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

Oil of origanum, natural

article number: 6612 date of compilation: 2020-02-18 Version: **2.0 en** Revision: 2022-04-22

Replaces version of: 2020-02-18

Version: (1)

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

Product identifier 1.1

Identification of the substance Oil of origanum, natural

Article number 6612

Registration number (REACH) It is not required to list the identified uses be-

cause the substance is not subject to registration

according to REACH (< 1 t/a).

EC number 281-670-3 CAS number 84012-24-8

Alternative name(s) Oleum Origani cretici

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).

Details of the supplier of the safety data sheet 1.3

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

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

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

sheet:

sicherheit@carlroth.de e-mail (competent person):

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 | |

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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 |
|---------|---|---------------|---------------------------|---------------------|
| 3.10 | Acute toxicity (oral) | 4 | Acute Tox. 4 | H302 |
| 3.1D | Acute toxicity (dermal) | 4 | Acute Tox. 4 | H312 |
| 3.2 | Skin corrosion/irritation | 2 | Skin Irrit. 2 | H315 |
| 3.45 | Skin sensitisation | 1 | Skin Sens. 1 | H317 |
| 3.10 | Aspiration hazard | 1 | Asp. Tox. 1 | H304 |
| 4.1C | Hazardous to the aquatic environment - chronic hazard | 3 | Aquatic Chronic 3 | H412 |

For full text of abbreviations: see SECTION 16

The most important adverse physicochemical, human health and environmental effects

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

GHS07, GHS08





Hazard statements

| H302+H312 | Harmful if swallowed or in contact with skin |
|-----------|--|
| H304 | May be fatal if swallowed and enters airways |

H315 Causes skin irritation

H317 May cause an allergic skin reaction

H412 Harmful to aquatic life with long lasting effects

Precautionary statements

Precautionary statements - prevention

P273 Avoid release to the environment

P280 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements - response

P302+P352 IF ON SKIN: Wash with plenty of soap and water Call a POISON CENTRE/doctor if you feel unwell P332+P313 If skin irritation occurs: Get medical advice/attention

Labelling of packages where the contents do not exceed 125 ml

Signal word: Danger

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Symbol(s)



May be fatal if swallowed and enters airways. H304

H317

May cause an allergic skin reaction. Harmful to aquatic life with long lasting effects. H412

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

2.3 Other hazards

This material is combustible, but will not ignite readily.

Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 **Substances**

"UVCB substance" (substance of unknown or variable composition).

Name of substance Oil of origanum

CAS No 84012-24-8

EC No 281-670-3

Impurities/additives/constituents:

| Name of substance | Identifier | Wt% |
|-------------------|--------------------------|----------|
| Carvacrol | CAS No 499-75-2 | 5 – < 10 |
| | EC No 207-889-6 | |
| y-Terpinene | CAS No 99-85-4 | 5 – < 10 |
| | EC No 202-794-6 | |
| p-Cymene | CAS No 99-87-6 | 5 – < 10 |
| | EC No 202-796-7 | |
| | Index No 601-094-00-1 | |
| Myrcene | CAS No 123-35-3 | 1 – < 5 |
| | EC No 204-622-5 | |
| 4-Terpinenol | CAS No 562-74-3 | 1 – < 5 |
| | EC No 209-235-5 | |
| | | |
| | | |

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| Name of substance | Identifier | Wt% |
|-------------------|--------------------------|------|
| β-Caryophyllene | CAS No 87-44-5 | 1-<5 |
| | EC No 201-746-1 | |
| α-Terpinene | CAS No 99-86-5 | 1-<5 |
| | EC No 202-795-1 | |
| | Index No 601-095-00-7 | |
| Linalool | CAS No 78-70-6 | <1 |
| | EC No 201-134-4 | |
| | Index No 603-235-00-2 | |
| DL-α-Pinene | CAS No 80-56-8 | <1 |
| | EC No 201-291-9 | |

Substance, Specific Conc. Limits, M-factors, ATE

| Specific Conc. Limits | M-Factors | ATE | Exposure route |
|-----------------------|-----------|--|----------------|
| - | - | >300 ^{mg} / _{kg} >1.000 ^{mg} / _{kg} | oral dermal |

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

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

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Following ingestion

Rinse mouth with water (only if the person is conscious). Call a physician immediately. Observe aspiration hazard if vomiting occurs.

4.2 Most important symptoms and effects, both acute and delayed

Aspiration hazard, Vomiting, 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.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂), 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

Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains.

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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.

Measures to prevent fire as well as aerosol and dust generation



Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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:

Specific designs for storage rooms or vessels

Recommended storage temperature: 15 - 25 °C

7.3 Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

National limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Relevant DNELs of components of the mixture

| Name of sub- stance | CAS No | End- point | Threshol d level | Protection goal, route of exposure | Used in | Exposure time |
|------------------------|---------|---------------|------------------------|--|-------------------|-------------------------------|
| y-Terpinene | 99-85-4 | DNEL | 2,939 mg/ m³ | human, inhalat- ory | worker (industry) | chronic - systemic effects |
| y-Terpinene | 99-85-4 | DNEL | 0,833 mg/ kg bw/day | human, dermal | worker (industry) | chronic - systemic effects |
| α-Terpinene | 99-86-5 | DNEL | 2,939 mg/ m³ | human, inhalat- ory | worker (industry) | chronic - systemic effects |

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effects

Relevant DNELs of components of the mixture Name of sub-**CAS No** End-**Threshol Protection Used** in **Exposure time** goal, route of exposure d level stance point chronic - systemic effects α-Terpinene 99-86-5 **DNEL** 0,833 mg/ human, dermal worker (industry) kg bw/day Linalool 78-70-6 DNEL 2,8 mg/m³ human, inhalatworker (industry) chronic - systemic effects ory Linalool 78-70-6 DNEL 16,5 mg/ human, inhalatacute - systemic worker (industry) effects m³ ory human, dermal Linalool 78-70-6 DNEL 2,5 mg/kg worker (industry) chronic - systemic effects bw/day Linalool DNEL 78-70-6 5 mg/kg human, dermal worker (industry) acute - systemic bw/day effects DL-α-Pinene DNEL human, inhalatchronic - systemic 80-56-8 3,8 mg/m³ worker (industry) effects ory DL-α-Pinene 80-56-8 DNEL 0,542 mg/ human, dermal worker (industry) chronic - systemic

kg bw/day

Relevant PNECs of components of the mixture

| Name of sub- stance | CAS No | End- point | Threshol d level | Organism | Environmental compartment | Exposure time |
|------------------------|---------|---------------|------------------------------------|----------------------------|---------------------------------|---------------------------------|
| y-Terpinene | 99-85-4 | PNEC | 0,003 ^{mg} / _l | aquatic organ- isms | freshwater | short-term (single instance) |
| y-Terpinene | 99-85-4 | PNEC | 0 ^{mg} / _l | aquatic organ- isms | marine water | short-term (single instance) |
| y-Terpinene | 99-85-4 | PNEC | 10 ^{mg} / _l | aquatic organ- isms | sewage treatment plant (STP) | short-term (single instance) |
| y-Terpinene | 99-85-4 | PNEC | 0,49 ^{mg} / _{kg} | aquatic organ- isms | freshwater sedi- ment | short-term (single instance) |
| y-Terpinene | 99-85-4 | PNEC | 0,049 ^{mg} / kg | aquatic organ- isms | marine sediment | short-term (single instance) |
| y-Terpinene | 99-85-4 | PNEC | 0,423 ^{mg} / kg | terrestrial organ- isms | soil | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 0,2 ^{mg} / _l | aquatic organ- isms | freshwater | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 0,02 ^{mg} / _l | aquatic organ- isms | marine water | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 10 ^{mg} / _l | aquatic organ- isms | sewage treatment plant (STP) | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 2,22 ^{mg} / _{kg} | aquatic organ- isms | freshwater sedi- ment | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 0,222 ^{mg} / kg | aquatic organ- isms | marine sediment | short-term (single instance) |
| Linalool | 78-70-6 | PNEC | 0,327 ^{mg} / kg | terrestrial organ- isms | soil | short-term (single instance) |
| DL-α-Pinene | 80-56-8 | PNEC | 0,606 ^{µg} / _I | aquatic organ- isms | freshwater | short-term (single instance) |

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Relevant PNECs of components of the mixture

| Name of sub- stance | CAS No | End- point | Threshol d level | Organism | Environmental compartment | Exposure time |
|------------------------|---------|---------------|------------------------------------|----------------------------|---------------------------------|---------------------------------|
| DL-α-Pinene | 80-56-8 | PNEC | 0,061 ^{µg} / _l | aquatic organ- isms | marine water | short-term (single instance) |
| DL-α-Pinene | 80-56-8 | PNEC | 0,2 ^{mg} / _l | aquatic organ- isms | sewage treatment plant (STP) | short-term (single instance) |
| DL-α-Pinene | 80-56-8 | PNEC | 157 ^{µg} / _{kg} | aquatic organ- isms | freshwater sedi- ment | short-term (single instance) |
| DL-α-Pinene | 80-56-8 | PNEC | 15,7 ^{µg} / _{kg} | aquatic organ- isms | marine sediment | short-term (single instance) |
| DL-α-Pinene | 80-56-8 | PNEC | 31,7 ^{µg} / _{kg} | terrestrial organ- isms | soil | short-term (single instance) |

8.2 Exposure controls

Individual protection measures (personal protective equipment)

Eye/face protection





Use safety goggle with side protection.

Skin 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

>0,3 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.

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Respiratory protection





Respiratory protection necessary at: Aerosol or mist formation.

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 - yellow - red brown

Odour characteristic

Melting point/freezing point not determined

Boiling point or initial boiling point and boiling not determined

range

Flammability this material is combustible, but will not ignite

readily

Lower and upper explosion limit not determined

Flash point 76 °C

Auto-ignition temperature not determined

Decomposition temperature not relevant
pH (value) not determined

Kinematic viscosity not determined

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 and/or relative density

Density $0.915 \, {}^{9}/_{\text{cm}^3}$ at 20 ${}^{\circ}\text{C}$

Relative vapour density information on this property is not available

Particle characteristics not relevant (liquid)

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Other safety parameters

Oxidising properties none

9.2 Other information

Information with regard to physical hazard

classes:

hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Refractive index 1,5 - 1,52 (20 °C)

SECTION 10: Stability and reactivity

10.1 Reactivity

This material is not reactive under normal ambient conditions.

If heated

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

There are no specific conditions known which have to be avoided.

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

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

Acute toxicity

Harmful if swallowed. Harmful in contact with skin.

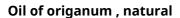
Acute toxicity of components of the mixture

| Name of substance | CAS No | Exposure route | Endpoint | Value | Species |
|-------------------|----------|----------------|----------|--------------------------------------|---------|
| p-Cymene | 99-87-6 | oral | LD50 | 4.750 ^{mg} / _{kg} | rat |
| p-Cymene | 99-87-6 | dermal | LD50 | >5.000 ^{mg} / _{kg} | rabbit |
| Carvacrol | 499-75-2 | oral | LD50 | 810 ^{mg} / _{kg} | rat |
| y-Terpinene | 99-85-4 | oral | LD50 | >2.000 ^{mg} / _{kg} | rat |
| y-Terpinene | 99-85-4 | dermal | LD50 | >2.000 ^{mg} / _{kg} | rat |

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| te toxicity of components of the mixture | | | | | | | |
|--|----------|----------------|----------|---|---------|--|--|
| Name of substance | CAS No | Exposure route | Endpoint | Value | Species | | |
| β-Caryophyllene | 87-44-5 | oral | LD50 | >5.000 ^{mg} / _{kg} | mouse | | |
| Myrcene | 123-35-3 | oral | LD50 | >3.380 ^{mg} / _{kg} | mouse | | |
| Myrcene | 123-35-3 | dermal | LD50 | >5.000 ^{mg} / _{kg} | rabbit | | |
| 4-Terpinenol | 562-74-3 | oral | LD50 | 1.300 ^{mg} / _{kg} | rat | | |
| 4-Terpinenol | 562-74-3 | dermal | LD50 | >2.500 - <5.00 0 ^{mg} / _{kg} | rabbit | | |
| α-Terpinene | 99-86-5 | oral | LD50 | 1.680 ^{mg} / _{kg} | rat | | |
| α-Terpinene | 99-86-5 | dermal | LD50 | >2.000 ^{mg} / _{kg} | rat | | |
| Linalool | 78-70-6 | oral | LD50 | 2.790 ^{mg} / _{kg} | rat | | |
| Linalool | 78-70-6 | dermal | LD50 | 5.610 ^{mg} / _{kg} | rabbit | | |
| DL-α-Pinene | 80-56-8 | dermal | LD50 | >2.000 ^{mg} / _{kg} | rat | | |
| DL-α-Pinene | 80-56-8 | oral | LD50 | 3.700 ^{mg} / _{kg} | rat | | |

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitisation

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.

Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

• If swallowed

vomiting, aspiration hazard

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• If in eyes

Data are not available.

• If inhaled

vertigo, nausea, headache

• If on skin

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

Other information

none

11.2 Endocrine disrupting properties

Not listed.

11.3 Information on other hazards

There is no additional information.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture

| Name of sub- stance | CAS No | Endpoint | Value | Species | Exposure time |
|------------------------|----------|----------|-------------------------------------|-----------------------|------------------|
| p-Cymene | 99-87-6 | LC50 | 48 ^{mg} / _l | fish | 96 h |
| p-Cymene | 99-87-6 | EC50 | 3,7 ^{mg} / _l | aquatic invertebrates | 48 h |
| p-Cymene | 99-87-6 | ErC50 | 4,03 ^{mg} / _l | algae | 72 h |
| Carvacrol | 499-75-2 | LC50 | 6,17 ^{mg} / _l | fish | 96 h |
| Carvacrol | 499-75-2 | EC50 | 6,06 ^{mg} / _l | aquatic invertebrates | 48 h |
| Carvacrol | 499-75-2 | ErC50 | 4,05 ^{mg} / _l | algae | 72 h |
| y-Terpinene | 99-85-4 | EC50 | 2,792 ^{mg} / _l | fish | 96 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 |
| 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 |
| α-Terpinene | 99-86-5 | LC50 | 3.150 ^{µg} / _l | fish | 96 h |
| α-Terpinene | 99-86-5 | EC50 | 1,7 ^{mg} / _l | aquatic invertebrates | 48 h |
| Linalool | 78-70-6 | LC50 | 27,8 ^{mg} / _l | fish | 96 h |
| Linalool | 78-70-6 | EC50 | 59 ^{mg} / _l | aquatic invertebrates | 48 h |
| Linalool | 78-70-6 | ErC50 | 156,7 ^{mg} / _l | algae | 96 h |
| | | | | | |

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| Aquatic toxicity (acute) of components of the mixture | | | | | |
|---|---------|----------|------------------------------------|-----------------------|------------------|
| Name of sub- stance | 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} / ₁ | aguatic invertebrates | 48 h |

Aquatic toxicity (chronic) of components of the mixture Name of sub-stance Exposure time **CAS No Endpoint Value Species** 75,75 ^{mg}/_I Carvacrol 499-75-2 EC50 microorganisms >1.000 ^{mg}/_I y-Terpinene 99-85-4 EC50 3 h microorganisms >10 ^{mg}/_l α-Terpinene 99-86-5 EC50 microorganisms 3 h >100 ^{mg}/_I Linalool 78-70-6 EC50 30 min microorganisms

Biodegradation

Data are not available.

12.2 Process of degradability

| Degradability of components of the mixture | | | | | | |
|--|----------|-----------------------|-----------------------|------|--------|--------|
| Name of substance | CAS No | Process | Degrada- tion rate | Time | Method | Source |
| p-Cymene | 99-87-6 | oxygen deple- tion | 88 % | 14 d | | ECHA |
| Carvacrol | 499-75-2 | oxygen deple- tion | 18,1 % | 28 d | | ECHA |
| y-Terpinene | 99-85-4 | oxygen deple- tion | 27 % | 28 d | | ECHA |
| β-Caryophyl- lene | 87-44-5 | oxygen deple- tion | 10 % | 28 d | | ECHA |
| Myrcene | 123-35-3 | oxygen deple- tion | 76 % | 28 d | | ECHA |
| α-Terpinene | 99-86-5 | oxygen deple- tion | 30 % | 14 d | | ECHA |
| Linalool | 78-70-6 | oxygen deple- tion | 40,9 % | 5 d | | ECHA |
| DL-α-Pinene | 80-56-8 | oxygen deple- tion | 68 % | 28 d | | ECHA |

12.3 Bioaccumulative potential

Data are not available.

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| Name of substance | CAS No | BCF | Log KOW | BOD5/COD |
|-------------------|----------|-----|------------------------------|----------|
| p-Cymene | 99-87-6 | | 4,8 (pH value: ~7, 20 °C) | |
| Carvacrol | 499-75-2 | | 3,33 (40 °C) | |
| y-Terpinene | 99-85-4 | | 5,4 (25 °C) | |
| β-Caryophyllene | 87-44-5 | | 6,23 (pH value: 7, 25 °C) | |
| Myrcene | 123-35-3 | | 4,82 (pH value: ~6,5, 30 °C) | |
| α-Terpinene | 99-86-5 | | 5,3 (35 °C) | |
| Linalool | 78-70-6 | | 2,9 (pH value: 7, 20 °C) | |
| DL-α-Pinene | 80-56-8 | | 4,83 | |

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

Not 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.

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

UN number or ID number not subject to transport regulations

14.2 UN proper shipping name not assigned

Transport hazard class(es) 14.3 none

14.4 Packing group not assigned

14.5 **Environmental hazards** non-environmentally hazardous acc. to the dan-

gerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

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

Not subject to ADR, RID and ADN.

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

SECTION 15: Regulatory information

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 origanum | this product meets the criteria for classification in accordance with Reg- ulation No 1272/2008/EC | | R3 | 3 |
| Oil of origanum | substances in tattoo inks and permanent make-up | | R75 | 75 |

Legend

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:

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(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.';

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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

(ií) 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

(f) in the case of a substance is the invalid in the legislation (EC) No 1223/2009 (17), 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:

(ii) "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 concen-

(n) 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.

as also falls within one of more of points (a) to (g) of paragraph 1, the concentration limit faid down in point (ii) 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 now or revised classification in fifty the date referred to in paragraph 1 or as the case may be paragraph. plication 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";

(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;

tion 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.



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9. This entry does not apply to substances that are gases at temperature of 20 $^{\circ}$ C and pressure of 101,3 kPa, or generate a vapour pressure of more than 300 kPa at temperature of 50 $^{\circ}$ 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

Not listed.

Seveso Directive

| 2012/ | 2012/18/EU (Seveso III) | | | | |
|-------|---------------------------------------|---|-------|--|--|
| No | Dangerous substance/hazard categories | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes | | |
| | not assigned | | | | |

Deco-Paint Directive

| VOC content | 100 % 915 ^g / _l |
|-------------|--|
| | |

Industrial Emissions Directive (IED)

| VOC content | 100 % |
|-------------|---------------------------------|
| VOC content | 915 ^g / _l |

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

not listed

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

not listed

Water Framework Directive (WFD)

not listed

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

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

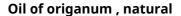
not listed

Regulation on persistent organic pollutants (POP)

not listed

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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 | AICS | substance is listed |
| CA | DSL | substance is listed |
| CN | IECSC | substance is listed |
| EU | ECSI | substance is listed |
| NZ | NZIoC | substance is listed |
| TW | TCSI | substance is listed |

Legend

AICS DSL Australian Inventory of Chemical Substances Domestic Substances List (DSL)

EC Substance Inventory (EINECS, ELINCS, NLP)
Inventory of Existing Chemical Substances Produced or Imported in China
New Zealand Inventory of Chemicals
Taiwan Chemical Substance Inventory ECSI IECSC

NZIoC

Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU

Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value) | Safety- relev- ant |
|---------|---|--|--------------------------|
| 2.1 | | Classification according to Regulation (EC) No 1272/2008 (CLP): change in the listing (table) | yes |
| 2.1 | | The most important adverse physicochemical, human health and environmental effects: Spillage and fire water can cause pollution of watercourses. | yes |
| 2.3 | Other hazards: There is no additional information. | Other hazards: This material is combustible, but will not ignite readily. | yes |
| 2.3 | | Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB. | yes |

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Abbreviations and acronyms

| Abbr. | Descriptions of used abbreviations | | |
|----------|---|--|--|
| ADN | Accord européen relatif au transport international des marchandises dangereuses par voies de navig tion intérieures (European Agreement concerning the International Carriage of Dangerous Goods by I land Waterways) | | |
| ADR | Accord relatif au transport international des marchandises dangereuses par route (Agreement concer ing the International Carriage of Dangerous Goods by Road) | | |
| ATE | Acute Toxicity Estimate | | |
| BCF | Bioconcentration factor | | |
| BOD | Biochemical Oxygen Demand | | |
| CAS | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substance | | |
| 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 causin 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 ide fier of substances commercially available within the EU (European Union) | | |
| EINECS | European Inventory of Existing Commercial Chemical Substances | | |
| ELINCS | European List of Notified Chemical Substances | | |
| 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 | | |
| GHS | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United N tions | | |
| IATA | International Air Transport Association | | |
| IATA/DGR | Dangerous Goods Regulations (DGR) for the air transport (IATA) | | |
| ICAO | International Civil Aviation Organization | | |
| IMDG | International Maritime Dangerous Goods Code | | |
| index No | The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulatio (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 durin specified time interval | | |
| log KOW | n-Octanol/water | | |
| 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) | | |

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| Abbr. | Descriptions of used abbreviations |
|-------|--|
| 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.

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).

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

| Code | Text |
|------|--|
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H312 | Harmful in contact with skin. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H412 | Harmful to aquatic life with long lasting effects. |

Disclaimer

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

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