# EO Litsea cubeba

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 2/14/2024 Version: 1.0

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Substance (UVCB) |
| Substance name | : | EO Litsea cubeba |
| IUPAC name | : | Litsea cubeba, ext. |
| EC-No. | : | 290-018-7 |
| CAS-No. | : | 90063-59-5 |
| Product code | : | 20128 |
| Product group | : | Trade product |

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

#### 1.2.1. Relevant identified uses

Intended for general public

| | | |
|---|---|---|
| Main use category | : | Professional use,Consumer use |
| Use of the substance/mixture | : | Fragrance raw material |

#### 1.2.2. Uses advised against

No additional information available

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

De Hekserij
Spoorstraat 57
8271 RG IJsselmuiden
Nederland
www.hekserij.nl

### 1.4. Emergency telephone number

No additional information available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

| | |
|---|---|
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Skin sensitisation, Category 1 | H317 |
| Aspiration hazard, Category 1 | H304 |
| Hazardous to the aquatic environment – Chronic Hazard, Category 2 | H411 |

Full text of H- and EUH-statements: see section 16

**Adverse physicochemical, human health and environmental effects**

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard pictograms (CLP) :

GHS07 GHS08 GHS09

Signal word (CLP) : Danger

| | | |
|---|---|---|
| Hazard statements (CLP) | : | H304 - May be fatal if swallowed and enters airways.<br>H315 - Causes skin irritation.<br>H317 - May cause an allergic skin reaction.<br>H319 - Causes serious eye irritation.<br>H411 - Toxic to aquatic life with long lasting effects. |
| Precautionary statements (CLP) | : | P261 - Avoid breathing fume, mist, spray, vapours.<br>P264 - Wash hands thoroughly after handling.<br>P273 - Avoid release to the environment.<br>P280 - Wear protective gloves, eye protection.<br>P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor.<br>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P331 - Do NOT induce vomiting.<br>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.<br>P337+P313 - If eye irritation persists: Get medical advice/attention.<br>P362+P364 - Take off contaminated clothing and wash it before reuse.<br>P391 - Collect spillage.<br>P405 - Store locked up.<br>P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |

### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

| | | |
|---|---|---|
| Substance type | : | UVCB |
| Name | : | EO Litsea cubeba |
| CAS-No. | : | 90063-59-5 |
| EC-No. | : | 290-018-7 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| EO Litsea cubeba | CAS-No.: 90063-59-5<br>EC-No.: 290-018-7 | 100 | See section 2.1 |
| Citral | CAS-No.: 5392-40-5<br>EC-No.: 226-394-6<br>EC Index-No.: 605-019-00-3<br>REACH-no: 01-2119462829-23 | 50.001 – 100 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317 |
| Limonene D- (nat) | CAS-No.: 5989-27-5<br>EC-No.: 227-813-5<br>EC Index-No.: 601-096-00-2 | 10.001 – 20 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Linalool | CAS-No.: 78-70-6<br>EC-No.: 201-134-4<br>EC Index-No.: 603-235-00-2<br>REACH-no: 01-2119474016-42 | 1.001 – 5 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Citronellal | CAS-No.: 106-23-0<br>EC-No.: 203-376-6 | 1.001 – 5 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Eukalyptol (1.8-Cineol) | CAS-No.: 470-82-6<br>EC-No.: 207-431-5 | 1.001 – 5 | Flam. Liq. 3, H226<br>Skin Sens. 1B, H317 |
| GERANIOL | CAS-No.: 106-24-1<br>EC-No.: 203-377-1 | 1.001 – 5 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1B, H317 |
| Myrcene | CAS-No.: 123-35-3<br>EC-No.: 204-622-5 | 1.001 – 5 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Nerol | CAS-No.: 106-25-2<br>EC-No.: 203-378-7 | 1.001 – 5 | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317 |
| Pinene alpha | CAS-No.: 80-56-8<br>EC-No.: 201-291-9 | 1.001 – 5 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304 |
| Pinene beta | CAS-No.: 127-91-3<br>EC-No.: 204-872-5 | 1.001 – 5 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304 |
| 4-Carvomenthenol | CAS-No.: 562-74-3<br>EC-No.: 209-235-5 | 1.001 – 5 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Aquatic Chronic 3, H412 |
| Sabinene | CAS-No.: 3387-41-5<br>EC-No.: 222-212-4 | 1.001 – 5 | Acute Tox. 4 (Oral), H302 |
| Geranic acid | CAS-No.: 459-80-3<br>EC-No.: 207-299-9 | 1.001 – 5 | Acute Tox. 4 (Dermal), H312 |
| Caryophyllene beta | CAS-No.: 87-44-5<br>EC-No.: 201-746-1 | 0.101 – 1 | Skin Sens. 1B, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Citronellol | CAS-No.: 106-22-9<br>EC-No.: 203-375-0<br>REACH-no: 01-2119453995-23 | 0.101 – 1 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Lindenol (IFF) | CAS-No.: 98-55-5<br>EC-No.: 202-680-6<br>REACH-no: 01-2119980717-23 | 0.101 – 1 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319 |
| Terpinolene | CAS-No.: 586-62-9<br>EC-No.: 209-578-0 | 0.101 – 1 | Skin Sens. 1B, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Geranyl acetate | CAS-No.: 105-87-3<br>EC-No.: 203-341-5<br>REACH-no: 01-2119973480-35 | 0.101 – 1 | Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Aquatic Chronic 3, H412 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Camphene | CAS-No.: 79-92-5<br>EC-No.: 201-234-8 | 0.101 – 1 | Flam. Sol. 1, H228<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| p-Cymene | CAS-No.: 99-87-6<br>EC-No.: 202-796-7<br>EC Index-No.: 601-094-00-1 | 0.101 – 1 | Flam. Liq. 3, H226<br>Acute Tox. 3 (Inhalation), H331<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 |
| Longifolene | CAS-No.: 475-20-7<br>EC-No.: 207-491-2 | 0.101 – 1 | Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

Full text of H- and EUH-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung oedema.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

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

Fire hazard : No fire hazard.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

#### 6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Store locked up.

Packaging materials : Store always product in container of same material as original container.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

No additional information available

#### 8.1.2. Recommended monitoring procedures

No additional information available

#### 8.1.3. Air contaminants formed

No additional information available

#### 8.1.4. DNEL and PNEC

| EO Litsea cubeba (90063-59-5) | |
|---|---|
| **DNEL/DMEL (Workers)** | |
| Long-term - systemic effects, dermal | 1.71 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 9 mg/m³ |
| **DNEL/DMEL (General population)** | |
| Long-term - systemic effects,oral | 0.57 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 2.69 mg/m³ |
| Long-term - systemic effects, dermal | 1.03 mg/kg bodyweight/day |

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**
Ensure good ventilation of the work station.

#### 8.2.2. Personal protection equipment

**Personal protective equipment:**
Wear recommended personal protective equipment.

**Personal protective equipment symbol(s):**

#### 8.2.2.1. Eye and face protection

**Eye protection:**
Safety glasses

#### 8.2.2.2. Skin protection

**Skin and body protection:**
Wear suitable protective clothing

**Hand protection:**
Protective gloves

#### 8.2.2.3. Respiratory protection

**Respiratory protection:**
In case of insufficient ventilation, wear suitable respiratory equipment

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**
Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Colour | : | dark yellow. light yellow. |
| Odour | : | Not available |
| Odour threshold | : | Not available |
| Melting point | : | < -20 °C |
| Freezing point | : | Not available |
| Boiling point | : | 83 °C Atm. press.: 1013 hPa |
| Flammability | : | Non flammable. |
| Lower explosion limit | : | Not available |
| Upper explosion limit | : | Not available |
| Flash point | : | 68.3 °C |
| Auto-ignition temperature | : | Not available |
| Decomposition temperature | : | Not available |
| pH | : | Not available |
| Viscosity, kinematic | : | Not available |
| Solubility | : | Not available |
| Partition coefficient n-octanol/water (Log Kow) | : | Not available |
| Vapour pressure | : | 60.29 Pa Temp.: 25 °C |
| Vapour pressure at 50°C | : | Not available |
| Density | : | Not available |
| Relative density | : | 0.885 Type: 'relative density' Temp.: 20 °C |
| Relative vapour density at 20°C | : | Not available |
| Particle characteristics | : | Not applicable |

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

| EO Litsea cubeba (90063-59-5) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
| LD50 dermal rabbit | 4800 mg/kg bodyweight Animal: rabbit, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 2400 - 9600 |

| Citral (5392-40-5) | |
|---|---|
| LD50 oral rat | ≈ 6800 mg/kg bodyweight Animal: rat |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat |

| Limonene D- (nat) (5989-27-5) | |
|---|---|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method) |

| Linalool (78-70-6) | |
|---|---|
| LD50 oral rat | 2790 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:, 95% CL: 2440 - 3180 |
| LD50 dermal rabbit | 5610 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374 |

| Citronellal (106-23-0) | |
|---|---|
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat |
| LD50 dermal rabbit | 2500 – 5000 mg/kg bodyweight Animal: rabbit |

| GERANIOL (106-24-1) | |
|---|---|
| LD50 oral rat | ≈ 3600 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg |

| Myrcene (123-35-3) | |
|---|---|
| LD50 oral rat | > 11390 mg/kg bodyweight Animal: rat |
| LD50 oral | > 3380 mg/kg bodyweight Animal: mouse |
| LD50 dermal rabbit | > 5000 mg/l Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| Nerol (106-25-2) | |
|---|---|
| LD50 oral rat | 4500 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 3400 - 5600 |
| LD50 dermal rabbit | > 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| Pinene alpha (80-56-8) | |
|---|---|
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)) |

| 4-Carvomenthenol (562-74-3) | |
|---|---|
| LD50 oral rat | 1300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
| LD50 dermal rabbit | 2500 – 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |

| Sabinene (3387-41-5) | |
|---|---|
| LD50 oral rat | 300 – 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method) |

| Caryophyllene beta (87-44-5) | |
|---|---|
| LD50 oral | > 5000 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: not determinable due to absence of adverse toxic effects |

| Lindenol (IFF) (98-55-5) | |
|---|---|
| LD50 oral rat | 4300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2900 - 5700 |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| Terpinolene (586-62-9) | |
|---|---|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| Geranyl acetate (105-87-3) | |
|---|---|
| LD50 oral rat | 6330 mg/kg bodyweight Animal: rat, 95% CL: 5450 - 7340 |
| LD50 dermal rabbit | > 2000 mg/kg |

| Camphene (79-92-5) | |
|---|---|
| LD50 dermal rabbit | > 2000 mg/kg bodyweight Animal: rabbit |

| p-Cymene (99-87-6) | |
|---|---|
| LD50 dermal rabbit | > 5000 mg/kg bodyweight Animal: rabbit, Guideline: other: |

| Longifolene (475-20-7) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |

Skin corrosion/irritation : Causes skin irritation.

| 4-Carvomenthenol (562-74-3) | |
|---|---|
| pH | 6.8 – 7.1 Temp.: 20 °C |

Serious eye damage/irritation : Causes serious eye irritation.

| 4-Carvomenthenol (562-74-3) | |
|---|---|
| pH | 6.8 – 7.1 Temp.: 20 °C |

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

| Citral (5392-40-5) | |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

| Citronellal (106-23-0) | |
|---|---|
| NOAEL (chronic, oral, animal/male, 2 years) | 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified.

| EO Litsea cubeba (90063-59-5) | |
|---|---|
| LOAEC (inhalation, rat, gas, 90 days) | 68 ppm Animal: rat, Animal sex: female, Guideline: other: |
| NOAEL (oral, rat, 90 days) | 100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEC (inhalation, rat, gas, 90 days) | 34 ppm Animal: rat, Animal sex: female, Guideline: other: |
| NOAEL (subchronic, oral, animal/male, 90 days) | 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

| Citral (5392-40-5) | |
|---|---|
| LOAEC (inhalation, rat, gas, 90 days) | 68 ppm Animal: rat, Animal sex: female |
| NOAEL (oral, rat, 90 days) | 100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEC (inhalation, rat, gas, 90 days) | 34 ppm Animal: rat, Animal sex: female |
| NOAEL (subchronic, oral, animal/male, 90 days) | 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

| Linalool (78-70-6) | |
|---|---|
| NOAEL (dermal, rat/rabbit, 90 days) | 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |

| Citronellal (106-23-0) | |
|---|---|
| LOAEC (inhalation, rat, gas, 90 days) | 68 ppm Animal: rat, Animal sex: female |
| NOAEL (oral, rat, 90 days) | 100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |
| NOAEC (inhalation, rat, gas, 90 days) | 34 ppm Animal: rat, Animal sex: female |
| NOAEL (subchronic, oral, animal/male, 90 days) | 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) |

| Eukalyptol (1.8-Cineol) (470-82-6) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Non-rodents) |

| Myrcene (123-35-3) | |
|---|---|
| LOAEL (oral, rat, 90 days) | 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (subchronic, oral, animal/male, 90 days) | 500 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (subchronic, oral, animal/female, 90 days) | 250 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |

| Citronellol (106-22-9) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 2000 mg/kg bodyweight Animal: rat, Guideline: other: |

| Citronellol (106-22-9) | |
|---|---|
| NOAEC (inhalation, rat, dust/mist/fume, 90 days) | 0.063 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study) |

| Lindenol (IFF) (98-55-5) | |
|---|---|
| NOAEL (oral, rat, 90 days) | ≥ 314 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |

| Geranyl acetate (105-87-3) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 2000 mg/kg bodyweight Animal: rat, Guideline: other: |

Aspiration hazard : May be fatal if swallowed and enters airways.

| Citral (5392-40-5) | |
|---|---|
| Viscosity, kinematic | 2.42 mm²/s at 20 °C |

| Linalool (78-70-6) | |
|---|---|
| Viscosity, kinematic | 5191.86 mm²/s |

| Nerol (106-25-2) | |
|---|---|
| Viscosity, kinematic | 10.37 mm²/s at 20 °C |

### 11.2. Information on other hazards

No additional information available

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

| Citral (5392-40-5) | |
|---|---|
| LC50 - Fish [1] | 6.78 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 6.8 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 103.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

| Limonene D- (nat) (5989-27-5) | |
|---|---|
| LC50 - Fish [1] | 720 µg/l Test organisms (species): Pimephales promelas |
| LC50 - Fish [2] | 702 µg/l Test organisms (species): Pimephales promelas |
| EC50 - Crustacea [1] | 0.307 mg/l Test organisms (species): Daphnia magna |
| EC50 - Crustacea [2] | 0.51 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 0.32 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | 0.214 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Linalool (78-70-6) | |
|---|---|
| LC50 - Fish [1] | 27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) |

| Linalool (78-70-6) | |
|---|---|
| EC50 - Crustacea [1] | 59 mg/l Test organisms (species): Daphnia magna |
| EC50 96h - Algae [1] | 88.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| EC50 96h - Algae [2] | 156.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

| Citronellal (106-23-0) | |
|---|---|
| LC50 - Fish [1] | ≈ 22 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 8.7 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 13.33 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| EC50 72h - Algae [2] | 6.74 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

| Eukalyptol (1.8-Cineol) (470-82-6) | |
|---|---|
| LC50 - Fish [1] | 57 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) |
| EC50 - Crustacea [1] | > 100 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | > 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 96h - Algae [1] | > 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| GERANIOL (106-24-1) | |
|---|---|
| LC50 - Fish [1] | ≈ 22 mg/l |
| EC50 - Crustacea [1] | ≈ 10.8 ml/l |
| ErC50 algae | ≈ 13.1 mg/l |
| NOEC chronic fish | ≈ 10 mg/l |
| NOEC chronic algae | ≈ 1 ml/l |

| Myrcene (123-35-3) | |
|---|---|
| EC50 - Crustacea [1] | 1.47 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 0.342 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | 0.31 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Nerol (106-25-2) | |
|---|---|
| LC50 - Fish [1] | 20.3 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 32.4 mg/l Test organisms (species): Daphnia magna |

| Pinene alpha (80-56-8) | |
|---|---|
| LC50 - Fish [1] | 0.303 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 0.475 mg/l Test organisms (species): Daphnia magna |

| 4-Carvomenthenol (562-74-3) | |
|---|---|
| LC50 - Fish [1] | 15.6 mg/l Test organisms (species): |
| EC50 - Other aquatic organisms [1] | 26.6 mg/l Test organisms (species): |

| Sabinene (3387-41-5) | |
|---|---|
| EC50 - Crustacea [1] | ≈ 3960 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | > 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Caryophyllene beta (87-44-5) | |
|---|---|
| EC50 - Crustacea [1] | > 0.17 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | > 0.033 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Citronellol (106-22-9) | |
|---|---|
| LC50 - Fish [1] | 14.66 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 17.48 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 2.4 mg/l Test organisms (species): |

| Lindenol (IFF) (98-55-5) | |
|---|---|
| LC50 - Fish [1] | 70 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 73 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | ≈ 68 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | ≈ 17 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Terpinolene (586-62-9) | |
|---|---|
| LC50 - Fish [1] | 0.805 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 0.634 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 11.69 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Geranyl acetate (105-87-3) | |
|---|---|
| LC50 - Fish [1] | 68.12 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 14.1 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 3.72 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| ErC50 algae | 3.72 mg/l Species: Desmodesmus subspicatus 72 h |

| Camphene (79-92-5) | |
|---|---|
| LC50 - Fish [1] | 0.72 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 0.72 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 1.75 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| p-Cymene (99-87-6) | |
|---|---|
| LC50 - Fish [1] | 48 mg/l Test organisms (species): Cyprinodon variegatus |
| EC50 - Crustacea [1] | 3.7 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 4.03 mg/l Test organisms (species): Scenedesmus capricornutum |
| EC50 72h - Algae [2] | 2.01 mg/l Test organisms (species): Scenedesmus capricornutum |

| Longifolene (475-20-7) | |
|---|---|
| EC50 - Crustacea [1] | 0.119 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 0.28 mg/l Test organisms (species): other: |

## 12.2. Persistence and degradability

| EO Litsea cubeba (90063-59-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Citral (5392-40-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Limonene D- (nat) (5989-27-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Linalool (78-70-6) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Citronellal (106-23-0) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Eukalyptol (1.8-Cineol) (470-82-6) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| GERANIOL (106-24-1) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Myrcene (123-35-3) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Nerol (106-25-2) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Pinene alpha (80-56-8) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Pinene beta (127-91-3) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| 4-Carvomenthenol (562-74-3) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Sabinene (3387-41-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Geranic acid (459-80-3) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Caryophyllene beta (87-44-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Citronellol (106-22-9) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Lindenol (IFF) (98-55-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Terpinolene (586-62-9) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Geranyl acetate (105-87-3) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Camphene (79-92-5) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| p-Cymene (99-87-6) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

| Longifolene (475-20-7) | |
|---|---|
| Persistence and degradability | Not rapidly degradable |

## 12.3. Bioaccumulative potential

| Citral (5392-40-5) | |
|---|---|
| Partition coefficient n-octanol/water (Log Kow) | 2.76 at 25 °C |

| Linalool (78-70-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | ≥ 2.84 |

| GERANIOL (106-24-1) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | ≈ 2.6 |

| Nerol (106-25-2) | |
|---|---|
| Partition coefficient n-octanol/water (Log Kow) | 2.76 pH value: ~6.5, 30 °C |

| Citronellol (106-22-9) | |
|---|---|
| BCF - Fish [1] | 82.59 |
| Partition coefficient n-octanol/water (Log Pow) | 3.3 |

| Lindenol (IFF) (98-55-5) | |
|---|---|
| Partition coefficient n-octanol/water (Log Kow) | ≥ 2.67 |

## 12.4. Mobility in soil

| Citral (5392-40-5) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.169 |

## 12.5. Results of PBT and vPvB assessment

No additional information available

## 12.6. Endocrine disrupting properties

No additional information available

## 12.7. Other adverse effects

No additional information available

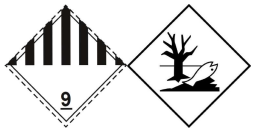
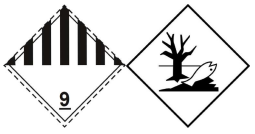
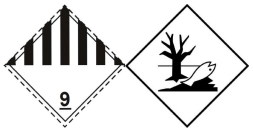
## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

## SECTION 14: Transport information

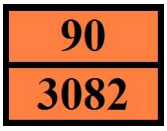
In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| **14.1. UN number or ID number** | | | | |
| UN 3082 | UN 3082 | UN 3082 | UN 3082 | UN 3082 |
| **14.2. UN proper shipping name** | | | | |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba) | Environmentally hazardous substance, liquid, n.o.s. (EO Litsea cubeba) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba) |
| **Transport document description** | | | | |
| UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba), 9, III, (-) | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba), 9, III, MARINE POLLUTANT | UN 3082 Environmentally hazardous substance, liquid, n.o.s. (EO Litsea cubeba), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Litsea cubeba), 9, III |
| **14.3. Transport hazard class(es)** | | | | |
| 9 | 9 | 9 | 9 | 9 |
|  |  |  |  |  |
| **14.4. Packing group** | | | | |
| III | III | III | III | III |
| **14.5. Environmental hazards** | | | | |
| Dangerous for the environment: Yes | Dangerous for the environment: Yes<br>Marine pollutant: Yes | Dangerous for the environment: Yes | Dangerous for the environment: Yes | Dangerous for the environment: Yes |
| No supplementary information available | | | | |

### 14.6. Special precautions for user

**Overland transport**

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5l
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19

| | | |
|---|---|---|
| Portable tank and bulk container instructions (ADR) | : | T4 |
| Portable tank and bulk container special provisions (ADR) | : | TP1, TP29 |
| Tank code (ADR) | : | LGBV |
| Vehicle for tank carriage | : | AT |
| Transport category (ADR) | : | 3 |
| Special provisions for carriage - Packages (ADR) | : | V12 |
| Special provisions for carriage - Loading, unloading and handling (ADR) | : | CV13 |
| Hazard identification number (Kemler No.) | : | 90 |
| Orange plates | : |  |
| Tunnel restriction code (ADR) | : | - |



### Transport by sea

| | | |
|---|---|---|
| Special provisions (IMDG) | : | 274, 335, 969 |
| Limited quantities (IMDG) | : | 5 L |
| Excepted quantities (IMDG) | : | E1 |
| Packing instructions (IMDG) | : | LP01, P001 |
| Special packing provisions (IMDG) | : | PP1 |
| IBC packing instructions (IMDG) | : | IBC03 |
| Tank instructions (IMDG) | : | T4 |
| Tank special provisions (IMDG) | : | TP1, TP29 |
| EmS-No. (Fire) | : | F-A |
| EmS-No. (Spillage) | : | S-F |
| Stowage category (IMDG) | : | A |

### Air transport

| | | |
|---|---|---|
| PCA Excepted quantities (IATA) | : | E1 |
| PCA Limited quantities (IATA) | : | Y964 |
| PCA limited quantity max net quantity (IATA) | : | 30kgG |
| PCA packing instructions (IATA) | : | 964 |
| PCA max net quantity (IATA) | : | 450L |
| CAO packing instructions (IATA) | : | 964 |
| CAO max net quantity (IATA) | : | 450L |
| Special provisions (IATA) | : | A97, A158, A197, A215 |
| ERG code (IATA) | : | 9L |

### Inland waterway transport

| | | |
|---|---|---|
| Classification code (ADN) | : | M6 |
| Special provisions (ADN) | : | 274, 335, 375, 601 |
| Limited quantities (ADN) | : | 5 L |
| Excepted quantities (ADN) | : | E1 |
| Carriage permitted (ADN) | : | T |
| Equipment required (ADN) | : | PP |
| Number of blue cones/lights (ADN) | : | 0 |

### Rail transport

| | | |
|---|---|---|
| Classification code (RID) | : | M6 |
| Special provisions (RID) | : | 274, 335, 375, 601 |
| Limited quantities (RID) | : | 5L |
| Excepted quantities (RID) | : | E1 |
| Packing instructions (RID) | : | P001, IBC03, LP01, R001 |
| Special packing provisions (RID) | : | PP1 |
| Mixed packing provisions (RID) | : | MP19 |
| Portable tank and bulk container instructions (RID) | : | T4 |
| Portable tank and bulk container special provisions (RID) | : | TP1, TP29 |
| Tank codes for RID tanks (RID) | : | LGBV |
| Transport category (RID) | : | 3 |

| | | |
|---|---|---|
| Special provisions for carriage – Packages (RID) | : | W12 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : | CW13, CW31 |
| Colis express (express parcels) (RID) | : | CE8 |
| Hazard identification number (RID) | : | 90 |

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

**REACH Annex XVII (Restriction List)**

| EU restriction list (REACH Annex XVII) | | |
|---|---|---|
| **Reference code** | **Applicable on** | **Entry title or description** |
| 3(a) | Limonene D- (nat) ; Eukalyptol (1.8-Cineol) ; Myrcene ; Pinene beta ; p-Cymene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F |
| 3(b) | EO Litsea cubeba ; Citral ; Limonene D- (nat) ; Linalool ; Citronellal ; Eukalyptol (1.8-Cineol) ; GERANIOL ; Myrcene ; Nerol ; Pinene alpha ; Pinene beta ; 4-Carvomenthenol ; Sabinene ; Geranic acid ; Caryophyllene beta ; Citronellol ; Lindenol (IFF) ; Terpinolene ; Geranyl acetate ; p-Cymene ; Longifolene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10 |
| 3(c) | EO Litsea cubeba ; Limonene D- (nat) ; Myrcene ; 4-Carvomenthenol ; Caryophyllene beta ; Terpinolene ; Geranyl acetate ; p-Cymene ; Longifolene | Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1 |
| 40. | Limonene D- (nat) ; Eukalyptol (1.8-Cineol) ; Myrcene ; Pinene beta ; Camphene ; p-Cymene | Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not. |

**REACH Annex XIV (Authorisation List)**

Not listed on REACH Annex XIV (Authorisation List)

**REACH Candidate List (SVHC)**

Not listed on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Not listed on the PIC list (Regulation EU 649/2012)

### POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

### Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

### 15.1.2. National regulations

### Netherlands

| | | |
|---|---|---|
| SZW-lijst van kankerverwekkende stoffen | : | The substance is not listed |
| SZW-lijst van mutagene stoffen | : | The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Borstvoeding | : | The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Vruchtbaarheid | : | The substance is not listed |
| SZW-lijst van reprotoxische stoffen – Ontwikkeling | : | The substance is not listed |

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

| Abbreviations and acronyms: | |
|---|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |

| Abbreviations and acronyms: | |
|---|---|
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |

| Full text of H- and EUH-statements: | |
|---|---|
| Acute Tox. 3 (Inhalation) | Acute toxicity (inhal.), Category 3 |
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment – Acute Hazard, Category 1 |
| Aquatic Chronic 1 | Hazardous to the aquatic environment – Chronic Hazard, Category 1 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment – Chronic Hazard, Category 2 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment – Chronic Hazard, Category 3 |
| Asp. Tox. 1 | Aspiration hazard, Category 1 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Flam. Sol. 1 | Flammable solids, Category 1 |
| H226 | Flammable liquid and vapour. |
| H228 | Flammable solid. |
| 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. |
| H318 | Causes serious eye damage. |

| Full text of H- and EUH-statements: | |
|---|---|
| H319 | Causes serious eye irritation. |
| H331 | Toxic if inhaled. |
| 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. |
| H412 | Harmful to aquatic life with long lasting effects. |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| Skin Sens. 1B | Skin sensitisation, category 1B |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.