

Safety data sheet

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



Oil of fir needles artificial

article number: **3301**
Version: **1.0 en**

date of compilation: 10.09.2021

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

1.1 Product identifier

| | |
|---------------------------------|--------------------------------------|
| Identification of the substance | Oil of fir needles artificial |
| Article number | 3301 |
| Registration number (REACH) | not relevant (mixture) |
| Alternative name(s) | Oleum Pini |

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

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

| 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 |
| 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 |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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 according to Regulation (EC) No 1272/2008 (CLP)

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 |
| H410 | Very toxic to aquatic life with long lasting effects |

Precautionary statements

Precautionary statements - prevention

| | |
|------|--|
| P210 | Keep away from heat. No smoking |
| P270 | Do not eat, drink or smoke when using this product |
| P273 | Avoid release to the environment |
| P280 | Wear protective gloves/eye protection |

Precautionary statements - response

| | |
|-----------|---|
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor |
| P331 | Do NOT induce vomiting |

Hazardous ingredients for labelling:

DL- α -Pinene, β -Pinene, β -Caryophyllene, L-(-)-Limonene, DL-Limonene, δ -3-Carene, Terpinolene, Myrcene

Labelling of packages where the contents do not exceed 125 ml

Signal word: **Danger**

Symbol(s)



| | |
|-----------|--|
| H304 | May be fatal if swallowed and enters airways. |
| H317 | May cause an allergic skin reaction. |
| P280 | Wear protective gloves/eye protection. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER/doctor. |
| P331 | Do NOT induce vomiting. |
| contains: | DL- α -Pinene, β -Pinene, β -Caryophyllene, L-(-)-Limonene, DL-Limonene, δ -3-Carene, Terpinolene, Myrcene |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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- α -Pinene | CAS No 80-56-8 EC No 201-291-9 REACH Reg. No 01-2119519223- 49-xxxx | 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 | | |
| Camphene | CAS No 79-92-5 EC No 201-234-8 REACH Reg. No 01-2119446293- 40-xxxx | 10 – < 25 | Flam. Sol. 1 / H228 Eye Irrit. 2 / H319 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | | |
| β -Pinene | CAS No 127-91-3 EC No 204-872-5 | 5 – < 10 | Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | | |
| L-(-)-Limonene | CAS No 5989-54-8 EC No 227-815-6 Index No 601-029-00-7 REACH Reg. No 01-2119958629- 18-xxxx | 5 – < 10 | Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | | C(b) GHS-HC |
| DL-Limonene | CAS No 138-86-3 EC No 205-341-0 Index No 601-029-00-7 | 1 – < 5 | Flam. Liq. 3 / H226 Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 | | C(a) GHS-HC |
















Safety data sheet

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



Oil of fir needles artificial

article number: 3301

| Name of substance | Identifier | Wt% | Classification acc. to GHS | Pictograms | Notes |
|-------------------|--|---------|---|--|----------|
| (-)-Borneol | CAS No 464-45-9 EC No 207-353-1 | 1 – < 5 | Flam. Sol. 2 / H228 Skin Irrit. 2 / H315 |   | |
| β-Caryophyllene | CAS No 87-44-5 EC No 201-746-1 | 1 – < 5 | Skin Sens. 1 / H317 Asp. Tox. 1 / H304 |   | |
| Myrcene | CAS No 123-35-3 EC No 204-622-5 REACH Reg. No 01-2119514321- 56-xxxx | < 1 | 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 |
| δ-3-Carene | CAS No 13466-78-9 EC No 236-719-3 REACH Reg. No 01-2119520252- 55-xxxx | < 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 |     | |
| Terpinolene | CAS No 586-62-9 EC No 209-578-0 REACH Reg. No 01-2119982325- 32-xxxx | < 1 | Skin Sens. 1B / H317 Asp. Tox. 1 / H304 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410 |    | |

Notes

C(a): Mixture of isomers

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)
2B:

| Name of substance | Identifier | Specific Conc. Limits | M-Factors | ATE | Exposure route |
|-------------------|---|-----------------------|---------------------------------|-------------|----------------|
| DL-α-Pinene | CAS No 80-56-8 EC No 201-291-9 | - | - | 1.000 mg/kg | oral |
| Camphene | CAS No 79-92-5 EC No 201-234-8 | - | M-factor (chronic) = 10.0 | - | |

For full text of abbreviations: see SECTION 16

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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 reactions, 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, Vomiting, Nausea, Irritation, Allergic reactions

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Firefighting measures

5.1 Extinguishing media



Suitable extinguishing media

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

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

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

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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.

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.

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

7.2 Conditions for safe storage, including any incompatibilities

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

Incompatible substances or mixtures

Observe hints for combined storage.

Consideration of other advice:

Ground/bond container and receiving equipment.

Ventilation requirements

Use local and general ventilation.

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

| Relevant DNELs of components of the mixture | | | | | | |
|---|-----------|-----------|-----------------------------|------------------------------------|-------------------|----------------------------|
| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
| DL- α -Pinene | 80-56-8 | DNEL | 3,8 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| DL- α -Pinene | 80-56-8 | DNEL | 0,542 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| Camphene | 79-92-5 | DNEL | 110,2 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| Camphene | 79-92-5 | DNEL | 110,2 mg/m ³ | human, inhalatory | worker (industry) | acute - systemic effects |
| Camphene | 79-92-5 | DNEL | 0,21 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| Camphene | 79-92-5 | DNEL | 1,25 mg/kg bw/day | human, dermal | worker (industry) | acute - systemic effects |
| β -Pinene | 127-91-3 | DNEL | 5,69 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| β -Pinene | 127-91-3 | DNEL | 0,8 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| β -Pinene | 127-91-3 | DNEL | 54 μ g/cm ² | human, dermal | worker (industry) | chronic - local effects |
| L(-)-Limonene | 5989-54-8 | DNEL | 33,3 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| L(-)-Limonene | 5989-54-8 | DNEL | 222 μ g/cm ² | human, dermal | worker (industry) | acute - local effects |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

Relevant DNELs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Protection goal, route of exposure | Used in | Exposure time |
|-------------------|----------|-----------|-------------------------|------------------------------------|-------------------|----------------------------|
| (-)-Borneol | 464-45-9 | DNEL | 0,208 mg/m ³ | human, inhalatory | worker (industry) | chronic - systemic effects |
| (-)-Borneol | 464-45-9 | DNEL | 0,059 mg/kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |

Relevant PNECs of components of the mixture

| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
|----------------------|----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| DL- α -Pinene | 80-56-8 | PNEC | 0,606 μ g/l | aquatic organisms | freshwater | short-term (single instance) |
| DL- α -Pinene | 80-56-8 | PNEC | 0,061 μ g/l | aquatic organisms | marine water | short-term (single instance) |
| DL- α -Pinene | 80-56-8 | PNEC | 0,2 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| DL- α -Pinene | 80-56-8 | PNEC | 157 μ g/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| DL- α -Pinene | 80-56-8 | PNEC | 15,7 μ g/kg | aquatic organisms | marine sediment | short-term (single instance) |
| DL- α -Pinene | 80-56-8 | PNEC | 31,7 μ g/kg | terrestrial organisms | soil | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 0,001 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 0 mg/l | aquatic organisms | marine water | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 10 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 0,026 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 0,003 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| Camphene | 79-92-5 | PNEC | 0,021 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 1,004 μ g/l | aquatic organisms | freshwater | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 0,1 μ g/l | aquatic organisms | marine water | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 3,26 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 0,337 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 0,034 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| β -Pinene | 127-91-3 | PNEC | 0,067 mg/kg | terrestrial organisms | soil | short-term (single instance) |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

| Relevant PNECs of components of the mixture | | | | | | |
|---|-----------|-----------|-----------------|-----------------------|------------------------------|------------------------------|
| Name of substance | CAS No | End-point | Threshold level | Organism | Environmental compartment | Exposure time |
| L-(-)-Limonene | 5989-54-8 | PNEC | 5,4 µg/l | aquatic organisms | freshwater | short-term (single instance) |
| L-(-)-Limonene | 5989-54-8 | PNEC | 0,54 µg/l | aquatic organisms | marine water | short-term (single instance) |
| L-(-)-Limonene | 5989-54-8 | PNEC | 0,2 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| L-(-)-Limonene | 5989-54-8 | PNEC | 1,322 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| L-(-)-Limonene | 5989-54-8 | PNEC | 0,132 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| L-(-)-Limonene | 5989-54-8 | PNEC | 0,262 mg/kg | terrestrial organisms | soil | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 0,009 mg/l | aquatic organisms | freshwater | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 0,001 mg/l | aquatic organisms | marine water | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 10 mg/l | aquatic organisms | sewage treatment plant (STP) | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 0,103 mg/kg | aquatic organisms | freshwater sediment | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 0,01 mg/kg | aquatic organisms | marine sediment | short-term (single instance) |
| (-)-Borneol | 464-45-9 | PNEC | 0,01 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



Safety data sheet

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



Oil of fir needles artificial

article number: 3301

• 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 | colourless - light yellow |
| 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 | 33 °C |
| Auto-ignition temperature | not determined |
| Decomposition temperature | not relevant |
| pH (value) | not determined |
| Kinematic viscosity | not determined |

Safety data sheet

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



Oil of fir needles artificial

article number: **3301**

Solubility(ies)

Water solubility not determined

Partition coefficient

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

Vapour pressure not determined

Density 0,88 g/cm³ at 20 °C

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard classes:

Flammable liquids

Sustained combustibility yes, sustained combustion was observed

Other safety characteristics: There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

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

If heated

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

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

Violent reaction with: strong oxidiser

10.4 Conditions to avoid

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

10.5 Incompatible materials

There is no additional information.

10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

SECTION 11: Toxicological information

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

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 according to GHS (1272/2008/EC, CLP)

Acute toxicity

Harmful if swallowed.

Acute toxicity estimate (ATE) of components of the mixture

| Name of substance | CAS No | Exposure route | ATE |
|----------------------|---------|----------------|-------------|
| DL- α -Pinene | 80-56-8 | oral | 1.000 mg/kg |

Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|------------------------|------------|----------------|----------|--------------|---------|
| 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 |
| β -Pinene | 127-91-3 | oral | LD50 | 4.700 mg/kg | rat |
| β -Caryophyllene | 87-44-5 | oral | LD50 | >5.000 mg/kg | mouse |
| DL-Limonene | 138-86-3 | oral | LD50 | 5.300 mg/kg | rat |
| (-)-Borneol | 464-45-9 | oral | LD50 | 6.500 mg/kg | rat |
| (-)-Borneol | 464-45-9 | dermal | LD50 | >2.000 mg/kg | rabbit |
| δ -3-Carene | 13466-78-9 | oral | LD50 | 4.800 mg/kg | rat |
| Terpinolene | 586-62-9 | oral | LD50 | >2.000 mg/kg | rat |
| Terpinolene | 586-62-9 | dermal | LD50 | >2.000 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 |

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.

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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

vomiting, nausea, 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.

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- 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 |
| 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 |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

| Aquatic toxicity (acute) of components of the mixture | | | | | |
|---|----------|----------|-------------|--|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| β -Pinene | 127-91-3 | LC50 | 0,68 mg/l | rainbow trout (<i>Oncorhynchus mykiss</i>) | 96 h |
| β -Pinene | 127-91-3 | EC50 | 1,09 mg/l | daphnia magna | 48 h |
| β -Pinene | 127-91-3 | ErC50 | 0,7 mg/l | <i>Pseudokirchneriella subcapitata</i> | 72 h |
| β -Caryophyllene | 87-44-5 | EC50 | >0,17 mg/l | daphnia magna | 48 h |
| β -Caryophyllene | 87-44-5 | ErC50 | >0,033 mg/l | algae | 72 h |
| DL-Limonene | 138-86-3 | EC50 | 17 mg/l | daphnia magna | 48 h |
| DL-Limonene | 138-86-3 | LC50 | 80 mg/l | rainbow trout (<i>Oncorhynchus mykiss</i>) | 96 h |
| (-)-Borneol | 464-45-9 | LC50 | 67,8 mg/l | fish | 96 h |
| (-)-Borneol | 464-45-9 | EC50 | 47,8 mg/l | fish | 96 h |
| (-)-Borneol | 464-45-9 | ErC50 | 11,69 mg/l | algae | 72 h |
| Terpinolene | 586-62-9 | LC50 | 0,805 mg/l | fish | 96 h |
| Terpinolene | 586-62-9 | EC50 | 0,634 mg/l | aquatic invertebrates | 48 h |
| Terpinolene | 586-62-9 | ErC50 | 0,692 mg/l | algae | 72 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 |

| Aquatic toxicity (chronic) of components of the mixture | | | | | |
|---|----------|----------|-------------|----------------|---------------|
| Name of substance | CAS No | Endpoint | Value | Species | Exposure time |
| Camphene | 79-92-5 | EC50 | >1.000 mg/l | microorganisms | 3 h |
| β -Pinene | 127-91-3 | EC50 | 326 mg/l | microorganisms | 3 h |
| Terpinolene | 586-62-9 | EC50 | 69 mg/l | microorganisms | 3 h |

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- α -Pinene | 80-56-8 | oxygen depletion | 68 % | 28 d | | ECHA |
| β -Pinene | 127-91-3 | oxygen depletion | 76 % | 28 d | | ECHA |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

| Degradability of components of the mixture | | | | | | |
|--|-----------|------------------|------------------|------|--------|--------|
| Name of substance | CAS No | Process | Degradation rate | Time | Method | Source |
| L(-)-Limonene | 5989-54-8 | oxygen depletion | 85 % | 28 d | | ECHA |
| β -Caryophyllene | 87-44-5 | oxygen depletion | 10 % | 28 d | | ECHA |
| (-)-Borneol | 464-45-9 | oxygen depletion | 79,8 % | 28 d | | ECHA |
| Terpinolene | 586-62-9 | oxygen depletion | 81 % | 28 d | | ECHA |
| Myrcene | 123-35-3 | oxygen depletion | 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 |
| DL- α -Pinene | 80-56-8 | | 4,83 | |
| Camphene | 79-92-5 | | 4,22 (pH value: 7,2, 37 °C) | |
| L(-)-Limonene | 5989-54-8 | 864,8 | 4,38 (pH value: 7,2, 37 °C) | |
| β -Caryophyllene | 87-44-5 | | 6,23 (pH value: 7, 25 °C) | |
| DL-Limonene | 138-86-3 | | 4,57 | |
| (-)-Borneol | 464-45-9 | | 2,75 (20 °C) | |
| δ -3-Carene | 13466-78-9 | | 4,38 | |
| Terpinolene | 586-62-9 | | 4,47 | |
| 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.

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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.

SECTION 14: Transport information

14.1 UN number or ID number

| | |
|-------------|---------|
| ADR/RID/ADN | UN 1993 |
| IMDG-Code | UN 1993 |
| ICAO-TI | UN 1993 |

14.2 UN proper shipping name

| | |
|--|--------------------------------|
| ADR/RID/ADN | FLAMMABLE LIQUID, N.O.S. |
| IMDG-Code | FLAMMABLE LIQUID, N.O.S. |
| ICAO-TI | Flammable liquid, n.o.s. |
| Technical name (hazardous ingredients) | DL- α -Pinene, Camphene |

14.3 Transport hazard class(es)

| | |
|-------------|---|
| ADR/RID/ADN | 3 |
| IMDG-Code | 3 |
| ICAO-TI | 3 |

14.4 Packing group

| | |
|-------------|-----|
| ADR/RID/ADN | III |
| IMDG-Code | III |
| ICAO-TI | III |

14.5 Environmental hazards

hazardous to the aquatic environment

Safety data sheet

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



Oil of fir needles artificial

article number: **3301**

Environmentally hazardous substance (aquatic environment): DL- α -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- α -Pinene, Camphene), 3, III, (D/E), environmentally hazardous |
| Classification code | F1 |
| Danger label(s) | 3, "Fish and tree" |
|  |  |
| Environmental hazards | yes (hazardous to the aquatic environment) |
| 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 |

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- α -Pinene, Camphene), 3, III, 33°C c.c., MARINE POLLUTANT |
| Marine pollutant | yes (hazardous to the aquatic environment), (DL- α -Pinene) |
| 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 |

Safety data sheet


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



Oil of fir needles artificial

article number: 3301

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- α -Pinene, Camphene), 3, III |
| Environmental hazards | YES (hazardous to the aquatic environment) |
| Danger label(s) | 3 |
|  | |
| Special provisions (SP) | A3 |
| Excepted quantities (EQ) | E1 |
| Limited quantities (LQ) | 10 L |

SECTION 15: Regulatory information

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

Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

| Dangerous substances with restrictions (REACH, Annex XVII) | | | | |
|--|--|--------|-------------|----|
| Name of substance | Name acc. to inventory | CAS No | Restriction | No |
| Oil of fir needles | this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC | | R3 | 3 |
| Myrcene | flammable / pyrophoric | | R40 | 40 |
| Myrcene | substances in tattoo inks and permanent make-up | | R75 | 75 |
| β -Pinene | flammable / pyrophoric | | R40 | 40 |
| β -Pinene | substances in tattoo inks and permanent make-up | | R75 | 75 |
| δ -3-Carene | flammable / pyrophoric | | R40 | 40 |
| DL-Limonene | flammable / pyrophoric | | R40 | 40 |
| DL-Limonene | substances in tattoo inks and permanent make-up | | R75 | 75 |
| (-)-Borneol | flammable / pyrophoric | | R40 | 40 |
| (-)-Borneol | substances in tattoo inks and permanent make-up | | R75 | 75 |
| L(-)-Limonene | flammable / pyrophoric | | R40 | 40 |
| L(-)-Limonene | substances in tattoo inks and permanent make-up | | R75 | 75 |
| Camphene | flammable / pyrophoric | | R40 | 40 |
| DL- α -Pinene | flammable / pyrophoric | | R40 | 40 |
| β -Caryophyllene | substances in tattoo inks and permanent make-up | | R75 | 75 |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

Legend

- R3
1. Shall not be used in:
 - ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
 - tricks and jokes,
 - games for one or more participants, or any article intended to be used as such, even with ornamental aspects,
 2. Articles not complying with paragraph 1 shall not be placed on the market.
 3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:
 - can be used as fuel in decorative oil lamps for supply to the general public, and
 - present an aspiration hazard and are labelled with H304.
 4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).
 5. Without prejudice to the implementation of other Union provisions relating to the classification, labelling and packaging of substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:
 - (a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil – or even sucking the wick of lamps – may lead to life-threatening lung damage";
 - (b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter fluid may lead to life threatening lung damage";
 - (c) lamps oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.;
- R40
1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following:
 - metallic glitter intended mainly for decoration,
 - artificial snow and frost,
 - 'whoopie' cushions,
 - silly string aerosols,
 - imitation excrement,
 - horns for parties,
 - decorative flakes and foams,
 - artificial cobwebs,
 - stink bombs.
 2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with:
'For professional users only'.
 3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/324/EEC (2).
 4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.

Oil of fir needles artificial

article number: **3301**

Legend

- R75
1. Shall not be placed on the market in mixtures for use for tattooing purposes, and mixtures containing any such substances shall not be used for tattooing purposes, after 4 January 2022 if the substance or substances in question is or are present in the following circumstances:
 - (a) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
 - (b) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as reproductive toxicant category 1A, 1B or 2, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
 - (c) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin sensitiser category 1, 1A or 1B, the substance is present in the mixture in a concentration equal to or greater than 0,001 % by weight;
 - (d) in the case of a substance classified in Part 3 of Annex VI to Regulation (EC) No 1272/2008 as skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2, or as serious eye damage category 1 or eye irritant category 2, the substance is present in the mixture in a concentration equal to or greater than:
 - (i) 0,1 % by weight, if the substance is used solely as a pH regulator;
 - (ii) 0,01 % by weight, in all other cases;
 - (e) in the case of a substance listed in Annex II to Regulation (EC) No 1223/2009 (*1), the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight;
 - (f) in the case of a substance for which a condition of one or more of the following kinds is specified in column g (Product type, Body parts) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration equal to or greater than 0,00005 % by weight:
 - (i) "Rinse-off products";
 - (ii) "Not to be used in products applied on mucous membranes";
 - (iii) "Not to be used in eye products";
 - (g) in the case of a substance for which a condition is specified in column h (Maximum concentration in ready for use preparation) or column i (Other) of the table in Annex IV to Regulation (EC) No 1223/2009, the substance is present in the mixture in a concentration, or in some other way, that does not accord with the condition specified in that column;
 - (h) in the case of a substance listed in Appendix 13 to this Annex, the substance is present in the mixture in a concentration equal to or greater than the concentration limit specified for that substance in that Appendix.
 2. For the purposes of this entry use of a mixture "for tattooing purposes" means injection or introduction of the mixture into a person's skin, mucous membrane or eyeball, by any process or procedure (including procedures commonly referred to as permanent make-up, cosmetic tattooing, micro-blading and micro-pigmentation), with the aim of making a mark or design on his or her body.
 3. If a substance not listed in Appendix 13 falls within more than one of points (a) to (g) of paragraph 1, the strictest concentration limit laid down in the points in question shall apply to that substance. If a substance listed in Appendix 13 also falls within one or more of points (a) to (g) of paragraph 1, the concentration limit laid down in point (h) of paragraph 1 shall apply to that substance.
 4. By way of derogation, paragraph 1 shall not apply to the following substances until 4 January 2023:
 - (a) Pigment Blue 15:3 (CI 74160, EC No 205-685-1, CAS No 147-14-8);
 - (b) Pigment Green 7 (CI 74260, EC No 215-524-7, CAS No 1328-53-6).
 5. If Part 3 of Annex VI to Regulation (EC) No 1272/2008 is amended after 4 January 2021 to classify or re-classify a substance such that the substance then becomes caught by point (a), (b), (c) or (d) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the date of application of that new or revised classification is after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect on the date of application of that new or revised classification.
 6. If Annex II or Annex IV to Regulation (EC) No 1223/2009 is amended after 4 January 2021 to list or change the listing of a substance such that the substance then becomes caught by point (e), (f) or (g) of paragraph 1 of this entry, or such that it then falls within a different one of those points from the one within which it fell previously, and the amendment takes effect after the date referred to in paragraph 1 or, as the case may be, paragraph 4 of this entry, that amendment shall, for the purposes of applying this entry to that substance, be treated as taking effect from the date falling 18 months after entry into force of the act by which that amendment was made.
 7. Suppliers placing a mixture on the market for use for tattooing purposes shall ensure that, after 4 January 2022, the mixture is marked with the following information:
 - (a) the statement "Mixture for use in tattoos or permanent make-up";
 - (b) a reference number to uniquely identify the batch;
 - (c) the list of ingredients in accordance with the nomenclature established in the glossary of common ingredient names pursuant to Article 33 of Regulation (EC) No 1223/2009, or in the absence of a common ingredient name, the IUPAC name. In the absence of a common ingredient name or IUPAC name, the CAS and EC number. Ingredients shall be listed in descending order by weight or volume of the ingredients at the time of formulation. "Ingredient" means any substance added during the process of formulation and present in the mixture for use for tattooing purposes. Impurities shall not be regarded as ingredients. If the name of a substance, used as ingredient within the meaning of this entry, is already required to be stated on the label in accordance with Regulation (EC) No 1272/2008, that ingredient does not need to be marked in accordance with this Regulation;
 - (d) the additional statement "pH regulator" for substances falling under point (d)(i) of paragraph 1;
 - (e) the statement "Contains nickel. Can cause allergic reactions." if the mixture contains nickel below the concentration limit specified in Appendix 13;
 - (f) the statement "Contains chromium (VI). Can cause allergic reactions." if the mixture contains chromium (VI) below the concentration limit specified in Appendix 13;
 - (g) safety instructions for use insofar as they are not already required to be stated on the label by Regulation (EC) No 1272/2008.
- The information shall be clearly visible, easily legible and marked in a way that is indelible.
The information shall be written in the official language(s) of the Member State(s) where the mixture is placed on the market, unless the Member State(s) concerned provide(s) otherwise.
Where necessary because of the size of the package, the information listed in the first subparagraph, except for point (a), shall be included instead in the instructions for use.
Before using a mixture for tattooing purposes, the person using the mixture shall provide the person undergoing the procedure with the information marked on the package or included in the instructions for use pursuant to this paragraph.
8. Mixtures that do not contain the statement "Mixture for use in tattoos or permanent make-up" shall not be used for tattooing purposes.

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

Legend

9. This entry does not apply to substances that are gases at temperature of 20 °C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 °C, with the exception of formaldehyde (CAS No 50-00-0, EC No 200-001-8).

10. This entry does not apply to the placing on the market of a mixture for use for tattooing purposes, or to the use of a mixture for tattooing purposes, when placed on the market exclusively as a medical device or an accessory to a medical device, within the meaning of Regulation (EU) 2017/745, or when used exclusively as a medical device or an accessory to a medical device, within the same meaning. Where the placing on the market or use may not be exclusively as a medical device or an accessory to a medical device, the requirements of Regulation (EU) 2017/745 and of this Regulation shall apply cumulatively.

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

None of the ingredients are listed. (Or Concentration of the substance in a mixture: <0.1 % Mass concentration)

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 | 100 % , 880 g/l |
|-------------|--------------------|

Industrial Emissions Directive (IED)

| | |
|-------------|-----------|
| VOC content | 98 % |
| VOC content | 862,4 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

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) | |

Legend

A) Indicative list of the main pollutants

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

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

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 | AICS | all ingredients are listed |
| CA | DSL | all ingredients are listed |
| CN | IECSC | all ingredients are listed |
| EU | ECSI | all ingredients are listed |
| EU | REACH Reg. | all ingredients are listed |
| JP | CSCL-ENCS | 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 | all ingredients are listed |

Legend

| | |
|------------|---|
| AICS | Australian Inventory of Chemical Substances |
| 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 |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

15.2 Chemical Safety Assessment

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

SECTION 16: Other information

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) |
| ADR/RID/ADN | Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN) |
| 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) |
| CLP | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures |
| 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) |
| EINECS | European Inventory of Existing Commercial Chemical Substances |
| ELINCS | European List of Notified Chemical Substances |
| EmS | Emergency Schedule |
| ErC50 | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control |
| Eye Dam. | Seriously damaging to the eye |
| Eye Irrit. | Irritant to the eye |
| Flam. Liq. | Flammable liquid |
| Flam. Sol. | Flammable solid |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations |
| IARC | International Agency for Research on Cancer |

Safety data sheet

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



Oil of fir needles artificial

article number: 3301

| Abbr. | Descriptions of used abbreviations |
|-------------|--|
| 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 |
| M-factor | Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present |
| NLP | No-Longer Polymer |
| PBT | Persistent, Bioaccumulative and Toxic |
| PNEC | Predicted No-Effect Concentration |
| 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 |
| SVHC | Substance of Very High Concern |
| VOC | Volatile Organic Compounds |
| vPvB | Very Persistent and very Bioaccumulative |

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). 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).

Safety data sheet

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



Oil of fir needles artificial

article number: **3301**

List of relevant phrases (code and full text as stated in chapter 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. |
| H319 | Causes serious eye irritation. |
| 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.