# Coriander Seed Essential Oil

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Issue date: 5/11/2023 Version: 1.0

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Substance |
| Substance name | : | Coriander Seed Essential Oil |
| Chemical name | : | Coriandrum Sativum Fruit Oil. |
| EC Index-No. | : | - / 283-880-0 |
| EC-No. | : | - / 283-880-0 |
| CAS-No. | : | 8008-52-4 / 84775-50-8 |
| Product code | : | Formulation Only |
| Synonyms | : | Coriandrum Sativum Fruit Oil. |
| Other means of identification | : | Coriandrum Sativum Fruit Oil is the volatile oil obtained from the dried fruit of the Coriander, Coriandrum sativum L., Umbelliferae. |

### 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 | : | Consumer use |
| Industrial/Professional use spec | : | Industrial<br>For professional use only |

#### 1.2.2. Uses advised against

No additional information available

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

Naissance
Unit 9 & 11 Milland Road Industrial Estate Milland Road
SA11 1NJ Neath
United Kingdom
www.naissance.com

### 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]**

| | |
|---|---|
| Flammable liquids, Category 3 | H226 |
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 2 | H319 |
| Skin sensitisation, Category 1 | H317 |
| 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**

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

### 2.2. Label elements

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

Hazard pictograms (CLP) :

GHS02 GHS07 GHS09

Signal word (CLP) : Warning

Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P102 - Keep out of reach of children.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P261 - Avoid breathing vapours.
P264 - Wash hands thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves.
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.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use carbon dioxide (CO2), foam to extinguish.
P391 - Collect spillage.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents to an approved waste disposal plant.

### 2.3. Other hazards

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

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : Coriander Seed Essential Oil
CAS-No. : 8008-52-4 / 84775-50-8
EC-No. : - / 283-880-0
EC Index-No. : - / 283-880-0

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Linalool | CAS-No.: 78-70-6<br>EC-No.: 201-134-4<br>EC Index-No.: 603-235-00-2 | 65 – 78 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Alpha-Pinene | CAS-No.: 80-56-8 / 7785-26-4<br>EC-No.: 201-291-9 | 1 – 9 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| gamma-Terpinene | CAS-No.: 99-85-4<br>EC-No.: 202-794-6 | 2 – 7 | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Camphor | CAS-No.: 76-22-2 / 21368-68-3<br>EC-No.: 200-945-0 | 3.5 – 6 | Flam. Sol. 2, H228<br>Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Inhalation), H332<br>STOT SE 2, H371 |
| Limonene | CAS-No.: 5989-27-5<br>EC-No.: 227-813-5<br>EC Index-No.: 601-096-00-2 | 1.5 – 5 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Asp. Tox. 1, H304<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Geranil acetate | CAS-No.: 105-87-3<br>EC-No.: 203-341-5 | 1 – 4.5 | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 3, H412 |
| p-Cymene | CAS-No.: 99-87-6<br>EC-No.: 202-796-7<br>EC Index-No.: 601-094-00-1 | ≤ 4 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Asp. Tox. 1, H304 |
| Geraniol | CAS-No.: 106-24-1<br>EC-No.: 203-377-1 | ≤ 2.9 | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Eye Dam. 1, H318 |
| Camphene | CAS-No.: 79-92-5<br>EC-No.: 201-234-8 | ≤ 1.7 | Flam. Sol. 1, H228<br>Eye Irrit. 2, H319<br>Aquatic Chronic 1, H410 |
| Beta-Myrcene | CAS-No.: 123-35-3<br>EC-No.: 204-622-5 | ≤ 1.5 | Carc. 1B, H350 |
| Terpinolene | CAS-No.: 586-62-9<br>EC-No.: 209-578-0 | ≤ 1.1 | Flam. Liq. 3, H226<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 |
| Beta-Pinene | CAS-No.: 127-91-3<br>EC-No.: 204-872-5 | ≤ 1 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, 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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Move the affected person away from the contaminated area and into the fresh air. Get immediate medical advice/attention. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Get medical advice/attention. Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation occurs: Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs:

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Immediately rinse with water for a prolonged period while holding the eyelids wide open. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting because of corrosive effects. Get immediate medical advice/attention. Rinse mouth out with water. Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

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

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

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

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

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

Fire hazard : Toxic fumes may be released. When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide and dioxide, smoke, nitrogen oxides (NOx). Flammable liquid and vapour.

Explosion hazard : May form flammable/explosive vapour-air mixture.

### 5.3. Advice for firefighters

Precautionary measures fire : Avoid breathing dust, mist or spray.

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

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

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

Measures in case of dust release : Provide a good standard of controlled ventilation (10 to 15 air changes per hour). Wear protective clothing. Keep unnecessary and unprotected personnel away from spillage. No open flames. No smoking. Avoid contact with skin and clothing. Harmful by inhalation, on contact with skin and if swallowed.

#### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Do not allow to enter drains or water courses. Prevent liquid from entering sewers, watercourses, underground or low areas. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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

For containment : Cover spill with non combustible material, e.g.: sand, earth, vermiculite.
Methods for cleaning up : Absorb spilled material with sand or earth. Notify authorities if product enters sewers or public waters. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Heading 8. For further information refer to section 8: "Exposure controls/personal protection". Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Apply good manufacturing practice and industrial hygiene practices, ensuring proper ventilation. Keep containers leak proof, tightly closed and dry when not in use. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapours. Work in a well-ventilated area. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

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

Technical measures : Keep in a cool, well-ventilated place away from heat. Store in tightly closed, leak-proof containers. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container tightly closed.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

### 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

| Camphor (76-22-2 / 21368-68-3) | |
|---|---|
| **United Kingdom - Occupational Exposure Limits** | |
| WEL TWA (OEL TWA) [1] | 13 |
| WEL TWA (OEL TWA) [2] | 2 ppm |
| WEL STEL (OEL STEL) | 19 |
| WEL STEL (OEL STEL) [ppm] | 3 ppm |

| Limonene (5989-27-5) | |
|---|---|
| **Germany - Occupational Exposure Limits (TRGS 900)** | |
| Local name | (R)-p-Mentha-1,8-dien (D-Limonen) |
| AGW (OEL TWA) [1] | 28 mg/m³ |
| AGW (OEL TWA) [2] | 5 ppm |
| Peak exposure limitation factor | 4(II) |
| Remark | DFG - Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG (MAK-Kommission); H - hautresorptiv; Sh - Hautsensibilisierender Stoff; Y - Ein Risiko der Fruchtschädigung braucht bei Einhaltung des Arbeitsplatzgrenzwertes und des biologischen Grenzwertes (BGW) nicht befürchtet zu werden |
| Regulatory reference | TRGS900 |

#### 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

No additional information available

#### 8.1.5. Control banding

No additional information available

### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

No additional information available

#### 8.2.2. Personal protection equipment

**Personal protective equipment:**
Insulated gloves. Protective goggles. Protective clothing. Avoid all unnecessary exposure.

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

#### 8.2.2.1. Eye and face protection

**Eye protection:**
Chemical goggles or safety glasses

#### 8.2.2.2. Skin protection

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

**Hand protection:**
Wear protective gloves.

#### 8.2.2.3. Respiratory protection

**Respiratory protection:**
Wear appropriate mask

#### 8.2.2.4. Thermal hazards

No additional information available

#### 8.2.3. Environmental exposure controls

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

**Consumer exposure controls:**
The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures.

**Other information:**
Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

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

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Appearance | : | Liquid. |
| Colour | : | Colourless to yellow. |
| Odour | : | Characteristic herb. |
| Odour threshold | : | No data available |
| pH | : | No data available |
| Relative evaporation rate (butylacetate=1) | : | No data available |
| Melting point | : | ≤ -20.0 |
| Freezing point | : | No data available |
| Boiling point | : | No data available |
| Flash point | : | ≥ 62.5 (Closed cup) |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Flammability (solid, gas) | : | No data available |
| Vapour pressure | : | 633 Pa @25°C |
| Relative vapour density at 20 °C | : | No data available |
| Relative density | : | Approx. 0.870 @ 20°C |
| Solubility | : | insoluble in water. |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosive properties | : | No data available |
| Oxidising properties | : | No data available |
| Explosive limits | : | No data available |

### 9.2. Other information

| | | |
|---|---|---|
| Refractive index | : | Approx. 1.465 @ 20°C |

## 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. Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

None under normal use. Not established.

### 10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Oxidizing agent. Acids. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. May release flammable gases. fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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

| Linalool (78-70-6) | |
|---|---|
| LD50 oral rat | 3000 mg/kg |
| LD50 oral | 2790 mg/kg |
| LD50 dermal rabbit | 5610 mg/kg |
| LC50 Inhalation - Rat | > 20 mg/l/4h |

| Alpha-Pinene (80-56-8 / 7785-26-4) | |
|---|---|
| LD50 oral rat | 3700 mg/kg |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)) |

| gamma-Terpinene (99-85-4) | |
|---|---|
| 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, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |

| Camphor (76-22-2 / 21368-68-3) | |
|---|---|
| LD50 oral | 1500 mg/g |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity) |
| LC50 Inhalation - Rat | 1.5 mg/l |

| Limonene (5989-27-5) | |
|---|---|
| LD50 oral rat | 4400 mg/kg |
| LD50 dermal | > 2000 mg/kg |
| LC50 Inhalation - Rat | > 20 mg/l |

| Geranil acetate (105-87-3) | |
|---|---|
| LD50 oral rat | ≈ 6330 mg/kg |

| p-Cymene (99-87-6) | |
|---|---|
| LD50 oral rat | 4750 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg bodyweight Animal: rabbit, Guideline: other: |
| LD50 dermal | > 2000 mg/kg |
| LC50 Inhalation - Rat | > 20 mg/l/4h |

| Geraniol (106-24-1) | |
|---|---|
| LD50 oral rat | ≈ 3600 ml/kg |
| LD50 dermal rabbit | > 5 g/kg |

| Beta-Pinene (127-91-3) | |
|---|---|
| LD50 dermal rat | ≈ 4700 mg/kg |

| 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) |

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

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

Germ cell mutagenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Carcinogenicity : Not classified

Additional information : Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified

Additional information : Based on available data, the classification criteria are not met

| gamma-Terpinene (99-85-4) | |
|---|---|
| NOAEL (animal/male, F1) | 250 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |
| NOAEL (animal/female, F1) | 100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) |

STOT-single exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

| Camphor (76-22-2 / 21368-68-3) | |
|---|---|
| STOT-single exposure | May cause damage to organs. |

STOT-repeated exposure : Not classified

Additional information : Based on available data, the classification criteria are not met

| 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) |

| Camphor (76-22-2 / 21368-68-3) | |
|---|---|
| NOAEL (oral, rat, 90 days) | 3.2 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (dermal, rat/rabbit, 90 days) | 250 mg/kg bodyweight Animal: rat, Guideline: other: |

Aspiration hazard : Not classified

Additional information : Based on available data, the classification criteria are not met

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

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : 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.

| Linalool (78-70-6) | |
|---|---|
| LC50 - Fish [1] | 27.8 mg/l |
| EC50 - Crustacea [1] | 59 mg/l |
| EC50 96h - Algae [1] | 88.3 mg/l |
| EC50 96h - Algae [2] | 156.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |

| Alpha-Pinene (80-56-8 / 7785-26-4) | |
|---|---|
| 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 |

| gamma-Terpinene (99-85-4) | |
|---|---|
| EC50 - Crustacea [1] | 10189 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | > 10.82 mg/l Test organisms (species): Scenedesmus capricornutum |

| Camphor (76-22-2 / 21368-68-3) | |
|---|---|
| LC50 - Fish [1] | 33.25 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) |
| EC50 - Crustacea [1] | 4.23 mg/l Test organisms (species): Daphnia magna |
| EC50 72h - Algae [1] | 0.3 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |
| EC50 72h - Algae [2] | 1.71 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) |

| Limonene (5989-27-5) | |
|---|---|
| LC50 - Fish [1] | ≈ 33 mg/l |
| LC50 - Fish [2] | 702 µg/l Test organisms (species): Pimephales promelas |
| EC50 - Crustacea [1] | 0.1 – 1 mg/l |
| 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) |
| ErC50 algae | 0.1 – 1 mg/l |

| p-Cymene (99-87-6) | |
|---|---|
| LC50 - Fish [1] | 48 mg/l |
| EC50 - Crustacea [1] | 6.5 mg/l |
| 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 |

| 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) |

## 12.2. Persistence and degradability

| Coriander Seed Essential Oil (8008-52-4 / 84775-50-8) | |
|---|---|
| Persistence and degradability | Biodegradability in water: no data available. May cause long-term adverse effects in the environment. |

| Linalool (78-70-6) | |
|---|---|
| Persistence and degradability | Not established. |

| Alpha-Pinene (80-56-8 / 7785-26-4) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| gamma-Terpinene (99-85-4) | |
|---|---|
| Persistence and degradability | Not established. |

| Limonene (5989-27-5) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| Geranil acetate (105-87-3) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| p-Cymene (99-87-6) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| Geraniol (106-24-1) | |
|---|---|
| Persistence and degradability | Not established. |

| Beta-Myrcene (123-35-3) | |
|---|---|
| Persistence and degradability | Not established. |

| Beta-Pinene (127-91-3) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| Camphene (79-92-5) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

| Terpinolene (586-62-9) | |
|---|---|
| Persistence and degradability | Not established. May cause long-term adverse effects in the environment. |

## 12.3. Bioaccumulative potential

| Coriander Seed Essential Oil (8008-52-4 / 84775-50-8) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Linalool (78-70-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.84 – 3.1 |
| Bioaccumulative potential | Not established. |

| Alpha-Pinene (80-56-8 / 7785-26-4) | |
|---|---|
| Bioaccumulative potential | Not established. |

| gamma-Terpinene (99-85-4) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Limonene (5989-27-5) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Geranil acetate (105-87-3) | |
|---|---|
| Bioaccumulative potential | Not established. |

| p-Cymene (99-87-6) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Geraniol (106-24-1) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Beta-Myrcene (123-35-3) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Beta-Pinene (127-91-3) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Camphene (79-92-5) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Terpinolene (586-62-9) | |
|---|---|
| Bioaccumulative potential | Not established. |

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information : Handle empty containers with care because residual vapours are flammable.

Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

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

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| Special provision(s) applied : 375 | | | | |
| These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. | | | | |
| **14.1. UN number** | | | | |
| UN 3082 | UN 3082 | UN 3082 | UN 3082 | UN 3082 |
| **14.2. UN proper shipping name** | | | | |
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. | TERPINOLENE | Terpinolene | TERPINOLENE | TERPINOLENE |
| **Transport document description** | | | | |
| UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (-) | UN 3082 TERPINOLENE, 3, III, MARINE POLLUTANT (37°C c.c.) | UN 3082 Terpinolene, 3, III | UN 3082 TERPINOLENE, 3, III | UN 3082 TERPINOLENE, 3, III |
| **14.3. Transport hazard class(es)** | | | | |
| 9 | 3 | 3 | 3 | 3 |
|  |  |  |  |  |
| **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) | : | - |
| EAC code | : | •3Z |

**Transport by sea**

| | | |
|---|---|---|
| Packing instructions (IMDG) | : | P001, LP01 |
| IBC packing instructions (IMDG) | : | IBC03 |
| Tank instructions (IMDG) | : | T2 |
| Tank special provisions (IMDG) | : | TP1 |
| EmS-No. (Fire) | : | F-E |
| EmS-No. (Spillage) | : | S-E |
| Stowage category (IMDG) | : | A |
| Flash point (IMDG) | : | 37°C c.c. |
| Properties and observations (IMDG) | : | Colourless to pale amber liquid with a lemon odour. Flashpoint: 37°C c.c. Immiscible with water. |

**Air transport**

| | | |
|---|---|---|
| PCA Excepted quantities (IATA) | : | E1 |
| PCA Limited quantities (IATA) | : | Y344 |
| PCA limited quantity max net quantity (IATA) | : | 10L |
| PCA packing instructions (IATA) | : | 355 |
| PCA max net quantity (IATA) | : | 60L |
| CAO packing instructions (IATA) | : | 366 |
| CAO max net quantity (IATA) | : | 220L |
| ERG code (IATA) | : | 3L |

**Inland waterway transport**

| | | |
|---|---|---|
| Classification code (ADN) | : | F1 |
| Limited quantities (ADN) | : | 5 L |
| Excepted quantities (ADN) | : | E1 |
| Equipment required (ADN) | : | PP, EX, A |
| Ventilation (ADN) | : | VE01 |
| Number of blue cones/lights (ADN) | : | 0 |

**Rail transport**

| | | |
|---|---|---|
| Classification code (RID) | : | F1 |
| Limited quantities (RID) | : | 5L |
| Excepted quantities (RID) | : | E1 |
| Packing instructions (RID) | : | P001, IBC03, LP01, R001 |
| Mixed packing provisions (RID) | : | MP19 |
| Portable tank and bulk container instructions (RID) | : | T2 |
| Portable tank and bulk container special provisions (RID) | : | TP1 |
| Tank codes for RID tanks (RID) | : | LGBF |
| Transport category (RID) | : | 3 |
| Special provisions for carriage – Packages (RID) | : | W12 |
| Colis express (express parcels) (RID) | : | CE4 |
| Hazard identification number (RID) | : | 30 |

## 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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)**

No REACH Annex XVII restrictions

**REACH Annex XIV (Authorisation List)**

Coriander Seed Essential Oil is not on the REACH Annex XIV List

**REACH Candidate List (SVHC)**

Coriander Seed Essential Oil is not on the REACH Candidate List

**PIC Regulation (Prior Informed Consent)**

Coriander Seed Essential Oil is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 july 2012 concerning the export and import of hazardous chemicals.

**POP Regulation (Persistent Organic Pollutants)**

Coriander Seed Essential Oil is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

**Ozone Regulation (1005/2009)**

Coriander Seed Essential Oil is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

**Explosives Precursors Regulation (2019/1148)**

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

**Drug Precursors Regulation (273/2004)**

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 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

**Germany**

| | | |
|---|---|---|
| Employment restrictions | : | Observe restrictions according Act on the Protection of Working Mothers (MuSchG).<br>Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG). |
| Water hazard class (WGK) | : | Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV). |
| Hazardous Incident Ordinance (12. BImSchV) | : | Is not subject of the Hazardous Incident Ordinance (12. BImSchV) |

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

| | | |
|---|---|---|
| Data sources | : | REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. |
| Other information | : | None. |

| Full text of H- and EUH-statements: | |
|---|---|
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 |

| Full text of H- and EUH-statements: | |
|---|---|
| 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 |
| Carc. 1B | Carcinogenicity, Category 1B |
| 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 |
| Flam. Sol. 2 | Flammable solids, Category 2 |
| H226 | Flammable liquid and vapour. |
| H228 | Flammable solid. |
| H302 | Harmful if swallowed. |
| H304 | May be fatal if swallowed and enters airways. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H332 | Harmful if inhaled. |
| H350 | May cause cancer. |
| H371 | May cause damage to organs. |
| 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 |
| STOT SE 2 | Specific target organ toxicity — Single exposure, Category 2 |

The classification complies with : ATP 12

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.