Fragrance Lime & Grapefruit 00015714

Lemo Fun SRL

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

IDENTIFICATION OF THE MIXTURE:

Fragrance, flavour, automotive cosmetics, industry and household chemistry

TRADE NAME:

Fragrance Lime & Grapefruit 00015714

PRODUCT NUMBER:

00015714

UFI Code:

A3HD-R1VK-W002-P8C6

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

RECOMMENDED USE:

Aromatic ingredient for household chemicals and cosmetics. Intended for manufacturing use only, not for direct consumption as such.

USE ADVISED AGAINST:

Do not use in foodstuffs.

1.3. Details of the supplier of the Safety Data Sheet

SUPPLIER:

Lemo Fun SRL

ADDRESS:

Nicolae Licaret 6, Bucharest, Romania

PHONE:

+40784943113

EMAIL:

info@shoplumanari.ro

WEBSITE:

www.shoplumanari.ro

1.4. Emergency telephone number

IN CASE OF INTOXICATION:

LATVIA – State Fire and Rescue Service: (+371) 112; (+371) 113;

National Poison Information Centre: +371 67042468;

GERMANY – International emergency number: +49 180 2273-112.

Transport emergency number (24 h service), Phone: +49 621 60-43333;

UNITED KINGDOM – National Poisons Information Service (24-hour service), Phone: +44 (0) 844-892-0111 (UK only);

FRANCE – INRS FRANCE: Phone: +33 (0)1 45 42 59-59.

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 in accordance with Regulation (EC) No. 1272/2008 (CLP)

Product definition: Mixture

Toxic to aquatic life with long-lasting effects. H411

May cause an allergic skin reaction. H317

Causes skin irritation. H315

Toxic if inhaled. H331

Causes serious eye irritation. H319

2.2. Label elements

Labelling in accordance with Regulation (EC) No. 1272/2008 (CLP)

Hazard Pictograms: see document header

Signal Word: Danger

Hazard Statements:

H411 – Toxic to aquatic life with long-lasting effects.

H317 – May cause an allergic skin reaction.

H315 – Causes skin irritation.

H331 – Toxic if inhaled.

H319 – Causes serious eye irritation.

Precautionary Statements:

P273 – Avoid release to the environment.

P261 – Avoid breathing dust/fumes/gas/mist/vapours/spray. [As modified by IV ATP]

P272 – Contaminated work clothing should not be allowed out of the workplace.

P280 – Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]

P264 – Wash thoroughly after handling.

P271 – Use only outdoors or in a well-ventilated area.

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 additional hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Mixture of natural, nature-identical and synthetic aromatic substances.

3.2. Mixtures

Mixture of natural and synthetic aromatic ingredients.

Hazardous components:

Ingredient	%	CAS No.	EC No.	Index No.	REACH No.	Classification (CLP) Reg. (EC) No. 1272/2008
Benzyl Benzoate (IUPAC: BENZYL BENZOATE)	<60%	120-51-4	204-402-9	—	01-2119976371-33-xxxx	Aquatic Chronic 2: H411; Acute Tox. 4 ORAL: H302; Aquatic Acute 1: H400
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE)	<12%	5989-27-5 / 8028-48-6	227-813-5	601-096-00-2	01-2119529223-47-xxxx	Flam. Liq. 3: H226; Skin Sens. 1B: H317; Skin Irrit. 2: H315; Aquatic Acute 1: H400; Asp. Tox. 1: H304; Aquatic Chronic 3: H412; M=1
Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL)	<8%	101-86-0 / 165184-98-5	202-983-3	—	01-2119533092-50-xxxx	Aquatic Chronic 2: H411; Skin Sens. 1: H317; Aquatic Acute 1: H400; M=1; M Chr=1
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL)	<7,19%	78-70-6	201-134-4	603-235-00-2	01-2119474016-42-xxxx	Skin Sens. 1B: H317; Skin Irrit. 2: H315; Eye Irrit. 2: H319
Orange Oil 100% pure and natural (IUPAC: (2Z,6E)-2,6-DIMETHYL-10-METHYLIDENEDODECA-2,6,11-TRIENAL)	<4%	8008-57-9 / 8028-48-6	232-433-8	—	01-2119493353-35-xxxx	Aquatic Chronic 2: H411; Skin Sens. 1: H317; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Asp. Tox. 1: H304
Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL)	<0,6%	106-24-1	203-377-1	603-241-00-5	01-2119552430-49-xxxx	Skin Sens. 1: H317; Skin Irrit. 2: H315; Eye Dam. 1: H318
Citral (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIENAL)	<0,6%	5392-40-5	226-394-6	—	01-2119462829-23-xxxx	Skin Sens. 1B: H317; Skin Irrit. 2: H315; Eye Irrit. 2: H319
Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE)	<0,4%	32210-23-4	250-954-9	—	01-2119976286-24-xxxx	Skin Sens. 1B: H317
Benzyl Acetate (IUPAC: BENZYL ACETATE)	<0,4%	140-11-4	205-399-7	—	01-2119638272-42-xxxx	Aquatic Chronic 3: H412
Citronellal Extra (IUPAC: 3,7-DIMETHYLOCT-6-ENAL)	<0,2%	106-23-0	203-376-6	—	—	Skin Sens. 1B: H317; Skin Irrit. 2: H315; Eye Irrit. 2: H319
Aldehyde C-8 (IUPAC: OCTANAL)	<0,2%	124-13-0	204-683-8	—	01-2119638274-38-xxxx	Flam. Liq. 3: H226; Skin Sens. 1B: H317; Skin Irrit. 2: H315; Eye Irrit. 2: H319
Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE)	<0,12%	27939-60-2 / 68039-49-6	248-742-6	—	01-2120766006-57-xxxx	Aquatic Chronic 2: H411; Skin Sens. 1B: H317; Skin Irrit. 2: H315; Eye Irrit. 2: H319
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE)	<0,12%	142-19-8	205-527-1	—	01-2119488961-23-xxxx	Aquatic Chronic 2: H411; Acute Tox. 3 SKIN: H311; Aquatic Acute 1: H400; Acute Tox. 3 ORAL: H301; M=10

Ingredient	%	CAS No.	EC No.	Index No.	REACH No.	Classification (CLP) Reg. (EC) No. 1272/2008
BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL)	<0,02%	128-37-0	204-881-4	—	01-2119555270-46-0000	Aquatic Chronic 1: H410; M Chr=1

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation:

Immediately move the affected person to fresh air. Seek medical attention if symptoms persist.

Ingestion:

Rinse the mouth thoroughly with water. Give plenty of water to drink. Seek medical attention immediately.

Skin contact:

Immediately remove contaminated clothing and wash the skin with water and soap. Seek medical attention if symptoms are severe or persist after washing.

Eye contact:

Remove all contact lenses and open the eyelids wide. Immediately rinse with plenty of water. Continue rinsing for at least 15 minutes. Seek medical attention if symptoms persist.

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

Persons suffering from asthma, eczema or skin problems should avoid contact, including skin 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 physician: No specific recommendations.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:

Extinguish with: 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 measures during firefighting:

Containers near the fire should be removed or cooled with water.

Special protective equipment for firefighters:

Wear self-contained positive-pressure breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear appropriate protective equipment, including gloves, safety goggles/face shield, respiratory mask, boots, clothing or apron. No smoking, sparks, flames or other ignition sources near spills.

6.2. Environmental precautions

Do not discharge into drains, watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Keep flammable materials away from the spill. Eliminate all ignition sources. Ensure adequate ventilation. Contain and absorb spilled material with sand, earth or other non-combustible materials. The contaminated absorbent may present the same hazard as the spilled material. Collect and place in suitable disposal containers and seal securely. Label containers with waste and contaminated materials and remove them from the area as quickly as possible. Wash thoroughly after spill.

6.4. Reference to other sections

See Section 8 for personal protective equipment. See Section 13 for disposal.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Precautions for use:

Wear protective clothing as described in Section 8 of this Safety Data Sheet. Avoid contact with skin, eyes and clothing.

General occupational hygiene advice:

Do not eat, drink or smoke when using this product. Wash hands 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 packaging in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flames. Protect from frost and direct sunlight.

7.3. Specific end use(s)

Aromatic ingredient for household chemicals and cosmetics.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limit values: No occupational exposure limit values have been established for this product. Derived No-Effect Levels (DNEL) have not been established for this product. Predicted No-Effect Concentrations (PNEC) have not been determined for this product.

Occupational exposure limit values:

Ingredient	CAS No.	TWA, 8 hours
Benzyl Acetate (IUPAC: BENZYL ACETATE)	140-11-4	TWA= 5* mg/m³ * Republic of Latvia Cabinet Regulation No. 325 Adopted 15 May 2007 – Labour Protection Requirements when Coming in Contact with Chemical Substances at Workplaces

SECTION 8 (continued): EXPOSURE CONTROLS

ADDITIONAL INFORMATION:

Information valid at the time of the Safety Data Sheet review.

8.2. Exposure controls

TECHNICAL MEASURES:

Observe the usual precautions for working with chemicals. See Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work.

HYGIENE MEASURES:

Do not eat, drink or smoke during use.

GENERAL PROTECTIVE AND HYGIENE MEASURES:

Avoid contact with eyes. Wash hands during work breaks and at the end of the shift. Provide a skin protection plan.

RESPIRATORY PROTECTION:

Avoid excessive inhalation of concentrated vapours. Ensure adequate ventilation. If workers are exposed to high concentrations, they must use appropriate certified respiratory protective equipment. Wear a suitable respiratory protection device in case of large-scale exposure. Suitable half-mask respirator in accordance with EN 140.

BODY PROTECTION:

Protective clothing. Emergency showers should be available in the immediate vicinity of possible exposure. Wear suitable protective clothing, overalls or suits and similar boots in accordance with EN 365/367.

EYE PROTECTION:

Wear appropriate safety spectacles with side shields in accordance with EN 166 when the risk of possible eye contact exists. Emergency eye wash fountains should be available in the immediate vicinity of possible exposure.

HYGIENE MEASURES:

No specific hygiene measures are recommended, but good personal hygiene practices should always be maintained when working with chemical products.

HAND PROTECTION:

Chemical-resistant gloves in accordance with DIN EN 374 with CE marking. Suitable material – Nitrile, 0.13 mm. Permeation breakthrough time indication – 1 hour. Check the condition of protective gloves for damage such as holes, cuts or tears after each use. Do not wear protective gloves longer than necessary. After wearing gloves, apply skin cleansing agents and skin cosmetics. Gloves for mechanical protection do not provide protection against chemicals.

RISK MANAGEMENT MEASURES:

Operators must be adequately trained. The workplace must be regularly inspected by competent personnel, e.g. the safety officer.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Property	Value
Appearance	Homogeneous, transparent liquid; opalescence is permitted.
Colour	Colourless to brown
Odour	Description of the fragrance
Refractive index, 20 °C	0.9 – 1.8
Density, 20 °C	0.9 – 1.6 g/cm³
Flashpoint	> 61 °C
Melting point/melting range	< 0 °C
Boiling point	No data available
Freezing point	No data available
Decomposition temperature	No data available
Solubility in water	Limited solubility
Solubility in alcohol	Soluble

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:

The product is stable under the conditions of use stated in Section 7.

10.3. Possibility of hazardous reactions:

Under normal conditions of use there is no information on hazardous reactions.

10.4. Conditions to avoid:

Contact with incompatible materials.

10.5. Incompatible materials:

Strong acids, strong bases, strong oxidising agents.

10.6. Hazardous decomposition products:

No decomposition products are expected under storage and handling conditions. In case of fire, hazardous gases may form.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

INHALATION:

Acute toxicity: Calculated ATEmix (LC50) = 6.23 mg/l. Components of unknown toxicity >10%: 84.44%. 2 < ATEmix > 10 mg/l. Classified as Acute toxicity, Hazard Category 3.

Corrosion/Irritation: Not classified – based on available data the classification criteria are not met.

Sensitisation: Contains no substances classified as inhalation allergens. Not classified – based on available data the classification criteria are not met.

Carcinogenicity: Contains no carcinogenic substances. Not classified – based on available data the classification criteria are not met.

Mutagenicity: Contains no mutagenic substances. Not classified – based on available data the classification criteria are not met.

SKIN CONTACT:

Acute toxicity: Calculated ATEmix (LD50) = 7 406.13 mg/kg. Components of unknown toxicity >10%: 63.58%. Not classified.

Corrosion/Irritation: Not classified – based on available data the classification criteria are not met.

Sensitisation: Contains no substances classified as inhalation allergens. Not classified – based on available data the classification criteria are not met.

Carcinogenicity: Contains no carcinogenic substances. Not classified – based on available data the classification criteria are not met.

Mutagenicity: Contains no mutagenic substances. Not classified – based on available data the classification criteria are not met.

EYE CONTACT:

Corrosion/Irritation: Classified as Not Classified.

INGESTION:

Acute toxicity: Calculated ATEmix (LD50) = 2 623.04 mg/kg. Components of unknown toxicity >10%: 15.07%. Not classified.

Corrosion/Irritation: May cause nausea, vomiting and diarrhoea.

Sensitisation: Contains no carcinogenic substances. Not classified – based on available data the classification criteria are not met.

Carcinogenicity: Contains no carcinogenic substances. Not classified – based on available data the classification criteria are not met.

Mutagenicity: Contains no mutagenic substances. Not classified – based on available data the classification criteria are not met.

Reproductive toxicity: Not expected to be toxic to reproduction. Not classified – based on available data the classification criteria are not met. Fertility: Not classified – based on available data the classification criteria are not met.

Toxicological information:

Ingredient name	CAS No.	LD50 (Oral)	LD50 (Dermal)	LC50 (Inhalation)
Benzyl Benzoate (IUPAC: BENZYL BENZOATE)	120-51-4	2 000 mg/kg	non-toxic	non-toxic
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE)	5989-27-5 / 8028-48-6	non-toxic	non-toxic	non-toxic
Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL)	101-86-0 / 165184-98-5	non-toxic	non-toxic	non-toxic
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL)	78-70-6	non-toxic	non-toxic	non-toxic
Orange Oil 100% pure and natural (IUPAC: (2Z,6E)-2,6-DIMETHYL-10-METHYLIDENEDODECA-2,6,11-TRIENAL)	8008-57-9 / 8028-48-6	non-toxic	non-toxic	non-toxic

Ingredient name	CAS No.	LD50 (Oral)	LD50 (Dermal)	LC50 (Inhalation)
Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2, 6-DIEN-1-OL)	106-24-1	non-toxic	non-toxic	non-toxic
Citral (IUPAC: (2E)-3,7-DIM ETHYLOCTA-2,6-DIENAL)	5392-40-5	non-toxic	non-toxic	non-toxic
Benzyl Acetate (IUPAC: BENZYL ACETATE)	140-11-4	non-toxic	non-toxic	non-toxic
Citronellal Extra (IUPAC: 3,7 -DIMETHYLOCT-6-ENAL)	106-23-0	non-toxic	non-toxic	non-toxic
Aldehyde C-8 (IUPAC: OCTANAL)	124-13-0	non-toxic	non-toxic	non-toxic
Trivertal (IUPAC: 1,2-DIMET HYLCYCLOHEX-3-ENE-1-C ARBALDEHYDE)	27939-60-2 / 68039-49-6	non-toxic	non-toxic	non-toxic
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE)	142-19-8	218 mg/kg	810 mg/kg	non-toxic
BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL)	128-37-0	non-toxic	non-toxic	non-toxic

SECTION 11 (continued): TOXICOLOGICAL INFORMATION

11.2. Primary irritant effect:

11.2.1. Endocrine disrupting properties: BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL)

11.3. Sensitisation:

May have a sensitising effect.

11.4. Chronic effects:

No chronic effects known.

11.5. Target organs:

No adverse health effects on target organs are expected for the finished product.

11.6. Carcinogenicity:

The finished product is not expected to be carcinogenic.

11.7. Mutagenicity:

The finished product is not expected to be mutagenic.

11.8. Reproductive toxicity:

The finished product is not expected to be toxic to reproduction.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

No ecotoxicological research has been carried out on this product.

Ecotoxicity – Toxic to aquatic organisms: (M × 10 × Chronic Category 1) + Chronic Category 2 ≥ 25% = 74.91 ≥ 25 ⇒ Hazardous to the aquatic environment — Chronic Category 2

Ingredient toxicity – Aquatic toxicity:

Ingredient / CAS No.	Test	Result
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	LC50/48H	7.77 mg/l (Aquatic invertebrates)
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	EC50/48H	3.09 mg/l (Aquatic invertebrates)
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	LC50/24H	11 mg/l (Aquatic invertebrates)
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	EC50/72H	311 (Aquatic algae and cyanobacteria)

Ingredient / CAS No.	Test	Result
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	LC50/96H	2.32 mg/l (Fish)
Benzyl Benzoate (IUPAC: BENZYL BENZOATE) 120-51-4	EC50/24H	4.26 mg/l (Fish)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/48H	408.5 mg/l (Aquatic invertebrates)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/48H	510 mg/l (Aquatic invertebrates)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/24H	840 mg/l (Aquatic invertebrates)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/21days	188 mg/l (Aquatic invertebrates)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/72H	320 mg/l (Aquatic algae and cyanobacteria)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/48H	250 mg/l (Aquatic algae and cyanobacteria)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/48H	250 (Algae)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	LC50/96H	590 mg/l (Fish)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/96H	695 (Fish)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	LC50/96H	720 mg/l (Fish)
D-Limonene (IUPAC: (4R)-1-METHYL-4-(PROP-1-EN-2-YL)CYCLOHEX-1-ENE) 5989-27-5 / 8028-48-6	EC50/96H	702 mg/l (Fish)
Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL) 101-86-0 / 165184-98-5	EC50/48H	475 (Aquatic invertebrates)
Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL) 101-86-0 / 165184-98-5	EC50/72H	65 (Algae)
Hexyl Cinnamic Aldehyde Alpha (IUPAC: (2E)-2-(PHENYLMETHYLIDENE)OCTANAL) 101-86-0 / 165184-98-5	LC50/96H	1.7 mg/l (Fish)
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL) 78-70-6	EC50/96H	59 mg/l (Aquatic invertebrates)
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL) 78-70-6	EC50/96H	122.5 mg/l (Algae)
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL) 78-70-6	LC50/96H	27.8 mg/l (Fish)
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL) 78-70-6	LC50/72H	27.8 mg/l (Fish)
Linalool (IUPAC: 3,7-DIMETHYLOCTA-1,6-DIEN-3-OL) 78-70-6	LC50/48H	27.8 mg/l (Fish)
Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL) 106-24-1	EC50/48H	10.8 mg/l (Daphnia magna)
Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL) 106-24-1	LC50/96H	22 mg/l (Zebrafish)
Geraniol Fine 98% (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIEN-1-OL) 106-24-1	EC50/72H	13.1 mg/l (Desmodesmus subspicatus)

Ingredient / CAS No.	Test	Result
Citral (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIENAL) 5392-40-5	EC50/72H	103.8 mg/l (Algae)
Citral (IUPAC: (2E)-3,7-DIMETHYLOCTA-2,6-DIENAL) 5392-40-5	LC50/96H	6.78 mg/l (Fish)
Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE) 32210-23-4	EC50/48H	5.3 mg/l (Aquatic invertebrates)
Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE) 32210-23-4	EC50/72H	22 mg/l (Algae)
Vertenex (PTBCH Acetate) (IUPAC: 4-TERT-BUTYLCYCLOHEXYL ACETATE) 32210-23-4	LC50/96H	8.6 mg/l (Fish)
Benzyl Acetate (IUPAC: BENZYL ACETATE) 140-11-4	EC50/48H	17 mg/l (Aquatic invertebrates)
Benzyl Acetate (IUPAC: BENZYL ACETATE) 140-11-4	EC50/72H	101 mg/l (Algae)
Benzyl Acetate (IUPAC: BENZYL ACETATE) 140-11-4	LC50/96H	4 mg/l (Fish)
Citronellal Extra (IUPAC: 3,7-DIMETHYLOCT-6-ENAL) 106-23-0	EC50/48H	8.7 mg/l (Aquatic invertebrates)
Citronellal Extra (IUPAC: 3,7-DIMETHYLOCT-6-ENAL) 106-23-0	EC50/72H	10.035 mg/l (Algae)
Citronellal Extra (IUPAC: 3,7-DIMETHYLOCT-6-ENAL) 106-23-0	LC50/96H	22 mg/l (Fish)
Aldehyde C-8 (IUPAC: OCTANAL) 124-13-0	LC50/48H	3.48 (Aquatic invertebrates)
Aldehyde C-8 (IUPAC: OCTANAL) 124-13-0	EC50/48H	1.54 mg/l (Aquatic invertebrates)
Aldehyde C-8 (IUPAC: OCTANAL) 124-13-0	EC50/72H	5 360 (Algae)
Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE) 27939-60-2 / 68039-49-6	EC50/48H	7.74 mg/l (Aquatic invertebrates)
Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE) 27939-60-2 / 68039-49-6	EC50/72H	22.8 mg/l (Algae)
Trivertal (IUPAC: 1,2-DIMETHYLCYCLOHEX-3-ENE-1-CARBALDEHYDE) 27939-60-2 / 68039-49-6	LC50/96H	15 mg/l (Fish)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	EC50/48H	890 (Aquatic invertebrates)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	EC50/72H	778 (Algae)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	LC50/96H	117 (Fish)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	LC50/72H	117 (Fish)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	LC50/48H	117 (Fish)
Allyl Heptanoate (IUPAC: PROP-2-EN-1-YL HEPTANOATE) 142-19-8	LC50/24H	201 (Fish)
BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL) 128-37-0	EC50/72H	5 120 µg/L (Algae)
BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL) 128-37-0	EC50/96H	758 µg/L (Algae)
BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL) 128-37-0	LC50/96H	384.5 µg/L (Fish)

SECTION 12 (continued): ECOLOGICAL INFORMATION

12.2. Persistence and degradability:

May have long-term harmful effects on the aquatic environment.

Assessment of biodegradability and elimination: No data available.

12.3. Bioaccumulative potential:

No further relevant information available. Low potential for bioaccumulation: (log Pow calculated = 0).

Chemical name	CAS No.	Partition coefficient
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SECTION 12 (continued): ECOLOGICAL INFORMATION

12.4. Mobility in soil:

The product is partially water-soluble. Adsorbs to soil and has low mobility.

General notes: Wastewater containing this product must not be discharged into water bodies without prior treatment.

12.5. Results of PBT and vPvB assessment:

This mixture does not contain any substances that meet the PBT or vPvB criteria of Annex XIII of the REACH Regulation.

12.6. Endocrine disrupting properties:

BHT (IUPAC: 2,6-DI-TERT-BUTYL-4-METHYLPHENOL)

12.7. Other adverse effects:

Global warming potential: Cannot 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 dispose of empty packaging with household waste. Containers can be recycled. Treat product residues, impregnated cloths and non-empty packaging as special waste.

Additional warning: None.

European waste catalogue:

Hazardous waste in accordance with Directive 91/689/EEC, acknowledging a waste code in accordance with Commission Decision 2000/532/EC, to be disposed of at an official chemical waste depot.

Local legislation:

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be observed.

Contaminated packaging:

Do not dispose of empty packaging with household waste. Containers can be recycled. Treat product residues, impregnated cloths and non-empty packaging as special waste.

Recommendation: Avoid release to the environment.

EWC Code	Description
07	Wastes from organic chemical processes:
07 07	Wastes from the MFSU of fine chemicals and chemical products, n.o.s.
07 07 99	Wastes not otherwise specified

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

Hazard label: 9

14.4. Packing group (ADR, IATA, IMDG):

III

14.5. Environmental hazards:

Marine pollutant: Yes

14.6. Special precautions for user:

Read the Safety Data Sheet and emergency procedures before handling.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not applicable. Packaged liquids are not considered bulk liquids.

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific to the substance 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.

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.

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.

COMMISSION Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on REACH.

INFORMATION ON USE RESTRICTIONS:

Observe Directive 94/33/EC on the protection of young people at work.

Directive 92/85/EC on the safety and health at work of pregnant workers must be observed.

15.2. Chemical safety assessment:

Not applicable.

SECTION 16: OTHER INFORMATION

Full text of classifications referred to in Sections 2 and 3, including hazard designation, hazard symbols and hazard statements:

H226 – Flammable liquid and vapour.

H301 – Toxic if swallowed.

H302 – Harmful if swallowed.

H304 – May be fatal if swallowed and enters airways.

H311 – Toxic in contact with skin.

H315 – Causes skin irritation.

H317 – May cause an allergic skin reaction.

H318 – Causes serious eye damage.

H319 – Causes serious eye irritation.

H331 – Toxic if inhaled.

H400 – Very toxic to aquatic life.

H410 – Very toxic to aquatic life with long lasting effects.

H411 – Toxic to aquatic life with long lasting effects.

H412 – Harmful to aquatic life with long lasting effects.

Precautionary Statements:

P261 – Avoid breathing dust/fumes/gas/mist/vapours/spray. [As modified by IV ATP]

P264 – Wash thoroughly after handling.

P271 – Use only outdoors or in a well-ventilated area.

P272 – Contaminated work clothing should not be allowed out of the workplace.

P273 – Avoid release to the environment.

P280 – Wear protective gloves/protective clothing/eye protection/face protection. [As modified by IV ATP]

P302+P352 – IF ON SKIN: Wash with plenty of soap and water.

P333+P313 – If skin irritation or rash occurs: Get medical advice/attention.

P501 – Dispose of contents/container according to local, regional, national, territorial, provincial, and international regulation.

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 by Road

IATA: International Air Transport Association

IMDG: International Maritime Dangerous Goods Code

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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 Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk

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

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