acc. to Safe Work Australia - Code of Practice

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## Oil of camphor all-natural

article number: 3357 Version: GHS 2.0 en

Replaces version of: 2021-04-30

Version: (GHS 1)

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

#### **Product identifier** 1.1

Identification of the substance Oil of camphor all-natural

Article number 3357

CAS number 8008-51-3

#### 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). Food, drink and animal feeding-

stuffs.

#### 1.3 Details of the supplier of the safety data sheet

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

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

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

sheet:

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

#### 1.4 **Emergency telephone number**

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

## **SECTION 2: Hazards identification**

#### 2.1 Classification of the substance or mixture

## Classification acc. to GHS

| Section | Hazard class                      |    | Hazard class and category | Hazard<br>statement |
|---------|-----------------------------------|----|---------------------------|---------------------|
| 2.6     | Flammable liquid                  | 3  | Flam. Liq. 3              | H226                |
| 3.2     | Skin corrosion/irritation         | 2  | Skin Irrit. 2             | H315                |
| 3.3     | Serious eye damage/eye irritation | 2A | Eye Irrit. 2A             | H319                |
| 3.45    | Skin sensitisation                | 1  | Skin Sens. 1              | H317                |

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| Section | Hazard class      |   | Hazard class and category | Hazard<br>statement |  |
|---------|-------------------|---|---------------------------|---------------------|--|
| 3.10    | Aspiration hazard | 1 | Asp. Tox. 1               | H304                |  |

For full text of abbreviations: see SECTION 16

## The most important adverse physicochemical, human health and environmental effects

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

### 2.2 Label elements

#### Labelling

Signal word Danger

## **Pictograms**

GHS02, GHS07, GHS08







## **Hazard statements**

| H226 | Flammable liquid and vapour                  |
|------|--|
| H304 | May be fatal if swallowed and enters airways |
| H315 | Causes skin irritation                       |
| H317 | May cause an allergic skin reaction          |

H317 May cause an allergic skin reaction H319 Causes serious eye irritation

## **Precautionary statements**

#### **Precautionary statements - prevention**

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

## **Precautionary statements - response**

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact

lenses, if present and easy to do. Continue rinsing

P331 Do NOT induce vomiting

P370+P378 In case of fire: Use sand, carbon dioxide or powder extinguisher for extinction

## Precautionary statements - storage

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

#### 2.3 Other hazards

#### Results of PBT and vPvB assessment

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

## **Endocrine disrupting properties**

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0.1\%$ .

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# **SECTION 3: Composition/information on ingredients**

## 3.1 Substances

Name of substance Oil of camphor

Molecular formula  $C_{30}H_{50}O$  Molar mass  $426.7 \, ^{\rm g}\!\!/_{\rm mol}$  CAS No 8008-51-3

## Impurities/additives/constituents:

| Name of substance | Identifier         | Wt%     |
|-------------------|--------------------|---------|
| Eucalyptol        | CAS No<br>470-82-6 | 25 – 50 |
| DL-Limonene       | CAS No<br>138-86-3 | 10 – 25 |
| p-Cymene          | CAS No<br>99-87-6  | 10 – 25 |
| ß-Phellandrene    | CAS No<br>555-10-2 | 5 – 10  |
| α-Phellandren     | CAS No<br>99-83-2  | 5 – 10  |
| y-Terpinene       | CAS No<br>99-85-4  | 5 – 10  |
| α-Terpinene       | CAS No<br>99-86-5  | 1 – 5   |
| Myrcene           | CAS No<br>123-35-3 | 1 – 5   |
| ß-Pinene          | CAS No<br>127-91-3 | 1 – 5   |
| DL-α-Pinene       | CAS No<br>80-56-8  | 1 – 5   |

## **Remarks**

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.

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#### Following skin contact

After contact with skin, wash immediately with plenty of water. 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, 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 (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

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

#### **Hazardous combustion products**

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

## 5.3 Advice for firefighters

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

## SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. Do not breathe vapour/spray. Avoidance of ignition sources.

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#### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

## 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.

## 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.

## Advice on general occupational hygiene

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

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed.

## **Incompatible substances or mixtures**

Observe hints for combined storage.

## **Consideration of other advice:**

Ground/bond container and receiving equipment.

### **Ventilation requirements**

Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

## 7.3 Specific end use(s)

No information available.

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# **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**

| Name of sub-<br>stance | CAS No   | End-<br>point | Threshol<br>d level    | Protection<br>goal, route of<br>exposure | Used in           | Exposure time                 |
|------------------------|----------|---------------|------------------------|--|-------------------|-------------------------------|
| Eucalyptol             | 470-82-6 | DNEL          | 7.05 mg/<br>m³         | human, inhalat-<br>ory                   | worker (industry) | chronic - systemic<br>effects |
| Eucalyptol             | 470-82-6 | DNEL          | 2 mg/kg<br>bw/day      | human, dermal                            | worker (industry) | chronic - systemic<br>effects |
| y-Terpinene            | 99-85-4  | DNEL          | 2.939 mg/<br>m³        | human, inhalat-<br>ory                   | worker (industry) | chronic - systemic<br>effects |
| y-Terpinene            | 99-85-4  | DNEL          | 0.833 mg/<br>kg bw/day | human, dermal                            | worker (industry) | chronic - systemic<br>effects |
| α-Terpinene            | 99-86-5  | DNEL          | 2.939 mg/<br>m³        | human, inhalat-<br>ory                   | worker (industry) | chronic - systemic<br>effects |
| α-Terpinene            | 99-86-5  | DNEL          | 0.833 mg/<br>kg bw/day | human, dermal                            | worker (industry) | chronic - systemic<br>effects |
| ß-Pinene               | 127-91-3 | DNEL          | 5.69 mg/<br>m³         | human, inhalat-<br>ory                   | worker (industry) | chronic - systemic<br>effects |
| ß-Pinene               | 127-91-3 | DNEL          | 0.8 mg/kg<br>bw/day    | human, dermal                            | worker (industry) | chronic - systemic<br>effects |
| ß-Pinene               | 127-91-3 | DNEL          | 54 μg/cm²              | human, dermal                            | worker (industry) | chronic - local ef-<br>fects  |
| DL-α-Pinene            | 80-56-8  | DNEL          | 3.8 mg/m <sup>3</sup>  | human, inhalat-<br>ory                   | worker (industry) | chronic - systemic<br>effects |
| DL-α-Pinene            | 80-56-8  | DNEL          | 0.542 mg/<br>kg bw/day | human, dermal                            | worker (industry) | chronic - systemic<br>effects |

## **Relevant PNECs of components**

| Name of sub-<br>stance | CAS No   | End-<br>point | Threshol<br>d level              | Organism               | Environmental compartment       | Exposure time                   |
|------------------------|----------|---------------|----------------------------------|------------------------|---------------------------------|---------------------------------|
| Eucalyptol             | 470-82-6 | PNEC          | 57 <sup>µg</sup> / <sub>I</sub>  | aquatic organ-<br>isms | freshwater                      | short-term (single<br>instance) |
| Eucalyptol             | 470-82-6 | PNEC          | 5.7 <sup>µg</sup> / <sub>l</sub> | aquatic organ-<br>isms | marine water                    | short-term (single<br>instance) |
| Eucalyptol             | 470-82-6 | PNEC          | 10 <sup>mg</sup> / <sub>l</sub>  | aquatic organ-<br>isms | sewage treatment<br>plant (STP) | short-term (single instance)    |
| Eucalyptol             | 470-82-6 | PNEC          | 1.425 <sup>mg</sup> / kg         | aquatic organ-<br>isms | freshwater sedi-<br>ment        | short-term (single<br>instance) |
| Eucalyptol             | 470-82-6 | PNEC          | 0.142 <sup>mg</sup> /<br>kg      | aquatic organ-<br>isms | marine sediment                 | short-term (single<br>instance) |

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# Relevant PNECs of components

| Relevant PiveCS        |          |               |                                    |                            |                                 |                                 |
|------------------------|----------|---------------|------------------------------------|----------------------------|---------------------------------|---------------------------------|
| Name of sub-<br>stance | CAS No   | End-<br>point | Threshol<br>d level                | Organism                   | Environmental compartment       | Exposure time                   |
| Eucalyptol             | 470-82-6 | PNEC          | 0.25 <sup>mg</sup> / <sub>kg</sub> | terrestrial organ-<br>isms | soil                            | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 0.003 <sup>mg</sup> / <sub>l</sub> | aquatic organ-<br>isms     | freshwater                      | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 0 <sup>mg</sup> / <sub>l</sub>     | aquatic organ-<br>isms     | marine water                    | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 10 <sup>mg</sup> / <sub>l</sub>    | aquatic organ-<br>isms     | sewage treatment<br>plant (STP) | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 0.49 <sup>mg</sup> / <sub>kg</sub> | aquatic organ-<br>isms     | freshwater sedi-<br>ment        | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 0.049 <sup>mg</sup> /<br>kg        | aquatic organ-<br>isms     | marine sediment                 | short-term (single<br>instance) |
| y-Terpinene            | 99-85-4  | PNEC          | 0.423 <sup>mg</sup> /<br>kg        | terrestrial organ-<br>isms | soil                            | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 1.004 <sup>µg</sup> / <sub>I</sub> | aquatic organ-<br>isms     | freshwater                      | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 0.1 <sup>µg</sup> / <sub>l</sub>   | aquatic organ-<br>isms     | marine water                    | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 3.26 <sup>mg</sup> / <sub>l</sub>  | aquatic organ-<br>isms     | sewage treatment<br>plant (STP) | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 0.337 <sup>mg</sup> /<br>kg        | aquatic organ-<br>isms     | freshwater sedi-<br>ment        | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 0.034 <sup>mg</sup> /<br>kg        | aquatic organ-<br>isms     | marine sediment                 | short-term (single<br>instance) |
| ß-Pinene               | 127-91-3 | PNEC          | 0.067 <sup>mg</sup> /<br>kg        | terrestrial organ-<br>isms | soil                            | short-term (single<br>instance) |
| DL-α-Pinene            | 80-56-8  | PNEC          | 0.606 <sup>µg</sup> / <sub>l</sub> | aquatic organ-<br>isms     | freshwater                      | short-term (single<br>instance) |
| DL-α-Pinene            | 80-56-8  | PNEC          | 0.061 <sup>µg</sup> / <sub>l</sub> | aquatic organ-<br>isms     | marine water                    | short-term (single<br>instance) |
| DL-α-Pinene            | 80-56-8  | PNEC          | 0.2 <sup>mg</sup> / <sub>l</sub>   | aquatic organ-<br>isms     | sewage treatment<br>plant (STP) | short-term (single<br>instance) |
| DL-α-Pinene            | 80-56-8  | PNEC          | 157 <sup>µg</sup> / <sub>kg</sub>  | aquatic organ-<br>isms     |                                 |                                 |
| DL-α-Pinene            | 80-56-8  | PNEC          | 15.7 <sup>µg</sup> / <sub>kg</sub> | aquatic organ-<br>isms     | marine sediment                 | short-term (single<br>instance) |
| DL-α-Pinene            | 80-56-8  | PNEC          | 31.7 <sup>µg</sup> / <sub>kg</sub> | terrestrial organ-<br>isms | soil                            | short-term (single<br>instance) |

## 8.2 Exposure controls

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## **Individual protection measures (personal protective equipment)**

## **Eye/face protection**



Use safety goggle with side protection.

## Skin protection



## hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a 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

>0,11 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.

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## **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

Physical state liquid

Colour colourless
Odour characteristic

Melting point/freezing point <-20 °C (ECHA)

Boiling point or initial boiling point and boiling 155 – 172 °C at 1,012 hPa (ECHA)

range

Flammability flammable liquid in accordance with GHS criteria

Lower and upper explosion limit not determined

Flash point 45.75 °C at 101.2 kPa (ECHA) Auto-ignition temperature 250 °C at 99,324 Pa (ECHA)

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 0.895 g/cm³

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 There is no additional information.

classes:

Other safety characteristics:

Refractive index 1.47

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## **SECTION 10: Stability and reactivity**

## 10.1 Reactivity

It's a reactive substance. 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.

#### Possibility of hazardous reactions 10.3

Violent reaction with: strong oxidiser

## 10.4 Conditions to avoid

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

## 10.5 Incompatible materials

There is no additional information.

## 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## **SECTION 11: Toxicological information**

## 11.1 Information on toxicological effects

Classification acc. to GHS

## **Acute toxicity**

Shall not be classified as acutely toxic.

Acute toxicity of components

| Acute toxicity |          |       |         |        |  |
|----------------|----------|-------|---------|--------|--|
| Exposure route | Endpoint | Value | Species | Method |  |

| <b>Exposure route</b> | Endpoint | Value                               | Species | Method | Source |
|-----------------------|----------|-------------------------------------|---------|--------|--------|
| oral                  | LD50     | 5,100 <sup>mg</sup> / <sub>kg</sub> | rat     |        | ECHA   |

#### Name of substance Exposure **CAS No Endpoint** Value **Species** route 2,480 <sup>mg</sup>/<sub>kg</sub> Eucalyptol 470-82-6 LD50 oral rat 5,300 <sup>mg</sup>/<sub>kg</sub> DL-Limonene LD50 138-86-3 oral rat 4,750 mg/kg p-Cymene 99-87-6 oral LD50 rat 99-87-6 >5,000 <sup>mg</sup>/<sub>kq</sub> p-Cymene dermal LD50 rabbit y-Terpinene 99-85-4 oral LD50 $>2,000 \, \text{mg/kg}$ rat $>2,000 \, \text{mg/kg}$ y-Terpinene 99-85-4 dermal LD50 rat 1,680 <sup>mg</sup>/<sub>kg</sub> 99-86-5 LD50 α-Terpinene oral rat 99-86-5 LD50 $>2,000 \frac{mg}{ka}$ α-Terpinene dermal rat

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| Acute | toxicity | of c | omp | onents |
|-------|----------|------|-----|--------|
|-------|----------|------|-----|--------|

| Name of substance | CAS No   | Exposure route | Endpoint | Value                                | Species |
|-------------------|----------|----------------|----------|--------------------------------------|---------|
| ß-Pinene          | 127-91-3 | oral           | LD50     | 4,700 <sup>mg</sup> / <sub>kg</sub>  | rat     |
| DL-α-Pinene       | 80-56-8  | dermal         | LD50     | >2,000 <sup>mg</sup> / <sub>kg</sub> | rat     |
| DL-α-Pinene       | 80-56-8  | oral           | LD50     | 3,700 <sup>mg</sup> / <sub>kg</sub>  | rat     |
| Myrcene           | 123-35-3 | oral           | LD50     | >3,380 <sup>mg</sup> / <sub>kg</sub> | mouse   |
| Myrcene           | 123-35-3 | dermal         | LD50     | >5,000 <sup>mg</sup> / <sub>kg</sub> | 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.

#### 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

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

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## 11.2 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq$  0,1%.

# **SECTION 12: Ecological information**

## 12.1 Toxicity

Toxic to aquatic life with long lasting effects.

| Aquatic toxicity (acute) |                                  |                       |        |                  |  |  |  |
|--------------------------|----------------------------------|-----------------------|--------|------------------|--|--|--|
| Endpoint                 | Value                            | Species               | Source | Exposure<br>time |  |  |  |
| LL50                     | 3.7 <sup>mg</sup> / <sub>l</sub> | fish                  | ECHA   | 96 h             |  |  |  |
| EL50                     | 5 <sup>mg</sup> / <sub>l</sub>   | aquatic invertebrates | ECHA   | 48 h             |  |  |  |

## Aquatic toxicity (acute) of components

| Name of sub-<br>stance | CAS No   | Endpoint | Value                              | Species                                  | Exposure<br>time |
|------------------------|----------|----------|------------------------------------|--|------------------|
| Eucalyptol             | 470-82-6 | LC50     | 57 <sup>mg</sup> / <sub>l</sub>    | fish                                     | 96 h             |
| Eucalyptol             | 470-82-6 | EC50     | >100 <sup>mg</sup> / <sub>l</sub>  | aquatic invertebrates                    | 48 h             |
| Eucalyptol             | 470-82-6 | ErC50    | >74 <sup>mg</sup> / <sub>l</sub>   | algae                                    | 72 h             |
| DL-Limonene            | 138-86-3 | EC50     | 17 <sup>mg</sup> / <sub>l</sub>    | daphnia magna                            | 48 h             |
| DL-Limonene            | 138-86-3 | LC50     | 80 <sup>mg</sup> / <sub>l</sub>    | rainbow trout (Onco-<br>rhynchus mykiss) | 96 h             |
| p-Cymene               | 99-87-6  | LC50     | 48 <sup>mg</sup> / <sub>l</sub>    | fish                                     | 96 h             |
| p-Cymene               | 99-87-6  | EC50     | 3.7 <sup>mg</sup> / <sub>l</sub>   | aquatic invertebrates                    | 48 h             |
| p-Cymene               | 99-87-6  | ErC50    | 4.03 <sup>mg</sup> / <sub>l</sub>  | algae                                    | 72 h             |
| y-Terpinene            | 99-85-4  | EC50     | 2.792 <sup>mg</sup> / <sub>l</sub> | fish                                     | 96 h             |
| α-Terpinene            | 99-86-5  | LC50     | 3,150 <sup>µg</sup> / <sub>l</sub> | fish                                     | 96 h             |
| α-Terpinene            | 99-86-5  | EC50     | 1.7 <sup>mg</sup> / <sub>l</sub>   | aquatic invertebrates                    | 48 h             |
| ß-Pinene               | 127-91-3 | LC50     | 0.68 <sup>mg</sup> / <sub>l</sub>  | rainbow trout (Onco-<br>rhynchus mykiss) | 96 h             |
| ß-Pinene               | 127-91-3 | EC50     | 1.09 <sup>mg</sup> / <sub>l</sub>  | daphnia magna                            | 48 h             |
| ß-Pinene               | 127-91-3 | ErC50    | 0.7 <sup>mg</sup> / <sub>l</sub>   | Pseudokirchneriella<br>subcapitata       | 72 h             |
| DL-α-Pinene            | 80-56-8  | LC50     | 0.303 <sup>mg</sup> / <sub>l</sub> | fish                                     | 96 h             |
| DL-α-Pinene            | 80-56-8  | EC50     | 0.475 <sup>mg</sup> / <sub>l</sub> | aquatic invertebrates                    | 48 h             |
| Myrcene                | 123-35-3 | EC50     | 1.47 <sup>mg</sup> / <sub>l</sub>  | aquatic invertebrates                    | 48 h             |
| Myrcene                | 123-35-3 | EC50     | 0.31 <sup>mg</sup> / <sub>l</sub>  | algae                                    | 72 h             |
| Myrcene                | 123-35-3 | ErC50    | 0.342 <sup>mg</sup> / <sub>l</sub> | algae                                    | 72 h             |

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## Aquatic toxicity (chronic) of components

| Name of sub-<br>stance | CAS No   | Endpoint | Value                               | Species        | Exposure<br>time |
|------------------------|----------|----------|-------------------------------------|----------------|------------------|
| Eucalyptol             | 470-82-6 | EC50     | >100 <sup>mg</sup> / <sub>l</sub>   | microorganisms | 3 h              |
| y-Terpinene            | 99-85-4  | EC50     | >1,000 <sup>mg</sup> / <sub>l</sub> | microorganisms | 3 h              |
| α-Terpinene            | 99-86-5  | EC50     | >10 <sup>mg</sup> / <sub>l</sub>    | microorganisms | 3 h              |
| ß-Pinene               | 127-91-3 | EC50     | 326 <sup>mg</sup> / <sub>l</sub>    | microorganisms | 3 h              |

## 12.2 Persistence and degradability

Theoretical Oxygen Demand:  $3.149 \, ^{mg}/_{mg}$  Theoretical Carbon Dioxide:  $3.094 \, ^{mg}/_{mg}$ 

## **Degradability of components**

| Name of substance | CAS No   | Process                      | Degrada-<br>tion rate | Time | Method | Source |
|-------------------|----------|------------------------------|-----------------------|------|--------|--------|
| Eucalyptol        | 470-82-6 | carbon dioxide<br>generation | 82 %                  | 28 d |        | ECHA   |
| p-Cymene          | 99-87-6  | oxygen deple-<br>tion        | 88 %                  | 14 d |        | ECHA   |
| y-Terpinene       | 99-85-4  | oxygen deple-<br>tion        | 27 %                  | 28 d |        | ECHA   |
| α-Terpinene       | 99-86-5  | oxygen deple-<br>tion        | 30 %                  | 14 d |        | ECHA   |
| ß-Pinene          | 127-91-3 | oxygen deple-<br>tion        | 76 %                  | 28 d |        | ECHA   |
| DL-α-Pinene       | 80-56-8  | oxygen deple-<br>tion        | 68 %                  | 28 d |        | ECHA   |
| Myrcene           | 123-35-3 | oxygen deple-<br>tion        | 76 %                  | 28 d |        | ECHA   |

## 12.3 Bioaccumulative potential

Data are not available.

## **Bioaccumulative potential of components**

| Name of substance | CAS No   | BCF | Log KOW                      | BOD5/COD |
|-------------------|----------|-----|------------------------------|----------|
| Eucalyptol        | 470-82-6 |     | 3.4                          |          |
| DL-Limonene       | 138-86-3 |     | 4.57                         |          |
| p-Cymene          | 99-87-6  |     | 4.8 (pH value: ~7, 20 °C)    |          |
| y-Terpinene       | 99-85-4  |     | 5.4 (25 °C)                  |          |
| α-Terpinene       | 99-86-5  |     | 5.3 (35 °C)                  |          |
| DL-α-Pinene       | 80-56-8  |     | 4.83                         |          |
| Myrcene           | 123-35-3 |     | 4.82 (pH value: ~6.5, 30 °C) |          |

## 12.4 Mobility in soil

Data are not available.

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# ROTH

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#### 12.5 Results of PBT and vPvB assessment

Data are not available.

#### 12.6 Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of  $\geq 0.1\%$ .

#### 12.7 Other adverse effects

Data are not available.

## **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods



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

## Sewage disposal-relevant information

Do not empty into drains.

## Waste treatment of containers/packagings

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used. Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

## Relevant provisions relating to waste(Basel Convention)

## Properties of waste which render it hazardous

**H3** Flammable liquids

**H11** Toxic (Delayed or chronic)

### 13.3 Remarks

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

# **SECTION 14: Transport information**

## 14.1 UN number

UN RTDGUN 1130IMDG-CodeUN 1130ICAO-TIUN 1130

## 14.2 UN proper shipping name

UN RTDGCAMPHOR OILIMDG-CodeCAMPHOR OILICAO-TICamphor oil

### 14.3 Transport hazard class(es)

UN RTDG 3
IMDG-Code 3

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ICAO-TI 3

14.4 Packing group

UN RTDG III
IMDG-Code III
ICAO-TI III

**14.5 Environmental hazards** hazardous to the aquatic environment

14.6 Special precautions for user

There is no additional information.

14.7 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 informationNational regulationsAdditional information(UN RTDG)

UN number 1130

Class 3

**Environmental hazards** Yes

Hazardous to the aquatic environment

Packing group III

Danger label(s) 3

Fish and tree



Special provisions (SP)

UN RTDG

Excepted quantities (EQ)

E1 UN RTDG

Limited quantities (LQ) 5

UN RTDG

Emergency Action Code 3Y

International Maritime Dangerous Goods Code (IMDG) - Additional information

Proper shipping name CAMPHOR OIL

Particulars in the shipper's declaration UN1130, CAMPHOR OIL, 3, III, 45.75°C c.c., MAR-

INE POLLUTANT

Marine pollutant yes (hazardous to the aquatic environment)

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





Special provisions (SP) 
Excepted quantities (EQ) E1

Limited quantities (LQ) 5 L

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**EmS** F-E, S-E

Stowage category Α

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

Proper shipping name Camphor oil

Particulars in the shipper's declaration UN1130, Camphor oil, 3, III

**Environmental hazards YES** (hazardous to the aquatic environment)

Danger label(s) 3



Excepted quantities (EQ) E1 10 L Limited quantities (LQ)

## **SECTION 15: Regulatory information**

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

There is no additional information.

National regulations(Australia)

Australian Inventory of Chemical Substances(AICS)

Substance is 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      | AIIC      | substance is listed          |
| CA      | DSL       | substance is listed          |
| CN      | IECSC     | substance is listed          |
| KR      | KECI      | substance is listed          |
| MX      | INSQ      | substance is listed          |
| NZ      | NZIoC     | substance is listed          |
| PH      | PICCS     | substance is listed          |
| TW      | TCSI      | substance is listed          |
| US      | TSCA      | substance is listed (ACTIVE) |
| VN      | NCI       | substance is listed          |

Legend

AIIC

DSL

Australian Inventory of Industrial Chemicals Domestic Substances List (DSL) Inventory of Existing Chemical Substances Produced or Imported in China National Inventory of Chemical Substances

Korea Existing Chemicals Inventory

National Chemical Inventory New Zealand Inventory of Chemicals Philippine Inventory of Chemicals and Chemical Substances (PICCS)

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Legend

Taiwan Chemical Substance Inventory Toxic Substance Control Act

## 15.2 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)

| Section | Former entry (text/value)              | Actual entry (text/value)   | Safety-<br>relev-<br>ant |
|---------|--|---|--------------------------|
| 1.1     | CAS number:<br>92201-50-8<br>8008-51-3 | CAS number:<br>8008-51-3  | yes                      |
| 2.3     |  | Endocrine disrupting properties:<br>Does not contain an endocrine disruptor (ED) at<br>a concentration of ≥ 0,1%.   | yes                      |
| 14.8    |  | Emergency Action Code:<br>3Y  | yes                      |
| 15.1    |  | 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. | yes                      |
| 15.1    |  | National inventories:<br>change in the listing (table)  | yes                      |

## **Abbreviations and acronyms**

| Abbr.                  | Descriptions of used abbreviations   |  |
|------------------------|--|--|
| BCF                    | Bioconcentration factor  |  |
| BOD                    | Biochemical Oxygen Demand  |  |
| CAS                    | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)   |  |
| COD                    | Chemical oxygen demand   |  |
| DGR                    | Dangerous Goods Regulations (see IATA/DGR)   |  |
| DNEL                   | Derived No-Effect Level  |  |
| EC50                   | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval |  |
| ED Endocrine disruptor |  |  |
| EL50                   | Effective Loading 50 %: the EL50 corresponds to the loading rate required to produce a response in 50% of the test organisms   |  |
| 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           |  |
| GHS                    | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations  |  |
| IATA                   | International Air Transport Association  |  |

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| Abbr.     | Descriptions of used abbreviations  |
|-----------|---|
| IATA/DGR  | Dangerous Goods Regulations (DGR) for the air transport (IATA)  |
| ICAO      | International Civil Aviation Organization   |
| ICAO-TI   | Technical instructions for the safe transport of dangerous goods by air   |
| IMDG      | International Maritime Dangerous Goods Code   |
| IMDG-Code | International Maritime Dangerous Goods Code   |
| LC50      | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval |
| LD50      | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval                  |
| LL50      | Lethal Loading 50 %: the LL50 corresponds to the loading rate causing 50 % lethality  |
| log KOW   | n-Octanol/water   |
| PBT       | Persistent, Bioaccumulative and Toxic   |
| PNEC      | Predicted No-Effect Concentration   |
| UN RTDG   | UN Recommendations on the Transport of Dangerous Good   |
| vPvB      | Very Persistent and very Bioaccumulative  |

## Key literature references and sources for data

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

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

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

| Code   | Text                                 |  |
|--|--------------------------------------|--|
| H226 Flammable liquid and vapour.                  |                                      |  |
| 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.       |  |

## **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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