

# Safety data sheet Safety data sheet

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



## Oil of fennel , artificial

article number: **3299**  
Version: **2.0 en**  
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Version: (1)

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

### 1.1 Product identifier

Identification of the substance **Oil of fennel , artificial**  
Article number 3299

### 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 sheet: :Department Health, Safety and Environment

**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

### 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	2	Eye Irrit. 2	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
3.5	Germ cell mutagenicity	2	Muta. 2	H341
3.6	Carcinogenicity	2	Carc. 2	H351
3.10	Aspiration hazard	1	Asp. Tox. 1	H304
4.1A	Hazardous to the aquatic environment - acute hazard	1	Aquatic Acute 1	H400
4.1C	Hazardous to the aquatic environment - chronic hazard	1	Aquatic Chronic 1	H410

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
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H410	Very toxic to aquatic life with long lasting effects

#### Precautionary statements

##### Precautionary statements - prevention

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P273	Avoid release to the environment
P280	Wear protective clothing/eye protection/face protection

##### Precautionary statements - response

P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]
P308+P313	IF exposed or concerned: Get medical advice/attention

For professional users only

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### Hazardous ingredients for labelling:

DL- $\alpha$ -Pinene, Oil of fennel, Anethole, Oil of orange, Myrcene, Oil of anise, Oil of eucalyptus

### 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 substance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
DL- $\alpha$ -Pinene	CAS No 80-56-8  EC No 201-291-9	25 – 50	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	   	
Anethole	CAS No 4180-23-8  EC No 224-052-0	10 – 25	Skin Sens. 1 / H317		
Myrcene	CAS No 123-35-3  EC No 204-622-5	10 – 25	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 2 / H411	   	IARC: 2B
Oil of fennel	CAS No 8006-84-6  EC No 282-892-3	10 – 25	Acute Tox. 4 / H302 Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 2 / H351 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	  	
Oil of orange	CAS No 8008-57-9  EC No 232-433-8	10 – 25	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   	
Oil of eucalyptus	CAS No 8000-48-4  EC No 283-406-2	5 – 10	Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Asp. Tox. 1 / H304 Aquatic Chronic 2 / H411	   	

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Name of sub-stance	Identifier	Wt%	Classification acc. to GHS	Pictograms	Notes
Oil of anise	CAS No 84650-59-9  EC No 283-518-1	5 – 10	Skin Sens. 1 / H317 Muta. 2 / H341 Carc. 2 / H351 Aquatic Chronic 2 / H411		

### Notes

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

Name of sub-stance	Identifier	Specific Conc. Limits	M-Factors	ATE	Exposure route
DL- $\alpha$ -Pinene	CAS No 80-56-8  EC No 201-291-9	-	-	1.000 mg/kg	oral
Oil of fennel	CAS No 8006-84-6  EC No 282-892-3	-	-	500 mg/kg	oral

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. After contact with skin, wash immediately with plenty of water. In case of skin reactions, consult a physician. 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

Rinse mouth with water (only if the person is conscious). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Observe aspiration hazard if vomiting occurs.

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

Aspiration hazard, Vomiting, 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 (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Combustible. In case of insufficient ventilation and/or in use, may form flammable/explosive vapour-air mixture. 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. Vapours may form explosive mixtures with air.

#### Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), May produce toxic fumes of carbon monoxide if burning.

### 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

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray. Avoidance of ignition sources.

### 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).

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### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 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. Avoid exposure.

### 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

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

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### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m <sup>3</sup> ]	STEL [ppm]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [ppm]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	cycloalkanes (>C7)	80-56-8	WEL		800						EH40/2005

#### Notation

Ceiling-C  
STEL

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)

TWA

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)

Relevant DNELs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DL- $\alpha$ -Pinene	80-56-8	DNEL	3,8 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DL- $\alpha$ -Pinene	80-56-8	DNEL	0,542 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Anethole	4180-23-8	DNEL	10,57 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Anethole	4180-23-8	DNEL	7,5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Oil of orange	8008-57-9	DNEL	31,1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
Oil of orange	8008-57-9	DNEL	8,89 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Oil of orange	8008-57-9	DNEL	185,8 $\mu$ g/cm <sup>2</sup>	human, dermal	worker (industry)	acute - local effects

Relevant PNECs of components of the mixture						
Name of substance	CAS No	Endpoint	Threshold level	Organism	Environmental compartment	Exposure time
DL- $\alpha$ -Pinene	80-56-8	PNEC	0,606 $\mu$ g/l	aquatic organisms	freshwater	short-term (single instance)
DL- $\alpha$ -Pinene	80-56-8	PNEC	0,061 $\mu$ g/l	aquatic organisms	marine water	short-term (single instance)
DL- $\alpha$ -Pinene	80-56-8	PNEC	0,2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
DL- $\alpha$ -Pinene	80-56-8	PNEC	157 $\mu$ g/kg	aquatic organisms	freshwater sediment	short-term (single instance)
DL- $\alpha$ -Pinene	80-56-8	PNEC	15,7 $\mu$ g/kg	aquatic organisms	marine sediment	short-term (single instance)
DL- $\alpha$ -Pinene	80-56-8	PNEC	31,7 $\mu$ g/kg	terrestrial organisms	soil	short-term (single instance)

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Relevant PNECs of components of the mixture						
Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Anethole	4180-23-8	PNEC	0,021 mg/l	aquatic organisms	freshwater	short-term (single instance)
Anethole	4180-23-8	PNEC	0,002 mg/l	aquatic organisms	marine water	short-term (single instance)
Anethole	4180-23-8	PNEC	0,972 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Anethole	4180-23-8	PNEC	0,166 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Anethole	4180-23-8	PNEC	0,017 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Anethole	4180-23-8	PNEC	0,097 mg/kg	terrestrial organisms	soil	short-term (single instance)
Oil of orange	8008-57-9	PNEC	5,4 µg/l	aquatic organisms	freshwater	short-term (single instance)
Oil of orange	8008-57-9	PNEC	0,54 µg/l	aquatic organisms	marine water	short-term (single instance)
Oil of orange	8008-57-9	PNEC	2,1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Oil of orange	8008-57-9	PNEC	1,3 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Oil of orange	8008-57-9	PNEC	0,13 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Oil of orange	8008-57-9	PNEC	0,261 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### Skin protection





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### • 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)

### • Splash protection - Protective gloves

• type of material: NBR (Nitrile rubber)

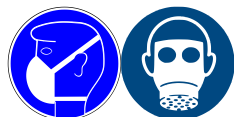
• material thickness: >0,11 mm

• breakthrough times of the glove material: >30 minutes (permeation: level 2)

### • 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	clear - light yellow - light 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	40 °C

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Auto-ignition temperature	255 °C
Decomposition temperature	not relevant
pH (value)	7 (20 °C)
Kinematic viscosity	not determined
<u>Solubility(ies)</u>	
Water solubility	not determined
<u>Partition coefficient</u>	
Partition coefficient n-octanol/water (log value):	this information is not available
Vapour pressure	not determined
<u>Density and/or relative density</u>	
Density	0,89 g/cm <sup>3</sup> at 20 °C
Relative vapour density	information on this property is not available
Particle characteristics	not relevant (liquid)
<u>Other safety parameters</u>	
Oxidising properties	none
<b>9.2 Other information</b>	
Information with regard to physical hazard classes:	There is no additional information.
Other safety characteristics:	
Refractive index	1,48 - 1,5 (20 °C)

## 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.

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### 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).

#### 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
DL- $\alpha$ -Pinene	80-56-8	oral	1.000 mg/kg
Oil of fennel	8006-84-6	oral	500 mg/kg

Acute toxicity of components of the mixture					
Name of substance	CAS No	Exposure route	Endpoint	Value	Species
DL- $\alpha$ -Pinene	80-56-8	dermal	LD50	>2.000 mg/kg	rat
DL- $\alpha$ -Pinene	80-56-8	oral	LD50	3.700 mg/kg	rat
Anethole	4180-23-8	oral	LD50	$\geq 2.330 - \leq 4.000$ mg/kg	mouse
Anethole	4180-23-8	inhalation: dust/mist	LC50	$\geq 5,1$ mg/l/4h	rat
Anethole	4180-23-8	dermal	LD50	>4.900 mg/kg	rabbit
Oil of orange	8008-57-9	oral	LD50	>5.000 mg/kg	rat
Oil of orange	8008-57-9	dermal	LD50	>5.000 mg/kg	rabbit
Myrcene	123-35-3	oral	LD50	>3.380 mg/kg	mouse
Myrcene	123-35-3	dermal	LD50	>5.000 mg/kg	rabbit
Oil of anise	84650-59-9	oral	LD50	$> 2.000 - \leq 2.500$ mg/kg	rat
Oil of anise	84650-59-9	dermal	LD50	>2.000 mg/kg	rat
Oil of eucalyptus	8000-48-4	oral	LD50	2.480 mg/kg	rat
Oil of eucalyptus	8000-48-4	dermal	LD50	2.480 mg/kg	rabbit

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### **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**

Suspected of causing genetic defects.

### **Carcinogenicity**

Suspected of causing cancer.

### **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**

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.

## **11.3 Information on other hazards**

There is no additional information.

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### SECTION 12: Ecological information

#### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
DL- $\alpha$ -Pinene	80-56-8	LC50	0,303 mg/l	fish	96 h
DL- $\alpha$ -Pinene	80-56-8	EC50	0,475 mg/l	aquatic invertebrates	48 h
Anethole	4180-23-8	LC50	7 mg/l	fish	96 h
Anethole	4180-23-8	EC50	4,25 mg/l	aquatic invertebrates	48 h
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
Oil of anise	84650-59-9	EC50	29,96 mg/l	aquatic invertebrates	48 h
Oil of anise	84650-59-9	ErC50	6,18 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Anethole	4180-23-8	EC50	2,81 mg/l	aquatic invertebrates	21 d

#### Biodegradation

Data are not available.

#### 12.2 Process of degradability

Degradability of components of the mixture						
Name of substance	CAS No	Process	Degradation rate	Time	Method	Source
DL- $\alpha$ -Pinene	80-56-8	oxygen depletion	68 %	28 d		ECHA
Anethole	4180-23-8	biotic/abiotic	78 %	d		
Anethole	4180-23-8	oxygen depletion	79 %	28 d		ECHA
Anethole	4180-23-8	carbon dioxide generation	$\geq 90,7 - \leq 91,2$ %	28 d		ECHA
Myrcene	123-35-3	oxygen depletion	76 %	28 d		ECHA
Oil of anise	84650-59-9	oxygen depletion	62 %	28 d		ECHA

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### 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
DL- $\alpha$ -Pinene	80-56-8		4,83	
Anethole	4180-23-8	79,92	3,39	
Oil of orange	8008-57-9	32 – 156	2,78 – 4,88	
Myrcene	123-35-3		4,82 (pH value: ~6,5, 30 °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.

### 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. 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. Waste catalogue ordinance (Germany).

### 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

#### 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.
Technical name (hazardous ingredients)	DL- $\alpha$ -Pinene, Oil of orange

#### 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	III

#### 14.5 Environmental hazards

	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment):	DL- $\alpha$ -Pinene

#### 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

##### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

Proper shipping name	FLAMMABLE LIQUID, N.O.S.
Particulars in the transport document	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: DL- $\alpha$ -Pinene, Oil of orange), 3, III, (D/E), environmentally hazardous
Classification code	F1
Danger label(s)	3, "Fish and tree"
Environmental hazards	YES (hazardous to the aquatic environment)

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

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

<b>Classification code</b>	3
<b>Danger label(s)</b>	3 Fish and tree



<b>Environmental hazards</b>	Yes Hazardous to water
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<b>Special provisions (SP)</b>	274, 601
<b>Excepted quantities (EQ)</b>	E1
<b>Limited quantities (LQ)</b>	5 L
<b>Transport category (TC)</b>	3
<b>Hazard identification No</b>	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: DL- $\alpha$ -Pinene, Oil of orange), 3, III, 40°C c.c., MARINE POLLUTANT
Marine pollutant	YES (hazardous to the aquatic environment), (DL- $\alpha$ -Pinene)
<b>Danger label(s)</b>	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: DL- $\alpha$ -Pinene, Oil of orange), 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

### 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 the application of lower and upper-tier requirements	Notes
E1	environmental hazards (hazardous to the aquatic environment, cat. 1)	100                      200	56)

##### Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

##### Deco-Paint Directive

VOC content	87 % 774,3 g/l
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##### Industrial Emissions Directive (IED)

VOC content	73 %
VOC content	649,7 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 possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Oil of fennel	Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment		a)	
Oil of anise	Substances and preparations, or the breakdown products of such, which have been proved to possess 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)

#### Restrictions according to GB REACH, Annex 17

none of the ingredients are listed

Dangerous substances with restrictions (GB REACH, Annex 17)			
Name of substance	Name acc. to inventory	CAS No	No
Oil of fennel	this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC		3

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### 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	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

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	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)

Alignment to regulation:  
Restructuring: section 9, section 14

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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		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.	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2	Hazardous ingredients for labelling: DL- $\alpha$ -Pinene, Oil of fennel, Oil of orange, Myrcene	Hazardous ingredients for labelling: DL- $\alpha$ -Pinene, Oil of fennel, Anethole, Oil of orange, Myrcene, Oil of anise, Oil of eucalyptus	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2	contains: DL- $\alpha$ -Pinene, Oil of fennel, Oil of orange, Myrcene		yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
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

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Abbr.	Descriptions of used abbreviations
Carc.	Carcinogenicity
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
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
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 ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
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
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
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
Muta.	Germ cell mutagenicity
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration

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Abbr.	Descriptions of used abbreviations
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations 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
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.
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.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
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.