# OIL, DUSK II*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture

Product name : OIL, DUSK II*

Product code : 90-3046-80

### 1.2. Recommended use and restrictions on use

### 1.3. Supplier

The Lebermuth Company
4004 Technology Drive
South Bend, IN 46628 - United States
T 574-259-7000 - F 574-258-7450
info@lebermuth.com - www.lebermuth.com

### 1.4. Emergency telephone number

Emergency number : CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300
CCN 13010

## SECTION 2: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS US classification**

| | |
|---|---|
| Flammable liquids Category 4 | Combustible liquid |
| Skin corrosion/irritation Category 2 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2 | Causes serious eye irritation |
| Skin sensitization, Category 1 | May cause an allergic skin reaction |
| Reproductive toxicity Category 2 | Suspected of damaging fertility or the unborn child |
| Specific target organ toxicity (repeated exposure) Category 2 | May cause damage to organs through prolonged or repeated exposure |

### 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**

Hazard pictograms (GHS US) :

GHS07 GHS08

Signal word (GHS US) : Warning

Hazard statements (GHS US) : Combustible liquid
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
Suspected of damaging fertility or the unborn child
May cause damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Specific treatment (see supplemental first aid instruction on this label).

If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use media other than water to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name | Product identifier | % | GHS US classification |
|---|---|---|---|
| CEDROL METHYL ETHER | (CAS-No.) 19870-74-7 | 5 – 10 | Skin Sens. 1B, H317 |
| LINALYL ACETATE | (CAS-No.) 115-95-7 | 5 – 10 | Flam. Liq. 4, H227<br>Skin Irrit. 2, H315<br>Eye Irrit. 2B, H320<br>Skin Sens. 1B, H317 |
| DIHYDROMYRCENOL | (CAS-No.) 18479-58-8 | 5 – 10 | Flam. Liq. 4, H227<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319 |
| LINALOOL | (CAS-No.) 78-70-6 | 5 – 10 | Flam. Liq. 4, H227<br>Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Skin Sens. 1B, H317 |
| d-Limonene | (CAS-No.) 5989-27-5 | 1 – 5 | Flam. Liq. 3, H226<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Asp. Tox. 1, H304 |
| ACETYL CEDRENE | (CAS-No.) 32388-55-9 | 1 – 5 | Skin Sens. 1B, H317<br>STOT RE 2, H373 |
| 7-acetyl-1,1,3,4,4,6-hexamethyltetralin | (CAS-No.) 1506-02-1 | 1 – 5 | Acute Tox. 4 (Oral), H302 |
| 2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol | (CAS-No.) 63500-71-0 | 1 – 5 | Eye Irrit. 2A, H319 |
| CITRONELLOL | (CAS-No.) 106-22-9 | 1 – 5 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Skin Sens. 1B, H317 |
| p-t-Butyl-α-methylhydrocinnamic aldehyde | (CAS-No.) 80-54-6 | 1 – 5 | Acute Tox. 4 (Oral), H302<br>Skin Irrit. 2, H315<br>Skin Sens. 1B, H317<br>Repr. 2, H361 |
| 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone | (CAS-No.) 54464-57-2 | 1 – 5 | Skin Irrit. 2, H315<br>Skin Sens. 1B, H317 |
| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde | (CAS-No.) 103-95-7 | 1 – 5 | Skin Irrit. 2, H315<br>Skin Sens. 1B, H317 |
| HYDROXYCITRONELLAL | (CAS-No.) 107-75-5 | 1 – 5 | Skin Irrit. 2, H315<br>Eye Irrit. 2A, H319<br>Skin Sens. 1B, H317 |
| α-Guaiene | (CAS-No.) 3691-12-1 | 1 – 5 | Skin Irrit. 2, H315<br>Eye Irrit. 2, H319<br>Asp. Tox. 1, H304 |
| GAMMA-TERPINENE | (CAS-No.) 99-85-4 | 0.1 – 1 | Flam. Liq. 3, H226<br>Repr. 2, H361<br>Asp. Tox. 1, H304 |
| p-Cymene | (CAS-No.) 99-87-6 | 0.1 – 1 | Flam. Liq. 3, H226<br>Acute Tox. 3 (Inhalation:vapour), H331<br>Repr. 2, H361<br>Asp. Tox. 1, H304 |

Full text of hazard classes and H-statements : see section 16

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

First-aid measures general : IF exposed or concerned: Get medical advice/attention.

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

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

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

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

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

Symptoms/effects after eye contact : Eye irritation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

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

### 5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

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

### 5.3. Special protective equipment and precautions for fire-fighters

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

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. No open flames, no sparks, and no smoking. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

#### 6.1.2. For emergency responders

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

### 6.2. Environmental precautions

Avoid release to the environment.

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

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

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

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

Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| **OIL, DUSK II*** |
|---|
| No additional information available |
| **CITRONELLOL (106-22-9)** |
| No additional information available |
| **DIHYDROMYRCENOL (18479-58-8)** |
| No additional information available |
| **p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6)** |
| No additional information available |
| **LINALOOL (78-70-6)** |
| No additional information available |
| **p-Cymene (99-87-6)** |
| No additional information available |
| **ACETYL CEDRENE (32388-55-9)** |
| No additional information available |
| **7-acetyl-1,1,3,4,4,6-hexamethyltetralin (1506-02-1)** |
| No additional information available |
| **1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2)** |
| No additional information available |
| **CEDROL METHYL ETHER (19870-74-7)** |
| No additional information available |
| **2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7)** |
| No additional information available |
| **2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol (63500-71-0)** |
| No additional information available |
| **HYDROXYCITRONELLAL (107-75-5)** |
| No additional information available |
| **LINALYL ACETATE (115-95-7)** |
| No additional information available |
| **d-Limonene (5989-27-5)** |
| No additional information available |
| **GAMMA-TERPINENE (99-85-4)** |
| No additional information available |
| **α-Guaiene (3691-12-1)** |
| No additional information available |

### 8.2. Appropriate engineering controls

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

Environmental exposure controls : Avoid release to the environment.

### 8.3. Individual protection measures/Personal protective equipment

**Hand protection:**

Protective gloves

**Eye protection:**

Safety glasses

**Skin and body protection:**

Wear suitable protective clothing

**Respiratory protection:**

Wear respiratory protection.

## SECTION 9: Physical and chemical properties

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

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Color | : | YELLOW TO AMBER |
| Odor | : | CHARACTERISTIC, MATCHING RETAINER SAMPLE |
| Odor threshold | : | No data available |
| pH | : | No data available |
| Melting point | : | Not applicable |
| Freezing point | : | No data available |
| Boiling point | : | No data available |
| Flash point | : | 85 °C |
| Relative evaporation rate (butyl acetate=1) | : | No data available |
| Flammability (solid, gas) | : | Not applicable. |
| Vapor pressure | : | No data available |
| Relative vapor density at 20 °C | : | No data available |
| Relative density | : | 0.9396 (0.9296 – 0.9496) |
| Solubility | : | Insoluble. |
| Partition coefficient n-octanol/water (Log Pow) | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosion limits | : | No data available |
| Explosive properties | : | No data available |
| Oxidizing properties | : | No data available |

### 9.2. Other information

Refractive index : 1.47724 (1.46724 – 1.48724)

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

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

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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

| CITRONELLOL (106-22-9) | |
|---|---|
| LD50 oral rat | 3450 mg/kg (Rat, Inconclusive, insufficient data, Oral) |
| LD50 dermal rabbit | 2650 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal) |
| ATE US (oral) | 3450 mg/kg body weight |
| ATE US (dermal) | 2650 mg/kg body weight |

| DIHYDROMYRCENOL (18479-58-8) | |
|---|---|
| ATE US (oral) | 3600 mg/kg body weight |

| p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6) | |
|---|---|
| ATE US (oral) | 1390 mg/kg body weight |

| LINALOOL (78-70-6) | |
|---|---|
| ATE US (oral) | 2790 mg/kg body weight |

| p-Cymene (99-87-6) | |
|---|---|
| LD50 oral rat | 4750 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rabbit | > 5000 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s)) |
| LC50 Inhalation - Rat | > 9.7 mg/l (5 h, Rat, Experimental value, Inhalation) |
| ATE US (oral) | 4750 mg/kg body weight |
| ATE US (vapors) | 3 mg/l/4h |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| LD50 dermal rabbit | > 5000 mg/kg body weight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |
| ATE US (oral) | 4500 mg/kg body weight |

| 7-acetyl-1,1,3,4,4,6-hexamethyltetralin (1506-02-1) | |
|---|---|
| ATE US (oral) | 1000 mg/kg body weight |

| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7) | |
|---|---|
| LD50 oral rat | 3810 mg/kg (Rat, Male / female, Weight of evidence, Oral, 14 day(s)) |
| LD50 dermal rat | > 5000 mg/kg (Rat, Male, Experimental value, Dermal, 14 day(s)) |
| ATE US (oral) | 3810 mg/kg body weight |

| HYDROXYCITRONELLAL (107-75-5) | |
|---|---|
| LD50 oral rat | > 5000 mg/kg (Rat) |
| LD50 dermal rabbit | > 2000 mg/kg (Rabbit) |

| d-Limonene (5989-27-5) | |
|---|---|
| LD50 oral rat | > 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 14 day(s)) |
| LD50 dermal rabbit | > 5000 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Read-across, Dermal, 7 day(s)) |

| GAMMA-TERPINENE (99-85-4) | |
|---|---|
| ATE US (oral) | 3850 mg/kg body weight |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

| d-Limonene (5989-27-5) | |
|---|---|
| IARC group | 3 - Not classifiable |

Reproductive toxicity : Suspected of damaging fertility or the unborn child.

STOT-single exposure : Not classified

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

| CITRONELLOL (106-22-9) | |
|---|---|
| NOAEL (oral,rat,90 days) | 2000 mg/kg body weight Animal: rat, Guideline: other: |
| NOAEC (inhalation,rat,dust/mist/fume,90 days) | 0.063 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study) |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| NOAEL (oral,rat,90 days) | 80 mg/kg body weight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| NOAEL (dermal,rat/rabbit,90 days) | 300 mg/kg body weight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study) |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

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

Symptoms/effects after eye contact : Eye irritation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

| CITRONELLOL (106-22-9) | |
|---|---|
| LC50 - Fish [1] | 14.66 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value) |
| EC50 - Crustacea [1] | 17.48 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value) |

| p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6) | |
|---|---|
| LC50 - Fish [1] | 2.04 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Flow-through system, Fresh water, Experimental value, GLP) |
| EC50 - Crustacea [1] | 10.7 mg/l (Other, 48 h, Daphnia magna, Static system, Fresh water, Experimental value) |

| p-Cymene (99-87-6) | |
|---|---|
| LC50 - Fish [1] | 48 mg/l (EPA OPPTS 850.1075, 96 h, Cyprinodon variegatus, Static system, Salt water, Experimental value) |
| EC50 - Crustacea [1] | 3.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP) |
| ErC50 algae | 4.03 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP) |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| LC50 - Fish [1] | 3 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Static system, Experimental value, GLP) |
| EC50 - Crustacea [1] | 0.86 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Experimental value, GLP) |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| LC50 - Fish [2] | 3 mg/l Test organisms (species): Pimephales promelas |
| ErC50 algae | > 4.3 mg/l (OECD 201: Alga, Growth Inhibition Test, 96 h, Pseudokirchneriella subcapitata, Static system, Experimental value, GLP) |
| LOEC (chronic) | 0.23 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
| NOEC (chronic) | 0.087 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |

| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7) | |
|---|---|
| LC50 - Fish [1] | 1.092 mg/l (96 h, Calculated value) |
| EC50 - Crustacea [1] | 1.4 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value) |
| LC50 - Fish [2] | 2.49 mg/l Test organisms (species): |

| d-Limonene (5989-27-5) | |
|---|---|
| LC50 - Fish [1] | 720 µg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value) |
| EC50 - Crustacea [1] | 0.307 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP) |
| LC50 - Fish [2] | 702 µg/l Test organisms (species): Pimephales promelas |
| EC50 - Crustacea [2] | 0.51 mg/l Test organisms (species): Daphnia magna |
| ErC50 algae | 0.32 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP) |

### 12.2. Persistence and degradability

| CITRONELLOL (106-22-9) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| Chemical oxygen demand (COD) | 2.05 g $O_2$/g substance |
| ThOD | 2.961 g $O_2$/g substance |

| DIHYDROMYRCENOL (18479-58-8) | |
|---|---|
| Persistence and degradability | Biodegradability in water: no data available. |

| p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |

| p-Cymene (99-87-6) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| Persistence and degradability | Not readily biodegradable in water. |

| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |

| HYDROXYCITRONELLAL (107-75-5) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| Chemical oxygen demand (COD) | 2.65 g $O_2$/g substance |

| d-Limonene (5989-27-5) | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. |
| ThOD | 3.29 g $O_2$/g substance |

### 12.3. Bioaccumulative potential

| CITRONELLOL (106-22-9) | |
|---|---|
| BCF - Fish [1] | 82.59 l/kg (BCFBAF v3.00, Estimated value) |
| Partition coefficient n-octanol/water (Log Pow) | 3.41 (Practical experience/observation, EU Method A.8: Partition Coefficient, 25 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| DIHYDROMYRCENOL (18479-58-8) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 3.47 (Estimated value) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 4.2 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 24 °C) |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5). |

| p-Cymene (99-87-6) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C) |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5). |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| BCF - Fish [1] | 867 – 3920 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Oncorhynchus mykiss, Flow-through system, Fresh water, Experimental value, GLP) |
| Partition coefficient n-octanol/water (Log Pow) | 5.6 – 5.9 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method) |
| Bioaccumulative potential | Potential for bioaccumulation (500 ≤ BCF ≤ 5000). |

| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7) | |
|---|---|
| BCF - Fish [1] | 155 l/kg (Calculated value) |
| Partition coefficient n-octanol/water (Log Pow) | 3.4 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 35 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (BCF < 500). |

| HYDROXYCITRONELLAL (107-75-5) | |
|---|---|
| Partition coefficient n-octanol/water (Log Pow) | 2.11 (Estimated value) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| d-Limonene (5989-27-5) | |
|---|---|
| BCF - Fish [1] | 864.8 l/kg (BCFBAF v3.01, Pisces, QSAR, Fresh weight) |
| Partition coefficient n-octanol/water (Log Pow) | 4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C) |
| Bioaccumulative potential | Potential for bioaccumulation (4 ≤ Log Kow ≤ 5). |

### 12.4. Mobility in soil

| CITRONELLOL (106-22-9) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 1.85 (log Koc, EPIWIN 2.00, Estimated value) |
| Ecology - soil | Highly mobile in soil. |

| DIHYDROMYRCENOL (18479-58-8) | |
|---|---|
| Ecology - soil | No (test)data on mobility of the substance available. |

| p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.11 (log Koc, PCKOCWIN v1.66, Calculated value) |
| Ecology - soil | Low potential for mobility in soil. |

| p-Cymene (99-87-6) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 4.17 (log Koc, SRC PCKOCWIN v2.0, QSAR) |
| Ecology - soil | Low potential for mobility in soil. |

| ACETYL CEDRENE (32388-55-9) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.5 – 5.1 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value, GLP) |
| Ecology - soil | Low potential for mobility in soil. |

| 2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7) | |
|---|---|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.05 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value) |
| Ecology - soil | Low potential for mobility in soil. |

| d-Limonene (5989-27-5) | |
|---|---|
| Surface tension | No data available in the literature |
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 3.049 – 3.801 (log Koc, SRC PCKOCWIN v2.0, Calculated value) |
| Ecology - soil | Low potential for mobility in soil. |

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

## SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

| | | |
|---|---|---|
| Transport document description (DOT) | : | NA1993 Combustible liquid, n.o.s. (Dihydromyrcenol, Linalyl Acetate) - Regulated for Bulk only, Comb Liq, III |
| UN-No.(DOT) | : | NA1993 |
| Proper Shipping Name (DOT) | : | Combustible liquid, n.o.s.<br>(Dihydromyrcenol, Linalyl Acetate) - Regulated for Bulk only |
| Class (DOT) | : | Comb Liq - Combustible liquid |
| Packing group (DOT) | : | III - Minor Danger |
| DOT Packaging Non Bulk (49 CFR 173.xxx) | : | 203 |
| DOT Packaging Bulk (49 CFR 173.xxx) | : | 241 |
| DOT Symbols | : | D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name |
| DOT Special Provisions (49 CFR 172.102) | : | 148 - For domestic transportation, this entry directs to § 173.66 for: a. The standards for transporting a single bulk hazardous material for blasting by cargo tank motor vehicles (CTMV); and b. The standards for CTMVs capable of transporting multiple hazardous materials for blasting in bulk and non-bulk packagings (i.e, a multipurpose bulk truck (MBT)).<br>IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).<br>T1 - 1.5 178.274(d)(2) Normal..... 178.275(d)(2)<br>TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : | 150 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : | 60 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : | 220 L |
| DOT Vessel Stowage Location | : | A - The material may be stowed ''on deck'' or ''under deck'' on a cargo vessel and on a passenger vessel. |
| Other information | : | No supplementary information available. |

**Transportation of Dangerous Goods**

Not applicable

**Transport by sea**

Not regulated

**Air transport**

Not regulated

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

| **p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| **ACETYL CEDRENE (32388-55-9)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| **7-acetyl-1,1,3,4,4,6-hexamethyltetralin (1506-02-1)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| **CEDROL METHYL ETHER (19870-74-7)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

| **2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol (63500-71-0)** | |
|---|---|
| EPA TSCA Regulatory Flag | PMN - PMN - indicates a commenced PMN substance. |

| **α-Guaiene (3691-12-1)** |
|---|
| Listed on the United States TSCA (Toxic Substances Control Act) inventory |

### 15.2. International regulations

**CANADA**

| **CITRONELLOL (106-22-9)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **DIHYDROMYRCENOL (18479-58-8)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **p-t-Butyl-α-methylhydrocinnamic aldehyde (80-54-6)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **LINALOOL (78-70-6)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **p-Cymene (99-87-6)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **ACETYL CEDRENE (32388-55-9)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **7-acetyl-1,1,3,4,4,6-hexamethyltetralin (1506-02-1)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **CEDROL METHYL ETHER (19870-74-7)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

| **2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol (63500-71-0)** |
|---|
| Listed on the Canadian DSL (Domestic Substances List) |

**HYDROXYCITRONELLAL (107-75-5)**
Listed on the Canadian DSL (Domestic Substances List)

**LINALYL ACETATE (115-95-7)**
Listed on the Canadian DSL (Domestic Substances List)

**d-Limonene (5989-27-5)**
Listed on the Canadian DSL (Domestic Substances List)

**GAMMA-TERPINENE (99-85-4)**
Listed on the Canadian DSL (Domestic Substances List)

**α-Guaiene (3691-12-1)**
Listed on the Canadian DSL (Domestic Substances List)

### EU-Regulations
No additional information available

### National regulations

**CITRONELLOL (106-22-9)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**DIHYDROMYRCENOL (18479-58-8)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**LINALOOL (78-70-6)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**p-Cymene (99-87-6)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**2-Methyl-3-(p-isopropylphenyl)propionaldehyde (103-95-7)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

**2-Isobutyl-4-methyltetrahydro-2H-pyran-4-ol (63500-71-0)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**HYDROXYCITRONELLAL (107-75-5)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active

**LINALYL ACETATE (115-95-7)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**d-Limonene (5989-27-5)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

**GAMMA-TERPINENE (99-85-4)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active
Listed on INSQ (Mexican National Inventory of Chemical Substances)

### 15.3. US State regulations

This product can expose you to furocoumarines (e. g. trioxysalen (inn), 8-methoxypsoralen, 5-methoxypsoralen) except for normal content in natural essences used. in sunprotection and in bronzing products, furocoumarines shall be below 1 mg/kg, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

**⚠ WARNING:**

This product can expose you to eugenyl methyl ether, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

This product can expose you to myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

| Component | State or local regulations |
|---|---|
| p-Cymene(99-87-6) | U.S. - Massachusetts - Right To Know List; U.S. - Pennsylvania - RTK (Right to Know) List |

## SECTION 16: Other information

Revision date : 10/12/2022

Full text of H-phrases:

| | |
|---|---|
| H226 | Flammable liquid and vapor |
| H227 | Combustible liquid |
| H302 | Harmful if swallowed |
| 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 |
| H320 | Causes eye irritation |
| H331 | Toxic if inhaled |
| H361 | Suspected of damaging fertility or the unborn child |
| H373 | May cause damage to organs through prolonged or repeated exposure |

SDS US (GHS HazCom 2012) - Lebermuth

*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.*