acc. to Regulation (EC) No. 1907/2006 (REACH)

Oil of cedar leaf, artificial

article number: 3291 date of compilation: 2021-08-30 Version: **3.0 en** Revision: 2023-02-03

Replaces version of: 2023-02-03

Version: (2)



Product identifier 1.1

Identification of the substance Oil of cedar leaf, artificial

Article number 3291

Alternative name(s) Oleum Foliorum cedri

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

Relevant identified uses: Laboratory chemical

Laboratory and analytical use

Uses advised against: 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
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

SECTION 2: Hazards identification

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	2	Eye Irrit. 2	H319

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Section	Hazard class	Cat- egory	Hazard class and category	Hazard statement
3.45	Skin sensitisation	1	Skin Sens. 1	H317
3.10	Aspiration hazard	1	Asp. Tox. 1	H304
4.1C	Hazardous to the aquatic environment - chronic hazard	2	Aquatic Chronic 2	H411

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. Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling

Signal word Danger

Pictograms

GHS02, GHS07, GHS08, GHS09









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
H411	Toxic to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P210	Keep away from heat. No smoking
P273	Avoid release to the environment

Precautionary statements - response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor

P302+P352 IF ON SKIN: Wash with plenty of 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

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	Acute Tox. 4 / H302	<u>(1)</u>	
	EC No 208-912-2			~	
Fenchone	CAS No 1195-79-5	10 – < 25	Flam. Liq. 3 / H226	(b)	
	EC No 214-804-6			~	
Myrcene	CAS No 123-35-3	1-<5	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	(1)	IARC: 2B
	EC No 204-622-5		Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411		
Sabinene	CAS No 3387-41-5	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Irrit. 2 / H315	<u>(4)</u>	
	EC No 222-212-4		Eye Irrit. 2 / H319 STOT SE 3 / H335	~ ~	
4-Terpinenol	CAS No 562-74-3	1-<5	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319	<u>(!)</u>	
	EC No 209-235-5		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	<u>(4)</u>	C(b) GHS-HC
	EC No 227-815-6		Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410	*	
	Index No 601-029-00-7				
Camphene	CAS No 79-92-5	1-<5	Flam. Sol. 1 / H228 Eye Irrit. 2 / H319 Aquatic Acute 1 / H400	<u>(4)</u>	
	EC No 201-234-8		Aquatic Chronic 1 / H410	***	

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Name of sub- stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
DL-α-Pinene	CAS No 80-56-8 EC No 201-291-9	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Skin Sens. 1A / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		
α-Terpinene	CAS No 99-86-5 EC No 202-795-1 Index No 601-095-00-7	1-<5	Flam. Liq. 3 / H226 Acute Tox. 4 / H302 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		GHS-HC
(+)-Camphor	CAS No 464-49-3 EC No 207-355-2	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 EC No 202-794-6	1-<3	Flam. Liq. 3 / H226 Repr. 2 / H361fd Aquatic Chronic 2 / H411	(L)	
p-Cymene	CAS No 99-87-6 EC No 202-796-7 Index No 601-094-00-1	1-<3	Flam. Liq. 3 / H226 Acute Tox. 3 / H331 Repr. 2 / H361f Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411		GHS-HC
ß-Pinene Notes	CAS No 127-91-3 EC No 204-872-5	<1	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410		

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 GHS-HC: Harmonised classification (the classification of the substance corresponds to the entry in the list according to 1272/2008/EC, Annex VI)

IARC: IARC group 2B: possibly carcinogenic to humans (International Agency for Research on Cancer)

IARC: 2B:

Name of sub- stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
(-)-α-Thujone	CAS No 546-80-5 EC No 208-912-2	-	-	500 ^{mg} / _{kg}	oral
DL-α-Pinene	CAS No 80-56-8 EC No 201-291-9	-	-	1.000 ^{mg} / _{kg}	oral

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Name of sub- stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
4-Terpinenol	CAS No 562-74-3	-	-	1.300 ^{mg} / _{kg}	oral
	EC No 209-235-5				
α-Terpinene	CAS No 99-86-5	-	-	1.680 ^{mg} / _{kg}	oral
	EC No 202-795-1				
Sabinene	CAS No 3387-41-5	-	-	301 ^{mg} / _{kg}	oral
	EC No 222-212-4				
p-Cymene	CAS No 99-87-6	-	-	3 ^{mg} / _l /4h	inhalation: va- pour
	EC No 202-796-7				
(+)-Camphor	CAS No 464-49-3	-	-	4,5 ^{mg} / _l /4h	inhalation: dust/ mist
	EC No 207-355-2				

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

4.3 Indication of any immediate medical attention and special treatment needed

none

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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. Do not allow firefighting water to enter drains or water courses. 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. Retain contaminated washing water and dispose of it. 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



Keep away from sources of ignition - No smoking.

Take precautionary measures against static discharge.

Measures to protect the environment

Avoid release to the environment.

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)

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Cou ntr y	Name of agent	CAS No	Identi- fier	TW A [pp m]	TWA [mg/ m³]	STE L [pp m]	STEL [mg/ m³]	Ceil ing- C [pp m]	Ceil- ing-C [mg/ m³]	Nota- tion	Source
GB	hydrocarbon mix- ture (RCP method)		WEL		800		1.600				EH40/ 2005
GB	cycloalkanes (>C7)	80-56-8	WEL		800						EH40/ 2005

Notation

Ceiling-C STEL

TWA

Ceiling value is a limit value above which exposure should not occur Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

Name of sub- stance	CAS No	End- point	Threshol d level	Protection goal, route of exposure	Used in	Exposure ti
DL-α-Pinene	80-56-8	DNEL	3,8 mg/m³	human, inhalat- ory	worker (industry)	chronic - syste effects
DL-α-Pinene	80-56-8	DNEL	0,542 mg/ kg bw/day	human, dermal	worker (industry)	chronic - syste effects
L-(-)-Limonene	5989-54-8	DNEL	33,3 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
L-(-)-Limonene	5989-54-8	DNEL	222 μg/ cm²	human, dermal	worker (industry)	acute - local fects
y-Terpinene	99-85-4	DNEL	2,939 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
y-Terpinene	99-85-4	DNEL	0,833 mg/ kg bw/day	human, dermal	worker (industry)	chronic - syste effects
α-Terpinene	99-86-5	DNEL	2,939 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
α-Terpinene	99-86-5	DNEL	0,833 mg/ kg bw/day	human, dermal	worker (industry)	chronic - syste effects
Camphene	79-92-5	DNEL	110,2 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
Camphene	79-92-5	DNEL	110,2 mg/ m³	human, inhalat- ory	worker (industry)	acute - syster effects
Camphene	79-92-5	DNEL	0,21 mg/kg bw/day	human, dermal	worker (industry)	chronic - syste effects
Camphene	79-92-5	DNEL	1,25 mg/kg bw/day	human, dermal	worker (industry)	acute - syster effects
(+)-Camphor	464-49-3	DNEL	17,63 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
(+)-Camphor	464-49-3	DNEL	10 mg/kg bw/day	human, dermal	worker (industry)	chronic - syste effects
ß-Pinene	127-91-3	DNEL	5,69 mg/ m³	human, inhalat- ory	worker (industry)	chronic - syste effects
ß-Pinene	127-91-3	DNEL	0,8 mg/kg bw/day	human, dermal	worker (industry)	chronic - syste effects

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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				
ß-Pinene	127-91-3	DNEL	54 μg/cm²	human, dermal	worker (industry)	chronic - local ef- fects				

Relevant PNECs	of compone	nts of th	e 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-α-Pinene	80-56-8	PNEC	157 ^{µg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
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 (single instance)
L-(-)-Limonene	5989-54-8	PNEC	0,262 ^{mg} / kg	terrestrial organ- isms	soil	short-term (single instance)
y-Terpinene	99-85-4	PNEC	0,003 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
y-Terpinene	99-85-4	PNEC	0 ^{mg} / _l	aquatic organ- isms	marine water	short-term (single instance)
y-Terpinene	99-85-4	PNEC	10 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
y-Terpinene	99-85-4	PNEC	0,49 ^{mg} / _{kg}	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
y-Terpinene	99-85-4	PNEC	0,049 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (single instance)
y-Terpinene	99-85-4	PNEC	0,423 ^{mg} / kg	terrestrial organ- isms	soil	short-term (single instance)
Camphene	79-92-5	PNEC	0,001 ^{mg} / _l	aquatic organ- isms	freshwater	short-term (single instance)

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Relevant PNECs	of compone	ents of th	e mixture			
Name of sub- stance	CAS No	End- point	Threshol d level	Organism	Environmental compartment	Exposure time
Camphene	79-92-5	PNEC	0 ^{mg} / _l	aquatic organ- isms	marine water	short-term (single instance)
Camphene	79-92-5	PNEC	10 ^{mg} / _l	aquatic organ- isms	sewage treatment plant (STP)	short-term (single instance)
Camphene	79-92-5	PNEC	0,026 ^{mg} / kg	aquatic organ- isms	freshwater sedi- ment	short-term (single instance)
Camphene	79-92-5	PNEC	0,003 ^{mg} / kg	aquatic organ- isms	marine sediment	short-term (single instance)
Camphene	79-92-5	PNEC	0,021 ^{mg} / kg	terrestrial organ- isms	soil	short-term (single instance)
(+)-Camphor	464-49-3	PNEC	1,71 ^{µg} / _l	aquatic organ- isms	freshwater	short-term (single instance)
(+)-Camphor	464-49-3	PNEC	0,171 ^{µg} / _l	aquatic organ- isms	marine water	short-term (single instance)
(+)-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 (single 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} /	aquatic organ- isms	marine sediment	short-term (single instance)
ß-Pinene	127-91-3	PNEC	0,067 ^{mg} / kg	terrestrial organ- isms	soil	short-term (single instance)

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

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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 considerable 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.

• 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 °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 not determined

range

Flammability flammable liquid in accordance with GHS criteria

Lower and upper explosion limit not determined

Flash point 51 °C

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Auto-ignition temperature not determined Decomposition temperature not relevant not determined

not determined Kinematic viscosity

Solubility(ies)

pH (value)

Water solubility (practically insoluble)

Partition coefficient

Partition coefficient n-octanol/water (log value): this information is not available

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

> There is no additional information. Information with regard to physical hazard

classes:

There is no additional information. Other safety characteristics:

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.

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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).

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-α-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-α-Pinene	80-56-8	dermal	LD50	>2.000 ^{mg} / _{kg}	rat
DL-α-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
y-Terpinene	99-85-4	dermal	LD50	>2.000 ^{mg} / _{kg}	rat
α-Terpinene	99-86-5	oral	LD50	1.680 ^{mg} / _{kg}	rat
α-Terpinene	99-86-5	dermal	LD50	>2.000 ^{mg} / _{kg}	rat

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Acute toxicity of components of the mixture						
Name of substance	CAS No	Exposure route	Endpoint	Value	Species	
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.

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

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Other information

none

11.2 Endocrine disrupting properties

None of the ingredients are listed.

11.3 Information on other hazards

There is no additional information.

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
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

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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	

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)			

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Bioaccumulative potential of components of the mixture						
Name of substance	CAS No	BCF	Log KOW	BOD5/COD		
Camphene	79-92-5		4,22 (pH value: 7,2, 37 °C)			
p-Cymene	99-87-6		4,8 (pH value: ~7, 20 °C)			

2,3 (20 °C)

464-49-3

Mobility in soil 12.4

Data are not available.

Results of PBT and vPvB assessment 12.5

(+)-Camphor

Data are not available.

12.6 Endocrine disrupting properties

None of the ingredients are listed.

12.7 Other adverse effects

Data are not available.

SECTION 13: Disposal considerations

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. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

Properties of waste which render it hazardous

HP3 flammable

HP 5 specific target organ toxicity (STOT)/aspiration toxicity

HP 6 acute toxicity

HP 10 toxic for reproduction HP 14 ecotoxic

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.

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SECTION 14: Transport information

Technical name (hazardous ingredients)

14.1 UN number or ID number

ADRRID UN 1993 **IMDG-Code** UN 1993 ICAO-TI UN 1993

14.2 UN proper shipping name

ADRRID FLAMMABLE LIQUID, N.O.S. IMDG-Code FLAMMABLE LIQUID, N.O.S. ICAO-TI Flammable liquid, n.o.s. Fenchone, Camphene

14.3 Transport hazard class(es)

ADRRID 3 **IMDG-Code** 3 ICAO-TI 3

14.4 Packing group

ADRRID III **IMDG-Code** III ICAO-TI Ш

14.5 Environmental hazards

hazardous to the aquatic environment Environmentally hazardous substance (aquatic 7-METHYL-3-METHYLEN-1,6-OCTADIENE environment):

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

14.8 Information for each of the UN Model Regulations

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)Additional information

FLAMMABLE LIQUID, N.O.S. Proper shipping name

Particulars in the transport document UN1993, FLAMMABLE LIQUID, N.O.S., (contains:

Fenchone, Camphene), 3, III, (D/E), environment-

ally hazardous

Classification code F1

Danger label(s) 3, "Fish and tree"





Environmental hazards yes (hazardous to the aquatic environment)

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Emergency Action Code	37
Hazard identification No	30
Tunnel restriction code (TRC)	D/E
Transport category (TC)	3
Limited quantities (LQ)	5 L
Excepted quantities (EQ)	E1
Special provisions (SP)	274, 601

Regulations concerning the International Carriage of Dangerous Goods by Rail (RID)Additional

information

Classification code F1

Danger label(s) 3

Fish and tree





Environmental hazards Yes

Hazardous to water

Special provisions (SP) 274, 601

Excepted quantities (EQ) E1
Limited quantities (LQ) 5 L
Transport category (TC) 3
Hazard identification No 30

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:

UN1993, FLAMMABLE LIQUID, N.O.S., (contains: Fenchone, Camphene, 7-METHYL-3-METHYLEN-1,6-OCTADIENE), 3, III, 51°C c.c., MARINE POLLUT-

AN٦

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>

Stowage category A

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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, Ćamphene), 3, İİI

Environmental hazards yes (hazardous to the aquatic environment)

Danger label(s) 3



Special provisions (SP)

Excepted quantities (EQ)

Limited quantities (LQ)

A3

E1

10 L

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

Seveso Directive

2012/18/EU (Seveso III)							
No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for plication of lower and upper-tic quirements	the ap- er re-				
E2	environmental hazards (hazardous to the aquatic environment, cat. 2)	200 500	57)				

Notation

57) Hazardous to the Aquatic Environment in category Chronic 2

Deco-Paint Directive

VOC content	100 % 900 ⁹ / _I
-------------	--

Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	900 ^g / _l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

none of the ingredients are listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

none of the ingredients are listed

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Water Framework Directive (WFD)

List of pollutants (WFD)

Name of substance	Name acc. to inventory	CAS No	Listed in	Remarks
Myrcene	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	
y-Terpinene	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	
p-Cymene	Substances and preparations, or the breakdown products of such, which have been proved to pos- sess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine- related functions in or via the aquatic environment		a)	

Legend

A) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

none of the ingredients are listed

Regulation on drug precursors

none of the ingredients are listed

Regulation on substances that deplete the ozone layer (ODS)

none of the ingredients are listed

Regulation concerning the export and import of hazardous chemicals (PIC)

none of the ingredients are listed

Regulation on persistent organic pollutants (POP)

none of the ingredients are listed

National regulations(GB)

List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

none of the ingredients are listed

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Restrictions according to GB REACH, Annex 17

Dangerous substances with restrictions (GB REACH, Annex 17)

Name of substance	Name acc. to inventory	CAS No	No
Oil of cedar leaf	this product meets the criteria for classi- fication in accordance with Regulation No 1272/2008/EC		3
Camphene	flammable / pyrophoric		40

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

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

CSCL-ENCS DSL ECSI IECSC INSQ

CSCL-ENCS
DSL
Domestic Substances List (DSL)
ECSI
ECSI
Inventory of Existing Chemical Substances Produced or Imported in China
INSQ
INSQ
ISHA-ENCS
INVENTORY OF Existing and New Chemical Substances (ISHA-ENCS)
KECI
NZIOC
NECS
PICCS
PICCS
REACH Reg.
REACH registered substances
Toxic Substances
Toxic Substances
Provinces
Provin

TCSI TSCA **Toxic Substance Control Act**

15.2 Chemical Safety Assessment

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

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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	IMDG-Code: UN 1169	IMDG-Code: UN 1993	yes
14.1	ICAO-TI: UN 1169	ICAO-TI: UN 1993	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
14.8	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
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
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
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)
Ceiling-C	Ceiling value

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Safety data sheet Safety data sheet acc. to Regulation (EC) No. 1907/2006 (REACH)

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COD Chemical oxygen demand DGR Dangerous Goods Regulations (see IATA/DGR) DNEL Derived No-Effect Level ECSO Effective Concentration 50 %. The ECSD corresponds to the concentration of a tested substance causing 50 % changes in response (e.g., or growth) during a specified time interval EC No The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) EH40/2005 EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence) EINECS European Inventory of Existing Commercial Chemical Substances ELINCS European List of Notified Chemical Substances EMS Emergency Schedule ErCSO = ECSO: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbCSO) or growth rate (ErCSO) relative to the control Eye Dam. Seriously damaging to the eye Eye Irrit. Irritant to the eye Eye Irrit. Irritant to the eye Flam. Liq. Flammable liquid Flam. Sol. GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IATA International Ajerncy for Research on Cancer IATA International Ajerncy for Research on Cancer IATA Dangerous Goods Regulations (DGR) for the air transport (IATA) International Maritime Dangerous Goods Code IMDG-Code International Maritime Dangerous Goods Code IMDG International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Ma	Abbr.	Descriptions of used abbreviations
DNEL Derived No-Effect Level EC50 Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing S0 % changes in response (e.g. on growth) during a specified time interval EC No The EC Inventory (EINECS, ELINCS and the NLP latis it the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) EH40/2005 EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/). EINECS EUROPEAN List of Notified Chemical Substances ELINCS 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 (EC50) 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 GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Maritime Dangerous Goods Code International Civil Aviation or a tested substance causing 50 % lethality during a specified time interval LC50 Lethal Concentration 50%: the LC50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval LC50 Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 %	COD	Chemical oxygen demand
ECSO Effective Concentration 50 %. The ECSO corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval EC No The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the severa-digit EC number, an identifier of substances commercially available within the EU (European Union) EH40/2005 EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) 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 GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, S1 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA International Agency for Research on Cancer IATA International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (CEC) No 1272/2008 LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Perdicted No-Effect Concentration	DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union) EH40/2005 EH40/2005 Workplace exposure limits (http://www.nationalarchives.gov.uk/doc/open-government-licence/) EINECS European Inventory of Existing Commercial Chemical Substances ELINCS European Inst of Notified Chemical Substances EILINCS European Inst of Notified Chemical Substances Ems Emergency Schedule ErC50	DNEL	Derived No-Effect Level
filer of substances commercially available within the EU (European Union) EH40/2005	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 GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic Predicted No-Effect Concentration	EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
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. GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic PNEC PREC Euchal Concentration	EH40/2005	
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 GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 LD50 Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	EINECS	European Inventory of Existing Commercial Chemical Substances
ErC50	ELINCS	European List of Notified Chemical Substances
Eye Dam. Seriously damaging to the eye Eye Irrit. Irritant to the eye Flam. Liq. Flam. Liq. Flam. Sol. GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic Predicted No-Effect Concentration	EmS	Emergency Schedule
Eye Irrit. Flam. Liq. Flam. Liq. Flam. Sol. Flammable liquid Flam. Sol. Flammable solid GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 Persistent, Bioaccumulative and Toxic Predicted No-Effect Concentration	ErC50	
Flam. Liq. Flammable liquid Flam. Sol. Flammable solid GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	Eye Dam.	Seriously damaging to the eye
Flam. Sol. GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA	Eye Irrit.	Irritant to the eye
GB REACH The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended) GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	Flam. Liq.	Flammable liquid
GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations IARC International Agency for Research on Cancer IATA 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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	Flam. Sol.	Flammable solid
IARC International Agency for Research on Cancer IATA 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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
IATA 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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic Predicted No-Effect Concentration	GHS	
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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	IARC	International Agency for Research on Cancer
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 index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	IATA	International Air Transport Association
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 Internationa	IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
IMDG International Maritime Dangerous Goods Code IMDG-Code International Maritime Dangerous Goods Code index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	ICAO	International Civil Aviation Organization
IMDG-Code International Maritime Dangerous Goods Code Index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008 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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	IMDG	International Maritime Dangerous Goods Code
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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	IMDG-Code	International Maritime Dangerous Goods Code
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 PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	index No	
specified time interval log KOW n-Octanol/water NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
NLP No-Longer Polymer PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	LD50	
PBT Persistent, Bioaccumulative and Toxic PNEC Predicted No-Effect Concentration	log KOW	n-Octanol/water
PNEC Predicted No-Effect Concentration	NLP	No-Longer Polymer
	PBT	Persistent, Bioaccumulative and Toxic
ppm Parts per million	PNEC	Predicted No-Effect Concentration
	ppm	Parts per million

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acc. to Regulation (EC) No. 1907/2006 (REACH)

Oil of cedar leaf, artificial

article number: 3291



Abbr.	Descriptions of used abbreviations
RCP	Reciprocal calculation procedure
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regula- tions concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitisation
STEL	Short-term exposure limit
STOT SE	Specific target organ toxicity - single exposure
TWA	Time-weighted average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). 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.
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.
H361f	Suspected of damaging fertility.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.

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acc. to Regulation (EC) No. 1907/2006 (REACH)

Oil of cedar leaf, artificial

article number: 3291



Code	Text
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.

Disclaimer

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

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