# Type 22 - ChCo CC-16059 10% in DPG

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

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

### 1.1. Product identifier

| | | |
|---|---|---|
| Product form | : | Mixture |
| Product name | : | Type 22 - ChCo CC-16059 10% in DPG |
| Product code | : | CC-16059_10% |
| Type of product | : | Perfumes, fragrances |

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

#### Relevant identified uses

| | | |
|---|---|---|
| Industrial/Professional use spec | : | Industrial<br>For professional use only |
| Use of the substance/mixture | : | Perfumes, fragrances |
| Function or use category | : | Odour agents |

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

No additional information available

### 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]

Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412

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

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

No additional information available

### 2.2. Label elements

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

| | | |
|---|---|---|
| Signal word (CLP) | : | - |
| Hazard statements (CLP) | : | H412 - Harmful to aquatic life with long lasting effects. |
| Precautionary statements (CLP) | : | P273 - Avoid release to the environment.<br>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| EUH-statements | : | EUH208 - Contains Linalool, Orange oil, Ethyl linalool, Linalyl acetate, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone, Grapefruit oil, Vertofix. May produce an allergic reaction. |

### 2.3. Other hazards

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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| Bis(2-ethylhexyl) adipate<br>substance with national workplace exposure limit(s) (PL) | CAS-No.: 103-23-1<br>EC-No.: 203-090-1<br>REACH-no: 01-2119439699-19 | 2.49 – 4.98 | Not classified |
| 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 | 0.41434435 – 0.8286887 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Orange oil | CAS-No.: 8008-57-9<br>EC-No.: 232-433-8<br>REACH-no: 01-2119493353-35 | 0.4 – 0.8 | 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 2, H411 |
| Ethyl linalool | CAS-No.: 10339-55-6<br>EC-No.: 233-732-6<br>REACH-no: 01-2119969272-32 | 0.3 – 0.6 | Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Benzyl acetate<br>substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO) | CAS-No.: 140-11-4<br>EC-No.: 205-399-7<br>REACH-no: 01-2119638272-42 | 0.15 – 0.3 | Aquatic Chronic 3, H412 |
| 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone | CAS-No.: 54464-57-2<br>EC-No.: 259-174-3<br>REACH-no: 01-2119489989-04 | 0.15 – 0.3 | Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Aquatic Chronic 1, H410 |
| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) | CAS-No.: 1222-05-5<br>EC-No.: 214-946-9<br>EC Index-No.: 603-212-00-7<br>REACH-no: 01-2119488227-29 | 0.1 – 0.2 | Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |
| Linalyl acetate | CAS-No.: 115-95-7<br>EC-No.: 204-116-4<br>REACH-no: 01-2119454789-19 | 0.0687282 – 0.1274564 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1, H317 |
| Grapefruit oil | CAS-No.: 8016-20-4<br>EC-No.: 600-007-4 | 0.06 – 0.125 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1, H317<br>Asp. Tox. 1, H304<br>Aquatic Chronic 2, H411 |
| Vertofix | CAS-No.: 32388-55-9<br>EC-No.: 251-020-3<br>REACH-no: 01-2119969651-28 | 0.05 – 0.1 | Skin Sens. 1B, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 |

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---|---|
| (R)-p-mentha-1,8-diene; d-limonene<br>substance with national workplace exposure limit(s) (DE, ES, FI, SI, NO, CH) | CAS-No.: 5989-27-5<br>EC-No.: 205-341-0<br>EC Index-No.: 601-096-00-2<br>REACH-no: 01-2119493353-35 | 0.038421 – 0.076842 | 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 3, H412 |
| Carbitol<br>substance with national workplace exposure limit(s) (AT, DE, EE, SE, SI, CH) | CAS-No.: 111-90-0<br>EC-No.: 203-919-7<br>REACH-no: 01-2119475105-42 | 0.007233 – 0.014466 | Not classified |
| .beta.-Pinene<br>substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO) | CAS-No.: 127-91-3<br>EC-No.: 204-872-5 | 0.00573825 – 0.0114765 | 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 |
| Alcohol C-10<br>substance with national workplace exposure limit(s) (BG, DE, LT, LV, RO, CH) | CAS-No.: 112-30-1<br>EC-No.: 203-956-9 | 0 – 0.00028 | Aquatic Chronic 3, H412 |
| Aldehyde C-6<br>substance with national workplace exposure limit(s) (FI, PL) | CAS-No.: 66-25-1<br>EC-No.: 200-624-5 | 0 – 0.00007 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Skin Sens. 1B, H317 |
| Toluene<br>substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH, TR); substance with a Community workplace exposure limit | CAS-No.: 108-88-3<br>EC-No.: 203-625-9<br>EC Index-No.: 601-021-00-3 | 0.0000006 – 0.0000012 | Flam. Liq. 2, H225<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Repr. 2, H361d<br>STOT SE 3, H336<br>STOT RE 2, H373<br>Asp. Tox. 1, H304 |

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

## 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 : Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

### 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. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

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

No additional information available

### 5.3. Advice for firefighters

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 : 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

#### For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

#### For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : 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.

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

Storage conditions : Keep only in the original container in a cool, well-ventilated place away from: Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

#### Germany

Storage class (LGK, TRGS 510) : LGK 12 - Non-combustible liquids

Joint storage table :

| | | | | |
|---|---|---|---|---|
| LGK 1 | LGK 2A | LGK 2B | LGK 3 | LGK 4.1A |
| LGK 4.1B | LGK 4.2 | LGK 4.3 | LGK 5.1A | LGK 5.1B |
| LGK 5.1C | LGK 5.2 | LGK 6.1A | LGK 6.1B | LGK 6.1C |
| LGK 6.1D | LGK 6.2 | LGK 7 | LGK 8A | LGK 8B |
| LGK 10 | LGK 11 | LGK 12 | LGK 13 | LGK 10-13 |

Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 4.1A, LGK 4.3, LGK 5.1C

Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

**Switzerland**

Storage class (LK) : LK 10/12 - Liquids

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**National occupational exposure and biological limit values**

| **Bis(2-ethylhexyl) adipate (103-23-1)** | |
|---|---|
| **Poland - Occupational Exposure Limits** | |
| NDS (OEL TWA) | 400 mg/m³ |

| **Toluene (108-88-3)** | |
|---|---|
| **EU - Indicative Occupational Exposure Limit (IOEL)** | |
| IOEL TWA | 192 mg/m³ |
| | 50 ppm |
| IOEL STEL | 384 mg/m³ |
| | 100 ppm |
| Remark | Possibility of significant uptake through the skin |
| **Austria - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 190 mg/m³ |
| | 50 ppm |
| MAK (OEL STEL) | 380 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **Belgium - Occupational Exposure Limits** | |
| OEL TWA | 77 mg/m³ |
| | 20 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin, Skin notation |

| Toluene (108-88-3) | |
|---|---|
| **Bulgaria - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| **Bulgaria - Biological limit values** | |
| BLV | 1.6 mmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of exposure or end of work shift |
| **Croatia - Occupational Exposure Limits** | |
| GVI (OEL TWA) | 192 mg/m³ |
| | 50 ppm |
| KGVI (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **Croatia - Biological limit values** | |
| BLV | 1 mg/l Parameter: Toluene - Medium: blood - Sampling time: at the end of the work shift<br>20 ppm Parameter: Toluene - Medium: final exhaled air - Sampling time: during exposure<br>2.5 g/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine)<br>1 mg/g creatinine Parameter: o-Cresol - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine) |
| **Cyprus - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin-potential for cutaneous absorption |
| **Czech Republic - Occupational Exposure Limits** | |
| PEL (OEL TWA) | 200 mg/m³ |
| OEL chemical category | Potential for cutaneous absorption |
| **Czech Republic - Biological limit values** | |
| BLV | 1.6 µmol/mmol Creatinine Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis)<br>1000 µmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.)<br>1.5 mg/g creatinine Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis)<br>1600 mg/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.) |

| Toluene (108-88-3) | |
|---|---|
| **Denmark - Occupational Exposure Limits** | |
| OEL TWA | 94 mg/m³ |
| | 25 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Potential for cutaneous absorption |
| **Estonia - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **Finland - Occupational Exposure Limits** | |
| HTP (OEL TWA) | 81 mg/m³ |
| | 25 ppm |
| HTP (OEL STEL) | 380 mg/m³ |
| | 100 ppm |
| OEL chemical category | Potential for cutaneous absorption |
| **Finland - Biological limit values** | |
| BLV | 500 nmol/L Parameter: Toluene - Medium: blood - Sampling time: in the morning after a working day |
| **France - Occupational Exposure Limits** | |
| VLEP 8h (OEL TWA) | 76.8 mg/m³ (restrictive limit) |
| | 20 ppm (restrictive limit) |
| VLEP CT (OEL STEL) | 384 mg/m³ (restrictive limit) |
| | 100 ppm (restrictive limit) |
| OEL chemical category | Reproductive Toxin category 2, Risk of cutaneous absorption |
| **France - Biological limit values** | |
| BLV | 20 µg/l Parameter: Toluene - Medium: blood - Sampling time: end of workweek (Semi-quantitative (ambiguous interpretation))<br>Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source) |
| **Germany - Occupational Exposure Limits (TRGS 900)** | |
| AGW (OEL TWA) | 190 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| | 50 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| Chemical category | Skin notation |

| Toluene (108-88-3) | |
|---|---|
| **Germany - Biological limit values (TRGS 903)** | |
| Biological limit value | 600 µg/l Parameter: Toluene - Medium: whole blood - Sampling time: immediately after exposure<br>75 µg/l Parameter: Toluene - Medium: urine - Sampling time: end of exposure or shift<br>1.5 mg/l Parameter: o-Cresol (after hydrolysis) - Medium: urine - Sampling time: at the end of the shift, in case of long-term exposure after several previous shifts |
| **Gibraltar - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **Greece - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | skin - potential for cutaneous absorption |
| **Hungary - Occupational Exposure Limits** | |
| AK (OEL TWA) | 190 mg/m³ |
| CK (OEL STEL) | 384 mg/m³ |
| OEL chemical category | Potential for cutaneous absorption |
| **Ireland - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Potential for cutaneous absorption |
| **Italy - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL chemical category | skin - potential for cutaneous absorption |
| **Latvia - Occupational Exposure Limits** | |
| OEL TWA | 50 mg/m³ |
| | 14 ppm |
| OEL chemical category | skin - potential for cutaneous exposure |

| Toluene (108-88-3) | |
|---|---|
| **Latvia - Biological Exposure Indices** | |
| BEI | 600 µg/l Parameter: Toluene - Medium: blood - Sampling time: at the end of exposure (for assessment of long-term exposure, samples are taken at the end of a shift after several previous shifts)<br>75 µg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift (for assessment of long-term exposure, samples are taken at the end of a shift after several previous shifts)<br>1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: at the end of exposure or shift (after hydrolysis) |
| **Lithuania - Occupational Exposure Limits** | |
| IPRV (OEL TWA) | 192 mg/m³ |
| | 50 ppm |
| TPRV (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Reproductive toxin, Skin notation |
| **Luxembourg - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Possibility of significant uptake through the skin |
| **Malta - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Possibility of significant uptake through the skin |
| **Netherlands - Occupational Exposure Limits** | |
| TGG-8u (OEL TWA) | 150 mg/m³ |
| | 39 ppm |
| TGG-15min (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| **Poland - Occupational Exposure Limits** | |
| NDS (OEL TWA) | 100 mg/m³ |
| NDSCh (OEL STEL) | 200 mg/m³ |
| **Portugal - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ (indicative limit value) |
| | 50 ppm (indicative limit value) |
| OEL STEL | 384 mg/m³ (indicative limit value) |
| | 100 ppm (indicative limit value) |
| OEL chemical category | A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value |

| Toluene (108-88-3) | |
|---|---|
| **Romania - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **Romania - Biological limit values** | |
| BLV | 2 g/l Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift<br>3 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift |
| **Slovakia - Occupational Exposure Limits** | |
| NPHV (OEL TWA) | 192 mg/m³ |
| | 50 ppm |
| NPHV (OEL C) | 384 mg/m³ (also biological monitoring considered) |
| OEL chemical category | Potential for cutaneous absorption |
| **Slovakia - Biological limit values** | |
| BLV | 600 µg/l Parameter: Toluene - Medium: blood - Sampling time: end of exposure or work shift<br>1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: after all work shifts (for long-term exposure)<br>1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of exposure or work shift<br>2401 mg/g creatinine Parameter: Hippuric acid - Sampling time: end of exposure or work shift |
| **Slovenia - Occupational Exposure Limits** | |
| OEL TWA | 192 mg/m³ |
| | 50 ppm |
| OEL STEL | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Category 2, Potential for cutaneous absorption |
| **Spain - Occupational Exposure Limits** | |
| VLA-ED (OEL TWA) | 192 mg/m³ (indicative limit value) |
| | 50 ppm (indicative limit value) |
| VLA-EC (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | skin - potential for cutaneous absorption |
| **Spain - Biological limit values** | |
| BLV | 0.6 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift<br>0.05 mg/l Parameter: Toluene - Medium: blood - Sampling time: start of last shift of workweek<br>0.08 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift |
| **Sweden - Occupational Exposure Limits** | |
| NGV (OEL TWA) | 192 mg/m³ |
| | 50 ppm |

| Toluene (108-88-3) | |
|---|---|
| KGV (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| OEL chemical category | Skin notation |
| **United Kingdom - Occupational Exposure Limits** | |
| WEL TWA (OEL TWA) | 191 mg/m³ |
| | 50 ppm |
| WEL STEL (OEL STEL) | 384 mg/m³ |
| | 100 ppm |
| WEL chemical category | Potential for cutaneous absorption |
| **Norway - Occupational Exposure Limits** | |
| Grenseverdi (OEL TWA) | 94 mg/m³ |
| | 25 ppm |
| Korttidsverdi (OEL STEL) | 141 mg/m³ (value calculated) |
| | 37.5 ppm (value calculated) |
| OEL chemical category | Skin notation |
| **Switzerland - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 190 mg/m³ |
| | 50 ppm |
| KZGW (OEL STEL) | 760 mg/m³ |
| | 200 ppm |
| OEL chemical category | Skin notation, Category 2 reproductive toxin |
| **Switzerland - BAT** | |
| BAT | 600 µg/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift<br>6.48 µmol/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift<br>2 g/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures)<br>Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures)<br>0.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures)<br>4.62 µmol/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures)<br>75 µg/l Parameter: Toluol - Medium: urine - Sampling time: end of shift |
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH® TLV® TWA | 20 ppm |
| ACGIH® chemical category | Not Classifiable as a Human Carcinogen |
| **USA - ACGIH - Biological Exposure Indices** | |
| BEI | 0.02 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek<br>0.03 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift<br>0.3 mg/g creatinine Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background) |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| **Finland - Occupational Exposure Limits** | |
| HTP (OEL TWA) | 140 mg/m³ |
| | 25 ppm |
| HTP (OEL STEL) | 280 mg/m³ |
| | 50 ppm |
| **Germany - Occupational Exposure Limits (TRGS 900)** | |
| AGW (OEL TWA) | 28 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| | 5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| Chemical category | Skin notation, Skin sensitization |
| **Slovenia - Occupational Exposure Limits** | |
| OEL TWA | 28 mg/m³ |
| | 5 ppm |
| OEL STEL | 112 mg/m³ |
| | 20 ppm |
| OEL chemical category | Potential for cutaneous absorption |
| **Spain - Occupational Exposure Limits** | |
| VLA-ED (OEL TWA) | 168 mg/m³ |
| | 30 ppm |
| OEL chemical category | Sensitizer, skin - potential for cutaneous absorption |
| **Norway - Occupational Exposure Limits** | |
| Grenseverdi (OEL TWA) | 140 mg/m³ |
| | 25 ppm |
| Korttidsverdi (OEL STEL) | 175 mg/m³ (value calculated) |
| | 37.5 ppm (value calculated) |
| OEL chemical category | Allergenic substance |
| **Switzerland - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 40 mg/m³ |
| | 7 ppm |
| KZGW (OEL STEL) | 80 mg/m³ |
| | 14 ppm |
| OEL chemical category | Sensitizer |

| .beta.-Pinene (127-91-3) | |
|---|---|
| **Belgium - Occupational Exposure Limits** | |
| OEL TWA | 20 ppm |
| **Estonia - Occupational Exposure Limits** | |
| OEL TWA | 150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect) |

| .beta.-Pinene (127-91-3) | |
|---|---|
| | 25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect) |
| OEL STEL | 300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect) |
| | 50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect) |
| **Lithuania - Occupational Exposure Limits** | |
| IPRV (OEL TWA) | 150 mg/m³ |
| | 25 ppm |
| TPRV (OEL STEL) | 300 mg/m³ |
| | 50 ppm |
| **Portugal - Occupational Exposure Limits** | |
| OEL TWA | 20 ppm (Turpentine and selected Monoterpenes) |
| OEL chemical category | Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen |
| **Spain - Occupational Exposure Limits** | |
| VLA-ED (OEL TWA) | 113 mg/m³ |
| | 20 ppm |
| OEL chemical category | Sensitizer |
| **Sweden - Occupational Exposure Limits** | |
| NGV (OEL TWA) | 150 mg/m³ |
| | 25 ppm |
| KGV (OEL STEL) | 300 mg/m³ |
| | 50 ppm |
| OEL chemical category | Skin sensitizer |
| **Norway - Occupational Exposure Limits** | |
| Grenseverdi (OEL TWA) | 140 mg/m³ |
| | 25 ppm |
| Korttidsverdi (OEL STEL) | 175 mg/m³ (value calculated) |
| | 37.5 ppm (value calculated) |
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH® TLV® TWA | 20 ppm (Turpentine and selected Monoterpenes) |
| ACGIH® chemical category | Not Classifiable as a Human Carcinogen, dermal sensitizer |

| Benzyl acetate (140-11-4) | |
|---|---|
| **Belgium - Occupational Exposure Limits** | |
| OEL TWA | 62 mg/m³ |
| | 10 ppm |
| **Denmark - Occupational Exposure Limits** | |
| OEL TWA | 61 mg/m³ |
| | 10 ppm |
| OEL STEL | 122 mg/m³ |

| Benzyl acetate (140-11-4) | |
|---|---|
| | 20 ppm |
| **Ireland - Occupational Exposure Limits** | |
| OEL TWA | 10 ppm |
| OEL STEL | 30 ppm (calculated) |
| **Latvia - Occupational Exposure Limits** | |
| OEL TWA | 5 mg/m³ |
| **Lithuania - Occupational Exposure Limits** | |
| IPRV (OEL TWA) | 5 mg/m³ |
| **Portugal - Occupational Exposure Limits** | |
| OEL TWA | 10 ppm |
| OEL chemical category | A4 - Not Classifiable as a Human Carcinogen |
| **Romania - Occupational Exposure Limits** | |
| OEL TWA | 50 mg/m³ |
| | 8 ppm |
| OEL STEL | 80 mg/m³ |
| | 13 ppm |
| **Spain - Occupational Exposure Limits** | |
| VLA-ED (OEL TWA) | 62 mg/m³ |
| | 10 ppm |
| **USA - ACGIH - Occupational Exposure Limits** | |
| ACGIH® TLV® TWA | 10 ppm |
| ACGIH® chemical category | Not Classifiable as a Human Carcinogen |

| Carbitol (111-90-0) | |
|---|---|
| **Austria - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 35 mg/m³ |
| | 6 ppm |
| MAK (OEL STEL) | 140 mg/m³ |
| | 24 ppm |
| **Estonia - Occupational Exposure Limits** | |
| OEL TWA | 50.1 mg/m³ |
| | 10 ppm |
| OEL chemical category | Skin notation |
| **Germany - Occupational Exposure Limits (TRGS 900)** | |
| AGW (OEL TWA) | 35 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| | 6 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| **Slovenia - Occupational Exposure Limits** | |
| OEL TWA | 35 mg/m³ |

| | |
|---|---|
| **Carbitol (111-90-0)** | |
| | 6 ppm |
| OEL STEL | 70 mg/m³ |
| | 12 ppm |
| **Sweden - Occupational Exposure Limits** | |
| NGV (OEL TWA) | 80 mg/m³ |
| | 15 ppm |
| KGV (OEL STEL) | 170 mg/m³ |
| | 30 ppm |
| OEL chemical category | Skin notation |
| **Switzerland - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 50 mg/m³ (aerosol, inhalable dust, vapour) |
| KZGW (OEL STEL) | 100 mg/m³ (aerosol, inhalable dust, vapour) |
| **Alcohol C-10 (112-30-1)** | |
| **Bulgaria - Occupational Exposure Limits** | |
| OEL TWA | 10 mg/m³ |
| **Germany - Occupational Exposure Limits (TRGS 900)** | |
| AGW (OEL TWA) | 66 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| | 10 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed) |
| **Latvia - Occupational Exposure Limits** | |
| OEL TWA | 10 mg/m³ |
| **Lithuania - Occupational Exposure Limits** | |
| IPRV (OEL TWA) | 10 mg/m³ |
| **Romania - Occupational Exposure Limits** | |
| OEL TWA | 100 mg/m³ |
| | 15 ppm |
| OEL STEL | 200 mg/m³ |
| | 30 ppm |
| **Switzerland - Occupational Exposure Limits** | |
| MAK (OEL TWA) | 66 mg/m³ (aerosol, vapour) |
| | 10 ppm (aerosol, vapour) |
| KZGW (OEL STEL) | 66 mg/m³ (aerosol, vapour) |
| | 10 ppm (aerosol, vapour) |
| **Aldehyde C-6 (66-25-1)** | |
| **Finland - Occupational Exposure Limits** | |
| HTP (OEL STEL) | 42 mg/m³ |
| | 10 ppm |

| Aldehyde C-6 (66-25-1) | |
|---|---|
| **Poland - Occupational Exposure Limits** | |
| NDS (OEL TWA) | 40 mg/m³ |
| NDSCh (OEL STEL) | 80 mg/m³ |

### 8.2. Exposure controls

#### Personal protection equipment

**Personal protective equipment:**
Avoid all unnecessary exposure.
**Personal protective equipment symbol(s):**



#### Eye and face protection

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

#### Skin protection

**Hand protection:**
Wear protective gloves.

#### Respiratory protection

**Respiratory protection:**
Wear appropriate mask

#### Environmental exposure controls

**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 |
| Colour | : | Conforms to standard. |
| Odour | : | characteristic. |
| Odour threshold | : | Not available |
| Melting point | : | Not available |
| Freezing point | : | Not available |
| Boiling point | : | Not available |
| Flammability | : | Non flammable. |
| Lower explosion limit | : | Not available |
| Upper explosion limit | : | Not available |
| Flash point | : | > 93 °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 | : | Not available |
| Vapour pressure at 50°C | : | Not available |
| Density | : | Not available |
| Relative density | : | Not available |
| Relative vapour density at 20°C | : | Not available |
| Particle characteristics | : | Not applicable |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

## 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

| Bis(2-ethylhexyl) adipate (103-23-1) | |
|---|---|
| LD50 oral rat | 5600 mg/kg (Source: NLM_CIP) |
| LD50 dermal rabbit | 8410 mg/kg (Source: NLM_CIP) |
| LC50 Inhalation - Rat | > 5.7 mg/l/4h |

| Linalool (78-70-6) | |
|---|---|
| LD50 oral rat | 2790 mg/kg (Source: NLM_CIP) |
| LD50 oral | 2790 mg/kg |
| LD50 dermal rabbit | 5610 mg/kg (Source: ECHA_API) |

| Orange oil (8008-57-9) | |
|---|---|
| LD50 oral rat | 4400 mg/kg (Source: NZ_CCID) |
| LD50 dermal rabbit | > 5000 mg/kg (Source: CHEMVIEW) |

| Ethyl linalool (10339-55-6) | |
|---|---|
| LD50 oral | 5000 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg (Source: ECHA_API) |

| Toluene (108-88-3) | |
|---|---|
| LD50 oral rat | 5000 mg/kg (Source: NLM_HSDB) |

| Toluene (108-88-3) | |
|---|---|
| LD50 dermal rabbit | 12000 mg/kg (Source: JAPAN_GHS) |
| LC50 Inhalation - Rat | 12.5 mg/l/4h |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| LD50 oral rat | 4400 mg/kg (Source: CHEMVIEW) |
| LD50 dermal rabbit | > 5 g/kg (Source: CHEMVIEW) |

| Linalyl acetate (115-95-7) | |
|---|---|
| LD50 oral rat | 14550 mg/kg (Source: EPA_HPV) |
| LD50 dermal rabbit | > 5000 mg/kg (Source: ECHA) |
| LC50 Inhalation - Rat | > 18.94 mg/l (Exposure time: 8 h Source: ECHA) |

| .beta.-Pinene (127-91-3) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg (Source: EPA_HPV) |
| LD50 dermal rabbit | > 5000 mg/kg (Source: CHEMVIEW) |

| Benzyl acetate (140-11-4) | |
|---|---|
| LD50 oral rat | 2490 mg/kg (Source: JAPAN_GHS) |
| LD50 oral | 2490 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg (Source: JAPAN_GHS) |

| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5) | |
|---|---|
| LD50 oral rat | > 3250 mg/kg (Source: CHEMVIEW) |
| LD50 dermal rabbit | > 3250 mg/kg (Source: CHEMVIEW) |
| LC50 Inhalation - Rat | > 5.04 mg/l/4h |

| Grapefruit oil (8016-20-4) | |
|---|---|
| LD50 oral rat | > 5 g/kg (Source: ECHA) |

| Vertofix (32388-55-9) | |
|---|---|
| LD50 oral | 4500 mg/kg |
| LD50 dermal rabbit | > 5000 mg/kg (Source: ECHA_API) |

| Carbitol (111-90-0) | |
|---|---|
| LD50 oral rat | 10502 mg/kg (Source: OECD_SIDS) |
| LD50 dermal rabbit | 9143 mg/kg (Source: OECD_SIDS) |
| LC50 Inhalation - Rat | > 5240 mg/m³ (Exposure time: 4 h Source: NLM_CIP) |

| Alcohol C-10 (112-30-1) | |
|---|---|
| LD50 oral rat | 4720 mg/kg (Source: NZ_CCID) |
| LD50 dermal rat | > 5000 mg/kg (Source: ECHA_API) |
| LC50 Inhalation - Rat | > 71 mg/l (Exposure time: 1 h Source: ECHA_API) |

| Aldehyde C-6 (66-25-1) | |
|---|---|
| LD50 oral rat | 4890 mg/kg (Source: NLM_CIP) |
| LD50 dermal rabbit | > 8100 mg/kg (Source: ECHA_API) |

Skin corrosion/irritation : Not classified
Additional information : Based on available data, the classification criteria are not met

Serious eye damage/irritation : Not classified
Additional information : Based on available data, the classification criteria are not met
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met
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

| Bis(2-ethylhexyl) adipate (103-23-1) | |
|---|---|
| IARC group | 3 - Not classifiable |

| Toluene (108-88-3) | |
|---|---|
| IARC group | 3 - Not classifiable |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| IARC group | 3 - Not classifiable |

| Benzyl acetate (140-11-4) | |
|---|---|
| IARC group | 3 - Not classifiable |

Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

| Toluene (108-88-3) | |
|---|---|
| STOT-single exposure | May cause drowsiness or dizziness. |

STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

| Toluene (108-88-3) | |
|---|---|
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

| Toluene (108-88-3) | |
|---|---|
| Hydrocarbon | Yes |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| Hydrocarbon | Yes |

| .beta.-Pinene (127-91-3) | |
|---|---|
| Hydrocarbon | Yes |

### 11.2. Information on other hazards

#### Other information

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

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.

| Bis(2-ethylhexyl) adipate (103-23-1) | |
|---|---|
| LC50 - Fish [1] | 0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA) |
| LC50 - Fish [2] | 0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA) |
| EC50 - Crustacea [1] | > 1.6 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 72h - Algae [1] | > 500 mg/l (Species: Desmodesmus subspicatus) |

| Linalool (78-70-6) | |
|---|---|
| LC50 - Fish [1] | 27.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: ECHA) |
| EC50 - Crustacea [1] | 20 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 96h - Algae [1] | 88.3 mg/l (Species: Desmodesmus subspicatus) |

| Ethyl linalool (10339-55-6) | |
|---|---|
| LC50 - Fish [1] | 24 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA) |

| Toluene (108-88-3) | |
|---|---|
| LC50 - Fish [1] | 15.22 – 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA) |
| LC50 - Fish [2] | 12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA) |
| EC50 - Crustacea [1] | 5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| EC50 - Crustacea [2] | 11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| EC50 72h - Algae [1] | 12.5 mg/l (Species: Pseudokirchneriella subcapitata [static]) |
| EC50 96h - Algae [1] | > 433 mg/l (Species: Pseudokirchneriella subcapitata) |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| LC50 - Fish [1] | 0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA) |
| LC50 - Fish [2] | 35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: EPA) |

| Linalyl acetate (115-95-7) | |
|---|---|
| LC50 - Fish [1] | 11 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through] Source: ECHA) |

| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5) | |
|---|---|
| LC50 - Fish [1] | 0.452 mg/l Wolf, 1996d-27682 |
| LC50 - Other aquatic organisms [1] | > 0.14 mg/l REACH DOSSIER Pimephales promelas |
| EC50 - Crustacea [2] | 260 µg/l REACH Dossier |
| EC50 - Other aquatic organisms [1] | 0.131 mg/l REACH Dossier |

| Carbitol (111-90-0) | |
|---|---|
| LC50 - Fish [1] | 10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA) |
| LC50 - Fish [2] | 19100 – 23900 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through] Source: EPA) |
| EC50 - Crustacea [1] | 3940 – 4670 mg/l (Exposure time: 48 h - Species: Daphnia magna) |

| Alcohol C-10 (112-30-1) | |
|---|---|
| LC50 - Fish [1] | 2.2 – 2.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA) |

| Alcohol C-10 (112-30-1) | |
|---|---|
| LC50 - Fish [2] | 4.12 – 6.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA) |
| EC50 - Crustacea [1] | 3 mg/l (Exposure time: 48 h - Species: Daphnia magna) |

| Aldehyde C-6 (66-25-1) | |
|---|---|
| LC50 - Fish [1] | 12 – 16.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA) |

### 12.2. Persistence and degradability

| Type 22 - ChCo CC-16059 10% in DPG | |
|---|---|
| Persistence and degradability | Not established. |

| Bis(2-ethylhexyl) adipate (103-23-1) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Linalool (78-70-6) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Orange oil (8008-57-9) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Ethyl linalool (10339-55-6) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Toluene (108-88-3) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Linalyl acetate (115-95-7) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| .beta.-Pinene (127-91-3) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Benzyl acetate (140-11-4) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Grapefruit oil (8016-20-4) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Vertofix (32388-55-9) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Carbitol (111-90-0) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Alcohol C-10 (112-30-1) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

| Aldehyde C-6 (66-25-1) | |
|---|---|
| Persistence and degradability | Rapidly degradable |

### 12.3. Bioaccumulative potential

| Type 22 - ChCo CC-16059 10% in DPG | |
|---|---|
| Bioaccumulative potential | Not established. |

| Bis(2-ethylhexyl) adipate (103-23-1) | |
|---|---|
| BCF - Fish [1] | (27 dimensionless) |
| Partition coefficient n-octanol/water (Log Pow) | 8.94 (at 25 °C) |

| Linalool (78-70-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.9 (at 20 °C (at pH 7) |

| Orange oil (8008-57-9) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | ≥ 2.78 – ≤ 4.88 |

| Ethyl linalool (10339-55-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 3.3 (at 20 °C) |

| Toluene (108-88-3) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.73 (at 20 °C (at pH 7) |

| (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 4.38 (at 37 °C (at pH 7.2) |

| Linalyl acetate (115-95-7) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 3.9 (at 25 °C) |

| .beta.-Pinene (127-91-3) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 4.4 (at 25 °C) |

| Benzyl acetate (140-11-4) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 1.96 (at 25 °C (at pH 7) |

| 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 5.65 (at 30°C) |

| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5) | |
|---|---|
| BCF - Fish [1] | (1618 dimensionless (whole body w.w.) |
| Partition coefficient n-octanol/water (Log Pow) | 5.3 (at 25 °C (at pH 7) |

| Vertofix (32388-55-9) | |
|---|---|
| BCF - Fish [1] | (3920 dimensionless (organ w.w.) |
| Partition coefficient n-octanol/water (Log Pow) | 5.6 – 5.9 |

| Carbitol (111-90-0) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | -0.8 |

| Alcohol C-10 (112-30-1) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 4.5 (at 25 °C (at pH 6) |

| Aldehyde C-6 (66-25-1) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.3 (at 25 °C (at pH 5) |

### 12.4. Mobility in soil

No additional information available

### 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

| Type 22 - ChCo CC-16059 10% in DPG | |
|---|---|
| Other 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.
Ecological waste information : Avoid release to the environment.
HP Code : HP14 - “Ecotoxic:” waste which presents or may present immediate or delayed risks for one or more sectors of the environment

## SECTION 14: Transport information

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

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| **14.1. UN number or ID number** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.2. UN proper shipping name** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.3. Transport hazard class(es)** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.4. Packing group** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| **14.5. Environmental hazards** | | | | |
| Not applicable | Not applicable | Not applicable | Not applicable | Not applicable |
| No supplementary information available | | | | |

### 14.6. Special precautions for user

**Overland transport**
Not applicable

**Transport by sea**
Not applicable

**Air transport**
Not applicable

**Inland waterway transport**
Not applicable

**Rail transport**
Not applicable

### 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

**EU-Regulations**

**REACH Annex XVII (Restriction List)**

| EU restriction list (REACH Annex XVII) | | |
|---|---|---|
| **Reference code** | **Applicable on** | **Entry title or description** |
| 3(a) | Orange oil ; Toluene ; d-Limonene ; .beta.-Pinene ; Grapefruit oil ; Aldehyde C-6 | 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) | Linalool ; Orange oil ; Ethyl linalool ; Toluene ; d-Limonene ; Linalyl acetate ; .beta.-Pinene ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone ; Grapefruit oil ; Vertofix ; Aldehyde C-6 | 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) | Type 22 - ChCo CC-16059 10% in DPG ; Orange oil ; d-Limonene ; .beta.-Pinene ; Benzyl acetate ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone ; Hexamethylindanopyran ; Grapefruit oil ; Vertofix ; Alcohol C-10 | 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 |
| 48. | Toluene | Toluene |

**REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

### Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

### Explosives Precursors Regulation (EU 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 (EC 273/2004)

Contains 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)

| Name | CN designation | CAS-No. | CN code | Category, Subcategory | Threshold | Annex |
|---|---|---|---|---|---|---|
| Toluene | | 108-88-3 | 2902 30 00 | Category 3 | | Annex I |

### National regulations

### Austria

Toxic Substances Ordinance 2000 : Is not subject to the Toxic Substances Ordinance 2000.

### France

| Occupational diseases | |
|---|---|
| Code | Description |
| RG 4 BIS | Gastrointestinal disorders caused by benzene, toluene, xylenes and all products containing them |
| RG 84 | Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide |

### Germany

VOC ordinance (ChemVOCFarbV) :

Water hazard class (WGK) : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1).
Major Accidents Ordinance (12. BImSchV) : Is not subject to the Major Accidents Ordinance (12. BImSchV)

### Netherlands

ABM category : A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW List of Carcinogenic Substances : Orange oil is listed
SZW List of Mutagenic Substances : Orange oil is listed
SZW List of Reprotoxic Substances – Breastfeeding : None of the components are listed
SZW List of Reprotoxic Substances – Fertility : None of the components are listed
SZW List of Reprotoxic Substances – Development : Toluene is listed

### Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Pregnant/breastfeeding women working with the product must not be in direct contact with it.
If an employee is pregnant or breastfeeding and the person in question uses or is exposed to this product at work, the employer must always carry out a risk assessment of the work. The assessment must both deal with the dangerousness of the impact and its strength and duration. The employer's decision that a pregnant or lactating woman can perform a specific work task must therefore be made in the context of her specific working conditions. See also WEA-Guideline A.1.8-7 on the working environment of pregnant and breastfeeding workers.

**Poland**

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)
Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines, and containers and tanks used for storing or containing hazardous substances or hazardous mixtures (J.o.L. 2015, item 1368 as amended)

### 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: | |
|---|---|
| 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 |

| Full text of H- and EUH-statements: | |
|---|---|
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Flam. Liq. 2 | Flammable liquids, Category 2 |
| Flam. Liq. 3 | Flammable liquids, Category 3 |
| Repr. 2 | Reproductive toxicity, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| Skin Sens. 1B | Skin sensitisation, category 1B |
| STOT RE 2 | Specific target organ toxicity – Repeated exposure, Category 2 |
| STOT SE 3 | Specific target organ toxicity – Single exposure, Category 3, Narcosis |
| H225 | Highly flammable liquid and vapour. |
| 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. |
| H336 | May cause drowsiness or dizziness. |
| H361d | Suspected of damaging the unborn child. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| 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. |
| EUH208 | Contains Linalool, Orange oil, Ethyl linalool, Linalyl acetate, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone, Grapefruit oil, Vertofix. May produce an allergic reaction. |

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.