative vapour density	information on this property is not available		
	Particle characteristics	not relevant (liquid)		
	Other safety parameters			
	Oxidising properties	none		
9.2	Other information			
	Information with regard to physical hazard classes:	There is no additional information.		
	Other safety characteristics:	There is no additional information.		

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture contains reactive substance(s). Risk of ignition.

If heated

Risk of ignition. Vapours may form explosive mixtures with air.

10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

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Classification acc. to GHS

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE) of components of the mixture				
Name of substance	CAS No	Exposure route	ATE	
(-)-α-Thujone	546-80-5	oral	500 ^{mg} / _{kg}	
DL-a-Pinene	80-56-8	oral	1,000 ^{mg} / _{kg}	
4-Terpinenol	562-74-3	oral	1,300 ^{mg} / _{kg}	
α-Terpinene	99-86-5	oral	1,680 ^{mg} / _{kg}	
Sabinene	3387-41-5	oral	301 ^{mg} / _{kg}	
p-Cymene	99-87-6	inhalation: vapour	3 ^{mg} / _l /4h	
(+)-Camphor	464-49-3	inhalation: dust/mist	4.5 ^{mg} / _l /4h	

Acute toxicity of components of the mixture

Name of substance	CAS No	Exposure route	Endpoint	Value	Species
(-)-α-Thujone	546-80-5	oral	LD50	500 ^{mg} / _{kg}	rat
Myrcene	123-35-3	oral	LD50	>3,380 ^{mg} / _{kg}	mouse
Myrcene	123-35-3	dermal	LD50	>5,000 ^{mg} / _{kg}	rabbit
DL-a-Pinene	80-56-8	dermal	LD50	>2,000 ^{mg} / _{kg}	rat
DL-a-Pinene	80-56-8	oral	LD50	3,700 ^{mg} / _{kg}	rat
4-Terpinenol	562-74-3	oral	LD50	1,300 ^{mg} / _{kg}	rat
4-Terpinenol	562-74-3	dermal	LD50	>2,500 - <5,00 0 ^{mg} / _{kg}	rabbit
y-Terpinene	99-85-4	oral	LD50	>2,000 ^{mg} / _{kg}	rat
γ-Terpinene	99-85-4	dermal	LD50	>2,000 ^{mg} / _{kg}	rat
α-Terpinene	99-86-5	oral	LD50	1,680 ^{mg} / _{kg}	rat
a-Terpinene	99-86-5	dermal	LD50	>2,000 ^{mg} / _{kg}	rat
Sabinene	3387-41-5	oral	LD50	301 – 2,000 ^{mg} / _{kg}	rat
p-Cymene	99-87-6	oral	LD50	4,750 ^{mg} / _{kg}	rat
p-Cymene	99-87-6	dermal	LD50	>5,000 ^{mg} / _{kg}	rabbit
(+)-Camphor	464-49-3	oral	LD50	1,310 ^{mg} / _{kg}	mouse
(+)-Camphor	464-49-3	dermal	LD50	>2,000 ^{mg} / _{kg}	rat
ß-Pinene	127-91-3	oral	LD50	4,700 ^{mg} / _{kg}	rat

Skin corrosion/irritation

Causes skin irritation.

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Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

nausea, gastrointestinal complaints, vomiting, aspiration hazard

• If in eyes

Causes serious eye irritation

• If inhaled

Data are not available.

• If on skin

causes skin irritation, May produce an allergic reaction, pruritis, localised redness

Other information

none

11.2 Endocrine disrupting properties

None of the ingredients are listed.

SECTION 12: Ecological information

12.1 Toxicity

Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture						
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time	
Myrcene	123-35-3	EC50	1.47 ^{mg} / _l	aquatic invertebrates	48 h	
Myrcene	123-35-3	EC50	0.31 ^{mg} / _l	algae	72 h	

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Aquatic toxicity (acute) of components of the mixture						
Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time	
Myrcene	123-35-3	ErC50	0.342 ^{mg} / _l	algae	72 h	
DL-α-Pinene	80-56-8	LC50	0.303 ^{mg} / _l	fish	96 h	
DL-α-Pinene	80-56-8	EC50	0.475 ^{mg} / _l	aquatic invertebrates	48 h	
y-Terpinene	99-85-4	EC50	2.792 ^{mg} / _l	fish	96 h	
α-Terpinene	99-86-5	LC50	3,150 ^{µg} / _l	fish	96 h	
α-Terpinene	99-86-5	EC50	1.7 ^{mg} / _l	aquatic invertebrates	48 h	
Camphene	79-92-5	LC50	0.72 ^{mg} / _l	fish	96 h	
Camphene	79-92-5	EC50	0.72 ^{mg} / _l	aquatic invertebrates	48 h	
Camphene	79-92-5	ErC50	>1,000 ^{mg} / _l	algae	72 h	
Sabinene	3387-41-5	EC50	3,960 ^{mg} / _l	aquatic invertebrates	48 h	
p-Cymene	99-87-6	LC50	48 ^{mg} / _l	fish	96 h	
p-Cymene	99-87-6	EC50	3.7 ^{mg} / _l	aquatic invertebrates	48 h	
p-Cymene	99-87-6	ErC50	4.03 ^{mg} / _l	algae	72 h	
(+)-Camphor	464-49-3	LC50	33.25 ^{mg} / _l	fish	96 h	
(+)-Camphor	464-49-3	EC50	4.23 ^{mg} / _l	aquatic invertebrates	48 h	
(+)-Camphor	464-49-3	ErC50	1.71 ^{mg} / _l	algae	72 h	
ß-Pinene	127-91-3	LC50	0.68 ^{mg} / _l	rainbow trout (Onco- rhynchus mykiss)	96 h	
ß-Pinene	127-91-3	EC50	1.09 ^{mg} / _l	daphnia magna	48 h	
ß-Pinene	127-91-3	ErC50	0.7 ^{mg} / _l	Pseudokirchneriella subcapitata	72 h	

Aquatic toxicity (chronic) of components of the mixture

Name of sub- stance	CAS No	Endpoint	Value	Species	Exposure time
y-Terpinene	99-85-4	EC50	>1,000 ^{mg} / _l	microorganisms	3 h
α-Terpinene	99-86-5	EC50	>10 ^{mg} / _l	microorganisms	3 h
Camphene	79-92-5	EC50	>1,000 ^{mg} / _l	microorganisms	3 h
(+)-Camphor	464-49-3	EC50	>100 ^{mg} / _l	microorganisms	3 h
ß-Pinene	127-91-3	EC50	326 ^{mg} / _l	microorganisms	3 h



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12.2 Persistence and degradability

Biodegradation

Not readily biodegradable.

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degrada- tion rate	Time	Method	Source
Myrcene	123-35-3	oxygen deple- tion	76 %	28 d		ECHA
DL-α-Pinene	80-56-8	oxygen deple- tion	68 %	28 d		ECHA
L-(-)-Limonene	5989-54-8	oxygen deple- tion	85 %	28 d		ECHA
y-Terpinene	99-85-4	oxygen deple- tion	27 %	28 d		ECHA
α-Terpinene	99-86-5	oxygen deple- tion	30 %	14 d		ECHA
Sabinene	3387-41-5	oxygen deple- tion	36 %	28 d		ECHA
p-Cymene	99-87-6	oxygen deple- tion	88 %	14 d		ECHA
ß-Pinene	127-91-3	oxygen deple- tion	76 %	28 d		ECHA

12.3 Bioaccumulative potential

Data are not available.

Bioaccumulative potential of components of the mixture					
Name of substance	CAS No	BCF	Log KOW	BOD5/COD	
Fenchone	1195-79-5		3.52		
Myrcene	123-35-3		4.82 (pH value: ~6.5, 30 °C)		
DL-α-Pinene	80-56-8		4.83		
L-(-)-Limonene	5989-54-8	864.8	4.38 (pH value: 7.2, 37 °C)		
y-Terpinene	99-85-4		5.4 (25 °C)		
α-Terpinene	99-86-5		5.3 (35 °C)		
Camphene	79-92-5		4.22 (pH value: 7.2, 37 °C)		
p-Cymene	99-87-6		4.8 (pH value: ~7, 20 °C)		
(+)-Camphor	464-49-3		2.3 (20 °C)		

12.4 Mobility in soil

Data are not available.

- **12.5 Results of PBT and vPvB assessment** Data are not available.
- 12.6 Endocrine disrupting properties

None of the ingredients are listed.

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12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

Relevant provisions relating to waste(Basel Convention)

Properties of waste which render it hazardous

- H3 Flammable liquids
- H11 Toxic (Delayed or chronic)

13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

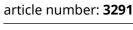
SECTION 14: Transport information

14.1 UN number

	UN RTDG	UN 1993
	IMDG-Code	UN 1993
	ICAO-TI	UN 1993
14.2	UN proper shipping name	
	UN RTDG	FLAMMABLE LIQUID, N.O.S.
	IMDG-Code	FLAMMABLE LIQUID, N.O.S.
	ICAO-TI	Flammable liquid, n.o.s.
	Technical name (hazardous ingredients)	Fenchone, Camphene
14.3	Transport hazard class(es)	
	UN RTDG	3
	IMDG-Code	3
	ICAO-TI	3
14.4	Packing group	
	UN RTDG	III
	IMDG-Code	III

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	ICAO-TI	III
4.5	Environmental hazards	hazardous to the aquatic environment
	Environmentally hazardous substance (aquatic environment):	7-METHYL-3-METHYLEN-1,6-OCTADIENE
4.6	Special precautions for user	
	There is no additional information.	
4.7	Transport in bulk according to IMO instrument	S
	The cargo is not intended to be carried in bulk.	
4.8	Information for each of the UN Model Regulation	ons
	Transport informationNational regulationsAdd	itional information(UN RTDG)
	UN number	1993
	Class	3
	Environmental hazards	Yes Hazardous to the aquatic environment
	Packing group	III
	Danger label(s)	3 Fish and tree
	Special provisions (SP)	223, 274 UN RTDG
	Excepted quantities (EQ)	E1 UN RTDG
	Limited quantities (LQ)	5 L UN RTDG
	Emergency Action Code	ЗY
	International Maritime Dangerous Goods Code (IMDG) - Additional information	
	Proper shipping name	FLAMMABLE LIQUID, N.O.S.
	Particulars in the shipper's declaration	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Fenchone, Camphene, 7-METHYL-3-METHYLEN- 1,6-OCTADIENE), 3, III, 51°C c.c., MARINE POLLUT ANT
	Marine pollutant	Yes (hazardous to the aquatic environment), (7-METHYL-3- METHYLEN-1,6-OCTADIENE)
	Danger label(s)	3, "Fish and tree"
	Special provisions (SP)	223, 274, 955
	Excepted quantities (EQ)	E1
	Limited quantities (LQ)	5 L
	EmS	F-E, <u>S-E</u>

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Stowage category	A		
International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information			
Proper shipping name	Flammable liquid, n.o.s.		
Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: Fen- chone, Camphene), 3, III		
Environmental hazards	Yes (hazardous to the aquatic environment)		
Danger label(s)	3		
Special provisions (SP)	A3		
Excepted quantities (EQ)	E1		
Limited quantities (LQ)	10 L		

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture 15.1 There is no additional information.

Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

National inventories

Country	Inventory	Status
AU	AIIC	not all ingredients are listed
CA	DSL	not all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	not all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	not all ingredients are listed

Legend AIIČ

CICR

Australian Inventory of Industrial Chemicals Chemical Inventory and Control Regulation List of Existing and New Chemical Substances (CSCL-ENCS) Domestic Substances List (DSL) CSCL-ENCS DSL

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Legend	
ECSI IECSC INSQ	EC Substance Inventory (EINECS, ELINCS, NLP) Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances Inventory of Existing and New Chemical Substances (ISHA-ENCS) Korea Existing Chemicals Inventory New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS) REACH registered substances Taiwan Chemical Substance Inventory Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
14.1	UN RTDG: UN 1169	UN RTDG: UN 1993	yes
14.1	IMDG-Code: UN 1169	IMDG-Code: UN 1993	yes
14.1	ICAO-TI: UN 1169	ICAO-TI: UN 1993	yes
14.2	UN RTDG: EXTRACTS, AROMATIC, LIQUID	UN RTDG: FLAMMABLE LIQUID, N.O.S.	yes
14.2	IMDG-Code: EXTRACTS, AROMATIC, LIQUID	IMDG-Code: FLAMMABLE LIQUID, N.O.S.	yes
14.2	ICAO-TI: Extracts, aromatic, liquid	ICAO-TI: Flammable liquid, n.o.s.	yes
14.2		Technical name (hazardous ingredients): Fenchone, Camphene	yes
14.8	UN number: 1169	UN number: 1993	yes
14.8	Special provisions (SP): 223 UN RTDG	Special provisions (SP): 223, 274 UN RTDG	yes
14.8	Proper shipping name: EXTRACTS, AROMATIC, LIQUID	Proper shipping name: FLAMMABLE LIQUID, N.O.S.	yes
14.8	Particulars in the shipper's declaration: UN1169, EXTRACTS, AROMATIC, LIQUID, (7- METHYL-3-METHYLEN-1,6-OCTADIENE), 3, III, 51°C c.c., MARINE POLLUTANT	Particulars in the shipper's declaration: UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Fenchone, Camphene, 7-METHYL-3-METHYLEN- 1,6-OCTADIENE), 3, III, 51°C c.c., MARINE POL- LUTANT	yes
14.8	Marine pollutant: yes (hazardous to the aquatic environment)	Marine pollutant: yes (hazardous to the aquatic environment), (7- METHYL-3-METHYLEN-1,6-OCTADIENE)	yes
14.8	Special provisions (SP): 223, 955	Special provisions (SP): 223, 274, 955	yes
14.8	EmS: F-E, S-D	EmS: F-E, <u>S-E</u>	yes

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Section	Former entry (text/value)	Actual entry (text/value)	Safety- relev- ant
14.8	Proper shipping name: Extracts, aromatic, liquid	Proper shipping name: Flammable liquid, n.o.s.	yes
14.8	Particulars in the shipper's declaration: UN1169, Extracts, aromatic, liquid, 3, III	Particulars in the shipper's declaration: UN1993, Flammable liquid, n.o.s., (contains: Fenchone, Camphene), 3, III	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical Oxygen Demand
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
COD	Chemical oxygen demand
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
Flam. Sol.	Flammable solid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Na- tions
IARC	International Agency for Research on Cancer
ΙΑΤΑ	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code
IMDG-Code	International Maritime Dangerous Goods Code

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Abbr.	Descriptions of used abbreviations
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW	n-Octanol/water
NLP	No-Longer Polymer
РВТ	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
Repr.	Reproductive toxicity
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STOT SE	Specific target organ toxicity - single exposure
UN RTDG	UN Recommendations on the Transport of Dangerous Good
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Safe Work Australia's Code of Practice for Labelling of Workplace Hazardous Chemicals (under WHS Regulations).

UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties. The classification is based on tested mixture. Health hazards. Environmental hazards. The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H226	Flammable liquid and vapour.
H227	Combustible liquid.
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.
H335	May cause respiratory irritation.

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Code	Text
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H371	May cause damage to organs.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.