# MATERIAL SAFETY DATA SHEET

in accordance with Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 (REACH), Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 and Comission Regulation (EU) No 2020/878 of 18 June 2020

## Fragrance Zest Spring DBB 12638

**version No. EN 6** **date of update: 17.09.2025**

**print: 23.02.2026**

## IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING:

1.1.Product identifier:

| | |
|---|---|
| MIXTURE IDENTIFICATION: | Fragrance, flavour, auto cosmetology, industrial and home chemistry |
| Trade name | Fragrance Zest Spring DBB 12638 |
| Product number | 12638 |
| UFI Code | YJR0-Q2YF-T00R-TJJP |
| E-MAIL OF THE SUPPLIER: | office@aromaukraine.com |

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST:

| | |
|---|---|
| RECOMMENDED USE: | Aromatic ingredient for household chemicals and cosmetics. Manufacturing use only, not for direct consumption as such. |
| USES ADVISED AGAINST: | Do not use in food. |

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:

| | |
|---|---|
| COMPETENT PERSON RESPONSIBLE FOR THE MATERIAL SAFETY DATA SHEET: | “Aroma Ukraine” Ltd. |
| ADDRESS OF THE SUPPLIER: | Ukraine, 54018, Mykolaiv; Bogoyavlensky Avenue, 47, off. 3 |
| TELEPHONE NUMBER OF THE SUPPLIER: | +38 (0512) 56-23-28 |

1.4. EMERGENCY CONTACTS:

| | |
|---|---|
| IN CASE OF INTOXINCATION: | "LATVIA - State fire and rescue service: (+371) 112; (+371) 113;<br>The national poison information center: +371 67042468;<br>GERMANY - International emergency number: +49 180 2273-112. Transport Emergency phone number: (24 h service), phone: +49 621 60-43333;<br>UNITED KINGDOM - National Poisons Information Service (24 h service), phone: +44 (0) 844-892-0111 (UK only);<br>FRANCE - INRS FRANCE: phone: +33 (0)1 45 42 59-59.<br>CZECH REPUBLIC – Klinika p aovního lékařství VFN a 1. LF UK, Na Bojišti 1, 120 00, Praha 2 224 91 92 93, 224 91 54 02 (nepřet žitě)<br>FOR OTHER EU COUNTRIES, please consult: http://echa.europa.eu/help/nationalhelp_contact_en.asp" |

## SECTION 2 - HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Classification according to regulation (EC) No 1272/2008 (CLP)

| | |
|---|---|
| Product definition | Mixture |
| H411 | Aquatic Chronic 2 |
| H317 | Skin Sens. 1 |

**Please refer to section 16 for details.**

### 2.2. LABEL ELEMENTS

**Labelling according to Regulation (EC) (CLP)**

Hazardous substances:

Hazard pictograms:



| | |
|---|---|
| Signal word | Warning |
| Hazard statements | |
| H411 | Toxic to aquatic life with long lasting effects. |
| H317 | May cause an allergic skin reaction. |

**Precautionary statements (Prevention and Intervention)**

| | |
|---|---|
| P273 | Avoid release to the environment. |
| P261 | Avoid breathing dust/fumes/gas/mist/vapours/spray. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P333+P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| 2.3. OTHER HAZARDS | No data available |

## SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

| | |
|---|---|
| 3.1 SUBSTANCES: | Mixture of natural, nature identical and synthetic aromatic products. |
| 3.2 MIXTURES: | Mixture of natural and synthetic aromatic ingredients. |

3.2 Hazardous components:

| INGREDIENTS | % | CAS No. / EC No.<br>Index No. / REACH No. | Classification<br>REGULATION (EC) No 1272/2008 |
|---|---|---|---|
| Benzyl Benzoate (IUPAC: BENZYL BENZOATE ) | <68,3% | CAS No. 120-51-4<br>EC No. 204-402-9<br>Index No.<br>REACH<br>No.01-2119976371-33-xxxx | Aquatic Chronic 2:H411<br>Acute Tox. 4 ORAL H302 :H302 |
| Undecavertol (IUPAC: (3E)-4-METHYLDEC-3-EN-5-OL ) | <3,17% | CAS No. 81782-77-6<br>EC No. 279-815-0<br>Index No.<br>REACH<br>No.01-2119983528-21-xxxx | Aquatic Acute 1:H400<br>M=1 |
| Benzyl Acetate (IUPAC: BENZYL ACETATE ) | <3,17% | CAS No. 140-11-4<br>EC No. 205-399-7<br>Index No.<br>REACH<br>No.01-2119638272-42-xxxx | Aquatic Chronic 3 :H412 |
| Verdox (OTBCH Acetate) (IUPAC: (1S,2S)-2-TERT-BUTYLCYCLOHEXYL ACETATE ) | <2,29% | CAS No. 88-41-5<br>20298-69-5<br>EC No. 243-718-1<br>Index No.<br>REACH No. | Aquatic Chronic 2:H411 |
| Cyclamen Aldehyde (IUPAC: 2-METHYL-3-[4-(PROPAN-2-YL)PHENYL]PROPANAL ) | <2,2% | CAS No. 103-95-7<br>EC No. 203-161-7<br>Index No.<br>REACH<br>No.01-2119970582-32-xxxx | Skin Sens. 1B:H317<br>Skin Irrit. 2:H315<br>Aquatic Chronic 3 :H412<br>M Chr=1 |
| D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE ) | <1,74% | CAS No. 5989-27-5<br>8028-48-6<br>EC No. 227-813-5<br>Index No.601-096-00-2<br>REACH<br>No.01-2119529223-47-xxxx | Flam. Liq. 3:H226<br>Skin Sens. 1B:H317<br>Skin Irrit. 2:H315<br>Aquatic Acute 1:H400<br>Asp. Tox. 1 :H304<br>Aquatic Chronic 3 :H412<br>M=1 |
| Diethyl Malonate (IUPAC: 1,3-DIETHYL PROPANEDIOATE ) | <1,58% | CAS No. 105-53-3<br>EC No. 203-305-9<br>Index No.<br>REACH<br>No.01-2119886972-18-xxxx | Skin Irrit. 2:H315<br>Eye Irrit. 2:H319<br>STOT SE 3 (H335):H335 |

| | | | |
|---|---|---|---|
| Florol (IUPAC: 2-(ISOBUTYL)-4-HYDROXY-4-METHYL TETRAHYDROPYRAN ) | <1,2% | CAS No. 63500-71-0<br>EC No. 405-040-6<br>Index No.<br>REACH No. | Eye Irrit. 2:H319 |
| Isoamyl Isovalerate (IUPAC: 3-METHYLBUTYL 3-METHYLBUTANOATE ) | <1,11% | CAS No. 659-70-1<br>EC No. 211-536-1<br>Index No.<br>REACH No.01-2120105228-66-xxxx | Aquatic Chronic 2:H411 |
| Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE ) | <0,97% | CAS No. 27939-60-2<br>68039-49-6<br>EC No. 248-742-6<br>Index No.<br>REACH No.01-2120766006-57-xxxx | Aquatic Chronic 2:H411<br>Skin Sens. 1B:H317<br>Skin Irrit. 2:H315<br>Eye Irrit. 2:H319 |
| Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL ) | <0,95% | CAS No. 101-86-0<br>165184-98-5<br>EC No. 202-983-3<br>Index No.<br>REACH No.01-2119533092-50-xxxx | Aquatic Chronic 2:H411<br>Skin Sens. 1:H317<br>Aquatic Acute 1:H400<br>M=1<br>M Chr=1 |
| Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE ) | <0,95% | CAS No. 142-19-8<br>EC No. 205-527-1<br>Index No.<br>REACH No.01-2119488961-23-xxxx | Aquatic Chronic 2:H411<br>Acute Tox. 3 SKIN:H311<br>Aquatic Acute 1:H400<br>Acute Tox. 3 ORAL:H301<br>M=10 |
| Musk 50 IPM (IUPAC: 4,6,6,7,8,8-HEXAMETHYL-1H,3H,4H,6H,7H,8H-INDENO[5,6-C]PYRAN ) | <0,79% | CAS No. 1222-05-5<br>EC No. 214-946-9<br>Index No.603-212-00-7<br>REACH No.01-2119488227-29-xxxx | Aquatic Chronic 1:H410<br>Aquatic Acute 1:H400<br>M Chr=1 |
| Isoamyl Acetate (IUPAC: 3-METHYLBUTYL ACETATE ) | <0,48% | CAS No. 123-92-2<br>EC No. 204-662-3<br>Index No.<br>REACH No.01-2119548408-32-xxxx | Flam. Liq. 3:H226 |
| Melonal (IUPAC: 2,6-DIMETHYLHEPT-5-ENAL ) | <0,48% | CAS No. 106-72-9<br>EC No. 203-427-2<br>Index No.<br>REACH No.01-2120270305-62-xxxx | Skin Sens. 1B:H317 |
| Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL ) | <0,48% | CAS No. 78-70-6<br>EC No. 201-134-4<br>Index No.603-235-00-2<br>REACH No.01-2119474016-42-xxxx | Skin Sens. 1B:H317<br>Skin Irrit. 2:H315<br>Eye Irrit. 2:H319 |
| Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE ) | <0,32% | CAS No. 32210-23-4<br>EC No. 250-954-9<br>Index No.<br>REACH No.01-2119976286-24-xxxx | Skin Sens. 1B:H317 |
| Fixolide (Kevolid, Tonalid) (IUPAC: 1-(3,5,5,6,8,8-HEXAMETHYL-5,6,7,8-TETRAHYDRONAPHTHALEN-2-YL)ETHAN-1-ONE ) | <0,32% | CAS No. 21145-77-7<br>1506-02-1<br>EC No. 244-240-6/216-1<br>Index No.<br>REACH No.01-2119539433-40-xxxx | Aquatic Chronic 1:H410<br>Acute Tox. 4 ORAL H302 :H302<br>Aquatic Acute 1:H400<br>M=1 |
| Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL ) | <0,16% | CAS No. 106-24-1<br>EC No. 203-377-1<br>Index No.603-241-00-5<br>REACH No.01-2119552430-49-xxxx | Skin Sens. 1:H317<br>Skin Irrit. 2:H315<br>Eye Dam. 1 :H318 |
| Allyl Amyl Glycolate (IUPAC: PROP-2-EN-1-YL 2-(3-METHYLBUTOXY)ACETATE ) | <0,16% | CAS No. 67634-00-8<br>EC No. 266-803-5<br>Index No.<br>REACH No.01-2120795456-39-xxxx | Aquatic Chronic 1:H410<br>Acute Tox. 4 ORAL H302 :H302<br>Aquatic Acute 1:H400<br>Acute Tox. 2 INHALATION:H330<br>M=1<br>M Chr=1 |
| Ethyl Acetate (IUPAC: ETHYL ACETATE ) | <0,16% | CAS No. 141-78-6<br>EC No. 205-500-4<br>Index No.<br>REACH No.01-2119475103-46-xxxx | Eye Irrit. 2:H319<br>Flam. Liq. 2:H225<br>STOT SE 3 (H336):H336 |
| Terpinene-4-ol (IUPAC: 4-METHYL-1-(PROPAN-2-YL)CYCLOHEX-3-EN-1-OL ) | <0,16% | CAS No. 562-74-3<br>EC No. 209-235-5<br>Index No.<br>REACH No.01-2120748638-40-xxxx | Skin Sens. 1:H317<br>Acute Tox. 4 ORAL H302 :H302<br>Skin Irrit. 2:H315<br>Eye Irrit. 2:H319<br>Acute Tox. 4 INHALATION:H332<br>STOT SE 3 (H336):H336 |

| | | | |
|---|---|---|---|
| BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL ) | <0,1% | CAS No. 128-37-0<br>EC No. 204-881-4<br>Index No.<br>REACH No.<br>01-2119555270-46-0000 | Aquatic Chronic 1:H410<br>M Chr=1 |

## SECTION 4 - FIRST-AID MEASURES

| | |
|---|---|
| Inhalation | Move affected person to fresh air at once. Get medical attention if any discomfort continues |
| Ingestion | Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention immediately. |
| Skin contact | Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist after washing. |
| Eye contact | Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues. |

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

| | |
|---|---|
| General information | Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. See Section 11 for additional information on health hazards. |

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

**Notes for the doctor No specific recommendations.**

## SECTION 5 - FIRE-FIGHTING MEASURES

5.1 Extinguishing media:

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|---|---|
| Suitable extinguishing media | Extinguish with the following media: Foam, carbon dioxide or dry powder. |
| Unsuitable extinguishing media | Water. |

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

| | |
|---|---|
| Specific hazards | Toxic gases or vapours |

**5.3. Advice for firefighters**

| | |
|---|---|
| Protective actions during firefighting | Containers close to fire should be removed or cooled with water. |
| Special protective equipment for firefighters | Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. |

## SECTION 6: Accidental release measures

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

| | |
|---|---|
| Personal precautions | Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots,clothing or apron, as appropriate. No smoking, sparks, flames or other sources of ignition near spillage. Look section 13 |

**6.2. Environmental precautions**

| | |
|---|---|
| Environmental precautions | Do not discharge into drains or watercourses or onto the ground. |
| 6.4. Reference to other sections | 8; 13 |

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling**

| | |
|---|---|
| Usage precautions | Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. |
| Advice on general occupational hygiene | Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. |

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

| | |
|---|---|
| Storage precautions | Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Protect from freezing and direct sunlight. Storage temperature: from 0 to 30 °C |
| 7.3. Specific end use(s) | See sections 1 and 2. |

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 Control parameters:**

| INGREDIENT | CAS № | TWA, 8 hours |
|---|---|---|
| Isoamyl Acetate (IUPAC: 3-METHY | 123-92-2 | TWA= 270* mg/m³ |
| Ethyl Acetate (IUPAC: ETHYL ACE | 141-78-6 | TWA= 200* mg/m³ |
| Benzyl Acetate (IUPAC: BENZYL A | 140-11-4 | TWA= 5* mg/m³ |

ADDITIONAL INFORMATION: Information valid at the time of review of safety data sheet.

8.2. EXPOSURE CONTROLS:

**ENGINEERING MEASURES: Comply with standard precautionary measures for working with chemicals. See Directive 2004/37/EG on the protection of workers from the risks related to exposure to carcinogens or mutagens at work. HYGIENIC MEASURES: When using do not eat, drink or smoke.**

| | |
|---|---|
| GENERAL PROTECTIVE AND HYGIENIC MEASURES: | Avoid contact with the eyes. Wash hands during work breaks and at the end of the shift. Provide skin protection plan. |
| RESPIRATORY PROTECTION: | Avoid excessive inhalation of concentrated vapors. Ensure adequate ventilation. If workers are exposed to high concentrations, they must use appropriate, certified respirators. Wear suitable respiratory protection in case of large scale exposure. Suitable facemask in accordance with EN 140. |
| BODY PROTECTION: | Protective clothing. Safety showers should be available in the immediate vicinity of any potential exposure. Wear appropriate protective clothing, overalls or suit, and similar boots in accordance with EN 365/367. |
| EYE PROTECTION: | Wear appropriate safety glasses with side shields, in accordance with EN 166, when there is danger of possible eye contact. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. |
| Hygiene measures | No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. |
| HAND PROTECTION: | Chemical protective gloves according to DIN EN 374 with CE-labelling. Suitable material - nitril. 0.13 mm. Indication of permeation breakthrough time – 1 hour. Check the condition of protective gloves after each use for any damages like holes, cuts or tears. Do not wear protective gloves longer than necessary. After use of gloves apply skin-cleaning agents and skin cosmetics. Gloves for mechanical protection do not provide protection against chemicals. |
| RISK MANAGEMENT MEASURES: | The operators shall be instructed adequately. The workplace shall be inspected regularly by competent personnel e.g. the safety representative. |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance: | Homogeneous transparent liquid , opalescence is allowed. |
| Colour: | From colorless to brown |
| Odour: | Fragrance description |
| Freezing point: | < 0 °C |
| Boiling point, °C: | No data available |
| Explosion | Not explosive |
| Combustibility | It doesn't burn |
| Lower and upper explosive limits: | Not explosive |
| Flash point: | It doesn't burn |
| Autoignition temperature: | No spontaneous combustion |
| Decomposition temperature: | No data available |
| pH: | Not stable |
| Kinematic viscosity: | No data available |
| Solubility in alcohol: | Soluble |
| Solubility in water: | Limited solubility |
| Partition coefficient n octanol/water (log mean): | No data available |
| Steam pressure | No data available |
| Density, 20 °C: | 0.9 – 1.6 g/cm³ |
| Relative vapor density: | No data available |
| flammability: | Non-flammable |
| Part characteristics | No |

9.2. OTHER INFORMATION: No data available

## SECTION 10: STABILITY AND REACTIVITY

| | |
|---|---|
| 10.1. REACTIVITY: | The product is stable and relatively inert under normal conditions of use, storage and transport. |
| 10.2. CHEMICAL STABILITY: | Under the conditions of use specified in Section 7, the product is stable. |
| 10.3. POSSIBILITY OF HAZARDOUS REACTION: | Under normal conditions of use, there is no information on dangerous reactions. |
| 10.4. CONDITIONS TO AVOID: | Contact with incompatible materials. |
| 10.5. INCOMPATIBLE MATERIALS: | Strong acids, strong bases, strong oxidants. |
| 10.6. HAZARDOUS DECOMPOSITION PRODUCTS: | No decomposition product of storage and handling conditions are followed. In case of fire, hazardous gases may form. |

## SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

INHALATION

| | |
|---|---|
| Acute toxicity: | Calculated ATEmix (LC50)= 42,08 mg/l. Ingredients of unknown toxicity>10%: 96,33 %.Not classified |
| Corrosion/irritation: | Does not have any classifiable toxicity. |
| Sensitisation: | Classified as Sensitisation — Skin, hazard category 1. |
| Carcinogenicity: | Does not have any classifiable toxicity. |
| Mutagenicity: | Does not have any classifiable toxicity. |

SKIN CONTACT:

| | |
|---|---|
| Acute toxicity: | Calculated ATEmix (LD50)= 10 309,2 mg/kg. Ingredients of unknown toxicity>10%: 85,29 %.Not classified |
| Corrosion/irritation: | Does not have any classifiable toxicity. |
| Sensitisation: | Classified as Sensitisation — Skin, hazard category 1. |
| Carcinogenicity: | Does not have any classifiable toxicity. |
| Mutagenicity: | Does not have any classifiable toxicity. |

EYE CONTACT:

Corrosion/irritation: Does not have any classifiable toxicity.

INGESTION:

Acute toxicity: Calculated ATEmix (LD50) = 2 223,09 mg/kg. Ingredients of unknown toxicity>10%: 14,32 %.Not classified

Corrosion/irritation: Does not have any classifiable toxicity.

Sensitisation: Classified as Sensitisation — Skin, hazard category 1.

Carcinogenicity: Does not have any classifiable toxicity.

Mutagenicity: Does not have any classifiable toxicity.

Reprotoxicity: Does not have any classifiable toxicity.

**Toxicological information:**

| Ingredients Name: | CAS No. | LD50 (oral) | LD50 (Dermal) | LC50 (Inhalation) |
|---|---|---|---|---|
| Benzyl Benzoate (IUPAC: BENZYL BENZOATE ) | 120-51-4 | 2 000 mg/kg | No data | No data |
| Benzyl Acetate (IUPAC: BENZYL ACETATE ) | 140-11-4 | 2 000 mg/kg | No data | No data |
| Verdox (OTBCH Acetate) (IUPAC: (1S,2S)-2-TERT-BUTYLCYCLOHEXYL ACETATE ) | 88-41-5<br>20298-69-5 | 4 600 mg/kg bw | >5 000 mg/kg | No data |
| Cyclamen Aldehyde (IUPAC: 2-METHYL-3-[4-(PROPAN-2-YL)PHENYL]PROPANAL ) | 103-95-7 | 2 000 mg/kg | No data | No data |
| D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE ) | 5989-27-5<br>8028-48-6 | 2 000 mg/kg bw | >5 mg/kg | No data |
| Diethyl Malonate (IUPAC: 1,3-DIETHYL PROPANEDIOATE ) | 105-53-3 | 15 794 mg/kg | 16 960 mg/kg | No data |
| Florol (IUPAC: 2-(ISOBUTYL)-4-HYDROXY-4-METHYL TETRAHYDROPYRAN ) | 63500-71-0 | 2 000 mg/kg bw | 2 000 mg/kg bw | No data |
| Isoamyl Isovalerate (IUPAC: 3-METHYLBUTYL 3-METHYLBUTANOATE ) | 659-70-1 | 5 000 mg/kg | >2 000 mg/kg | No data |
| Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE ) | 27939-60-2<br>68039-49-6 | 4 615 mg/kg | >5 000 gm/kg | No data |

| | | | | |
|---|---|---|---|---|
| Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL ) | 101-86-0 165184-98-5 | 3 100 mg/kg | 3 000 mg/kg | 3,56 mg/l |
| Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE ) | 142-19-8 | 218 mg/kg | 810 mg/kg | No data |
| Musk 50 IPM (IUPAC: 4,6,6,7,8,8-HEXAMETHYL-1H,3H,4H,6H,7H,8H-INDENO[5,6-C]PYRAN ) | 1222-05-5 | No data | >3 250 mg/kg | No data |
| Isoamyl Acetate (IUPAC: 3-METHYLBUTYL ACETATE ) | 123-92-2 | 7 400 mg/kg | No data | No data |
| Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL ) | 78-70-6 | 2 790 mg/kg | 5 610 mg/kg | 3 200 mL/kg bw |
| Fixolide (Kevolid, Tonalid) (IUPAC: 1-(3,5,5,6,8,8-HEXAMETHYL-5,6,7,8-TETRAHYDRONAPHTHALEN-2-YL)ETHAN-1-ONE ) | 21145-77-7 1506-02-1 | 920 mg/kg | 7 940 mg/kg | No data |
| Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL ) | 106-24-1 | 3 600 mg/kg | >5 gm/kg | No data |
| Allyl Amyl Glycolate (IUPAC: PROP-2-EN-1-YL 2-(3-METHYLBUTOXY)ACETATE ) | 67634-00-8 | 500 mg/kg | 2 000 mg/kg | No data |
| Ethyl Acetate (IUPAC: ETHYL ACETATE ) | 141-78-6 | 4 934 mg/kg | 20 000 mg/kg | No data |
| Terpinene-4-ol (IUPAC: 4-METHYL-1-(PROPAN-2-YL)CYCLOHEX-3-EN-1-OL ) | 562-74-3 | 1 016 mg/kg | >2 500 mg/kg | No data |
| BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL ) | 128-37-0 | 6 000 mg/kg bw | >2 000 mg/kg bw | No data |
| 11.2. PRIMARY IRRITANT EFFECT: | | Does not have any classifiable toxicity | | |

| | |
|---|---|
| 11.2.1 ENDOCRINE DISRUPTING PROPERTIES: | Musk 50 IPM (IUPAC: 4,6,6,7,8,8-HEXAMETHYL-1H,3H,4H,6H,7H,8H-INDENO PYRAN ),Fixolide (Kevolid, Tonalid) (IUPAC: 1-(3,5,5,6,8,8-HEXAMETHYL-5,6,7,8-TETRAHYDRONAPH THALEN-2-YL)ETHAN-1-ONE ),BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL ) |
| 11.3. SENSITISATION: | Classified as Sensitisation — Skin, hazard category 1. |
| 11.4 CHRONIC EFFECT: | Classified as Hazardous to the aquatic environment — Chronic Category 2. |
| 11.5 TARGET ORGANS: | Does not have any classifiable toxicity. |
| 11.6. CARCINOGENICITY: | Does not have any classifiable toxicity. |
| 11.7. MUTAGENICITY: | Does not have any classifiable toxicity. |
| 11.8. REPROTOXICITY: | Does not have any classifiable toxicity. |

## SECTION 12: ECOLOGICAL INFORMATION

12.1. TOXICITY:

| | |
|---|---|
| Acute: | Does not have any classifiable toxicity. |
| Chronic: | Classified as Hazardous to the aquatic environment — Chronic Category 2. |

Ingredients Toxicity:

AQUATIC TOXICITY:

| | |
|---|---|
| Benzyl Benzoate (IUPAC: BENZYL BENZOATE ) | |
| 120-51-4 | |
| EC50/72 H | 311 (Aquatic algae and cyanoba) |
| LC50/48 H | 7,77 mg/l(Aquatic invertebrates) |
| EC50/48 H | 3,09 mg/l(Aquatic invertebrates) |
| LC50/24 H | 11 mg/l(Aquatic invertebrates) |
| LC50/96 H | 2,32 mg/l(Fish) |
| EC50/24 H | 4,26 mg/l(Fish) |
| Undecavertol (IUPAC: (3E)-4-METHYLDEC-3-EN-5-OL ) | |
| 81782-77-6 | |
| EC50/72 H | 3,6 mg/l(Algae) |
| EC50/96 H | 3,8 mg/l(Algae) |
| Benzyl Acetate (IUPAC: BENZYL ACETATE ) | |
| 140-11-4 | |
| EC50/72 H | 101 mg/l(Algae) |
| EC50/48 H | 17 mg/l(Aquatic invertebrates) |
| LC50/96 H | 4 mg/l(Fish) |
| Cyclamen Aldehyde (IUPAC: 2-METHYL-3-[4-(PROPAN-2-YL)PHENYL]PROPANAL ) | |
| 103-95-7 | |
| EC50/72 H | 2,7 mg/l(Algae) |
| EC50/96 H | 2,7 mg/l(Algae) |
| EC50/48 H | 1,4 mg/l(Aquatic invertebrates) |
| LC50/96 H | 1,092 mg/l(Fish) |
| D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE ) | |
| 5989-27-5 8028-48-6 | |
| EC50/72 H | 320 mg/l(Aquatic algae and cyanoba) |
| EC50/48 H | 250 mg/l(Aquatic algae and cyanoba) |
| EC50/48 H | 250 (Algae) |
| EC50/48 H | 510 mg/l(Aquatic invertebrates) |
| EC50/48 H | 408,5 mg/l(Aquatic invertebrates) |
| EC50/24 H | 840 mg/l(Aquatic invertebrates) |
| EC50/21days | 188 mg/l(Aquatic invertebrates) |

| | |
|---|---|
| LC50/96 H | 720 mg/l(Fish) |
| EC50/96 H | 702 mg/l(Fish) |
| LC50/96 H | 590 mg/l(Fish) |
| EC50/96 H | 695 (Fish) |
| Diethyl Malonate (IUPAC: 1,3-DIETHYL PROPANEDIOATE ) | |
| 105-53-3 | |
| EC50/72 H | 800 mg/l(Aquatic algae and cyanoba) |
| EC50/48 H | 202,3 mg/l(Aquatic invertebrates) |
| EC50/24 H | 285,8 mg/l(Aquatic invertebrates) |
| LC50/96 H | 17,4 mg/l(Fish) |
| EC50/96 H | 16,8 mg/l(Fish) |
| Florol (IUPAC: 2-(ISOBUTYL)-4-HYDROXY-4-METHYL TETRAHYDROPYRAN ) | |
| 63500-71-0 | |
| EC50/72 H | 100 mg/l(Algae) |
| EC50/48 H | 320 mg/l(Aquatic invertebrates) |
| Isoamyl Isovalerate (IUPAC: 3-METHYLBUTYL 3-METHYLBUTANOATE ) | |
| 659-70-1 | |
| EC50/72 H | 5,11 mg/l(Algae) |
| EC50/48 H | 6,1 mg/l(Aquatic invertebrates) |
| LC50/96 H | 3,47 mg/l(Fish) |
| Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE ) | |
| 27939-60-2 68039-49-6 | |
| EC50/72 H | 22,8 mg/l(Algae) |
| EC50/48 H | 7,74 mg/l(Aquatic invertebrates) |
| LC50/96 H | 15 mg/l(Fish) |
| Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL ) | |
| 101-86-0 165184-98-5 | |
| EC50/72 H | 65 (Algae) |
| EC50/48 H | 475 (Aquatic invertebrates) |
| LC50/96 H | 1,7 mg/l(Fish) |
| Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE ) | |
| 142-19-8 | |
| EC50/72 H | 778 (Algae) |
| EC50/48 H | 890 (Aquatic invertebrates) |
| LC50/96 H | 117 (Fish) |
| LC50/72 H | 117 (Fish) |
| LC50/48 H | 117 (Fish) |
| LC50/24 H | 201 (Fish) |
| Musk 50 IPM (IUPAC: 4,6,6,7,8,8-HEXAMETHYL-1H,3H,4H,6H,7H,8H-INDENO[5,6-C]PYRAN ) | |
| 1222-05-5 | |
| EC50/72 H | 854 µg/L(Aquatic algae and cyanoba) |
| EC50/48 H | 300 µg/L(Aquatic invertebrates) |
| LC50/96 H | 950 µg/L(Fish) |
| Isoamyl Acetate (IUPAC: 3-METHYLBUTYL ACETATE ) | |
| 123-92-2 | |
| EC50/48 H | 42 mg/l(Aquatic invertebrates) |
| LC50/96 H | 34 mg/l(Fish) |
| Melonal (IUPAC: 2,6-DIMETHYLHEPT-5-ENAL ) | |
| 106-72-9 | |
| EC50/96 H | 4,3 mg/l(Aquatic algae and cyanoba) |

| | |
|---|---|
| EC50/48 H | 2,4 mg/l(Aquatic invertebrates) |
| LC50/96 H | 2,288 mg/l(Fish) |
| Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL ) | |
| 78-70-6 | |
| EC50/96 H | 122,5 mg/l(Algae) |
| EC50/96 H | 59 mg/l(Aquatic invertebrates) |
| LC50/96 H | 27,8 mg/l(Fish) |
| LC50/72 H | 27,8 mg/l(Fish) |
| LC50/48 H | 27,8 mg/l(Fish) |
| Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE ) | |
| 32210-23-4 | |
| EC50/72 H | 22 mg/l(Algae) |
| EC50/48 H | 5,3 mg/l(Aquatic invertebrates) |
| LC50/96 H | 8,6 mg/l(Fish) |
| Fixolide (Kevolid, Tonalid) (IUPAC: 1-(3,5,5,6,8,8-HEXAMETHYL-5,6,7,8-TETRAHYDRONAPHTHALEN-2-YL)ETHAN-1-ONE ) | |
| 21145-77-7 1506-02-1 | |
| EC50/72 H | 625 µg/L(Aquatic algae and cyanoba) |
| EC50/72 H | 800 µg/L(Aquatic invertebrates) |
| LC50/96 H | 1,49 mg/l(Fish) |
| Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL ) | |
| 106-24-1 | |
| LC50/96 H | 22 mg/l(Zebra(fish)) |
| EC50/72 H | 13,1 mg/l(Desmodesmus subspicatus) |
| EC50/48 H | 10,8 mg/l(Daphnia magna) |
| Allyl Amyl Glycolate (IUPAC: PROP-2-EN-1-YL 2-(3-METHYLBUTOXY)ACETATE ) | |
| 67634-00-8 | |
| EC50/96 H | 2,06 mg/l(Aquatic algae and cyanoba) |
| LC50/48 H | 5,09 mg/l(Aquatic invertebrates) |
| LC50/96 H | 768 µg/L(Fish) |
| Ethyl Acetate (IUPAC: ETHYL ACETATE ) | |
| 141-78-6 | |
| EC50/48 H | 5,6 g/l(Algae) |
| LC50/96 H | 230 mg/l(Fish) |
| EC50/96 H | 220 mg/l(Fish) |
| BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL ) | |
| 128-37-0 | |
| EC50/72 H | 5 120 µg/L(Algae) |
| EC50/96 H | 758 µg/L(Algae) |
| LC50/96 H | 384,5 µg/L(Fish) |

12.2. PERSISTENCE AND DEGRADABILITY: May cause long-term adverse effects in the aquatic environment.

ASSESSMENT BIODEGRADATION AND ELIMINATION: No data available

12.3. BIOACCUMULATIVE POTENTIAL: No further relevant information available. Low potential for bioaccumulation: logPow<4 (log Powcalculated = 0)

| **INGREDIENT** | CAS № | Partition Coefficient |
|---|---|---|

12.4. MOBILITY IN SOIL: No data available

GENERAL NOTES:

| | |
|---|---|
| 12.5. RESULTS OF PBT UN vPvB ASSESSMENT: | This mixture does not contain substances that meet the PBT or vPvB criteria of REACH, annex XIII. |
| 12.6. ENDOCRINE DISRUPTING PROPERTIES: | Musk 50 IPM (IUPAC: 4,6,6,7,8,8-HEXAMETHYL-1H,3H,4H,6H,7H,8H-INDENO PYRAN ),Fixolide (Kevolid, Tonalid) (IUPAC: 1-(3,5,5,6,8,8-HEXAMETHYL-5,6,7,8-TETRAHYDRONAPH THALEN-2-YL)ETHAN-1-ONE ),BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL ) |
| 12.7. OTHER ADVERSE EFFECTS: | |
| Global Warming Potential | Do not may contribute to the greenhouse effect. |

## SECTION 13: DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS:

**Dispose of in accordance with local and national regulations.**

| | |
|---|---|
| Product residues: | Do not pour residues into the municipal sewage system. |
| Additional warning: | None. |
| European waste catalogue: | Dispose of according to directives: 2008/98/ES; 94/62/ES ; 2014/955/EU; 2008/98/ES . |

| EUROPEAN WASTE CATALOGUE | |
|---|---|
| EWC CODE | Description |
| 07 | Wastes from organic chemical processes: |
| 07 07 | wastes from the MFSU of fine chemicals and chemical products not otherwise specified |
| 07 07 99 | wastes not otherwise specified |
| 15 02 02* | absorbents, filter materials (including oil filters not otherwise specified), wiping cloths, protective clothing contaminated by hazardous substances |

| | |
|---|---|
| CONTAMINATED PACKAGING: | Hand over the packaging left after use to the person responsible for the disposal of hazardous waste. |
| RECOMMENDATION: | Avoid release to the environment. |

## SECTION 14. TRANSPORT INFORMATION:

| | |
|---|---|
| 14.1. UN number | UN 3082 |
| 14.2. UN proper shipping name | UN 3082 Environmentally hazardous substance, liquid, N.O.S. |
| 14.3. TRANSPORT HAZARD CLASS (ES): ADR, IATA, IMDG CLASS | 9 |
| DANGER LABEL: | 9 |
| 14.4. PACKING GROUP: ADR, IATA, IMD | III |
| 14.5. ENVIRONMENTAL HAZARDS: MARINE POLLUTANT | Yes |
| 14.6. SPECIAL PRECAUTIONS FOR USER: | Read MSDS and emergency procedures before handling |
| 14.7. TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL 73/78 AND THE IBC CODE: | Not established.<br>Packaged liquids are not considered bulk. |

## SECTION 15: REGULATORY INFORMATION

| | |
|---|---|
| 15.1. SAFETY, HEALTH AND ENVIROMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THESUBSTANCE OR MIXTURE: | REGULATION (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.<br>DIRECTIVE 2006/11/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 February 2006 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community.<br>REGULATION (EC) No 1272/2008 (CLP) 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.<br>Directive 2008/98/EC of the European Parliament and of the Council on waste and on the repeal of certain Directives.<br>Directive 94/62/EC of the European Parliament and of the Council on packaging and packaging waste.<br>Commission Decision 2014/955/EU amending Decision 2000/532/EC on the list of wastes pursuant to Directive of the European Parliament and of the Council 2008/98/EC (EU Waste Catalogue) |
| INFORMATION ABOUT LIMITATION OF USE: | Take note of Directive 94/33/EC on the protection of young people at work.<br>Take note of Directive 92/85/EC on the safety and health of pregnant women at work. |
| 15.2. CHEMICAL SAFETY ASSESSMENT: | Not applicable. |

**Full text of the classifications, including the indication of danger, the hazard symbols and the hazard statements, mentioned in section 2 or 3:**

**Revisions are mentionned by a black stroke in left margin.**

## ABBREVIATIONS AND ACRONYMS:

| | |
|---|---|
| PBT: | Persistent, bioaccumulative, toxic |
| vPvB: | Very persistent, very bioaccumulative |
| EC: | European Inventory of Existing Commercial Chemical Substances |
| CAS: | Chemical Abstracts Service (division of the American Chemical Society) |
| ADR: | European Agreement concerning the International Carriage of Dangerous Goods |
| IATA: | International Air Transport Association |
| IMDG: | International Maritime Code for Dangerous Goods |
| LC50: | Median (50 %) lethal concentration |
| LD50: | Median (50%) lethal dose |
| EC50: | Effective concentration, 50 percent |
| CLP: | Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and Mixtures |
| ECHA: | European Chemicals Agency, Helsinki (http://echa.europa.eu/home_en.asp) |
| TWA: | Time Weighted Average |
| IBC code: | International Bulk Chemical Code |

| | |
|---|---|
| MARPOL: | International Convention for the Prevention of Pollution From Ships |
| REACH: | Registration, Evaluation, Authorisation and Restriction of Chemicals |
| UN: | United Nations |
| ATE: | Acute Toxicity Estimate |
| DNEL | Derived No-Effect Level |
| PNEC | Predicted No-Effect Concentration |

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