

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

1.1. Product identifier

Product form	: Mixture
Product name	: Zig Zag #EU37266F
UFI	: 8F6A-U3Q4-R00T-USY5
Product code	: EU37266F
Type of product	: Perfumes, fragrances
Product group	: Trade product

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

1.2.1. Relevant identified uses

Main use category	: Industrial use, Professional use
Industrial/Professional use spec	: For professional use only Industrial
Use of the substance/mixture	: Perfumes, fragrances
Function or use category	: Odour agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

FRENCH COLOR & FRAGRANCE International GmbH GmbH
Mittlerer Weg 35
DE- 79424 Auggen
Germany
T 49-7631-931-8900
SDS@frenchcolor.com - www.frenchcolor.com

1.4. Emergency telephone number

Emergency number	: 1-800-255-3924; +01-813-248-0585; China:+400-120-0751; Mexico:+01-800-099-0731; Brazil: +0-800-591-6042; India: +000-800-100-4086
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP) : Warning

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Contains	: Grapefruit oil, d-Limonene, Linalool, Majantol, Hydroxy, Hexyl cinnamic aldehyde, Aldehyde C-16, COUMARIN, Eugenol, Citronellol Pure, Heliotropine, Linalyl acetate, Cinnamic aldehyde, Methyl cinnamate, Clove leaf oil, Eucalyptus oil, Geranyl acetate
Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: 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/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P321 - Specific treatment (see supplemental first aid instruction on this label). P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Vanillin	CAS-No.: 121-33-5 EC-No.: 204-465-2 REACH-no: 01-2119516040-60	2.7 – 5.3	Eye Irrit. 2, H319
Verdorex	CAS-No.: 88-41-5 EC-No.: 201-828-7 REACH-no: 01-2119970713-33	2.1 – 4.25	Aquatic Chronic 2, H411
Hexamethylindanopyran	CAS-No.: 1222-05-5 EC-No.: 214-946-9 EC Index-No.: 603-212-00-7 REACH-no: 01-2119488227-29	2.1 – 4.2	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Grapefruit oil	CAS-No.: 8016-20-4 EC-No.: 289-904-6;600-007-4	0.42 – 3.1875	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Majantol	CAS-No.: 103694-68-4 EC-No.: 403-140-4 EC Index-No.: 603-138-00-5	0.014 – 2.75	Skin Sens. 1, H317 Aquatic Chronic 3, H412
Ethyl maltol	CAS-No.: 4940-11-8 EC-No.: 225-582-5	1.2 – 2.3	Acute Tox. 4 (Oral), H302
d-Limonene	CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-029-00-7;601-096-00-2 REACH-no: 01-2119493353-35	0.525 – 2.125	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexyl cinnamic aldehyde	CAS-No.: 101-86-0 EC-No.: 202-983-3 REACH-no: 01-2119533092-50	0.7 – 1.45	Skin Sens. 1, H317 Aquatic Chronic 2, H411
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	0.6 – 1.2425	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Aldehyde C-16	CAS-No.: 77-83-8 EC-No.: 201-061-8 REACH-no: 01-2119967770-28	0.6 – 1.15	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Diethyl malonate	CAS-No.: 105-53-3 EC-No.: 203-305-9 REACH-no: 01-2119886972-18	0.6 – 1.1007	Eye Irrit. 2, H319
Phenylpropyl alcohol	CAS-No.: 122-97-4 EC-No.: 204-587-6	0.6 – 1.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756-26	0.5 – 0.9	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1 REACH-no: 01-2119971802-33	0.4 – 0.8	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	0.4 – 0.7	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Heliotropine	CAS-No.: 120-57-0 EC-No.: 204-409-7 REACH-no: 01-2119983608-21	0.3 – 0.5	Skin Sens. 1B, H317
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	0.2 – 0.45	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 REACH-no: 01-2119935242-45	0.2 – 0.3	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Methyl cinnamate	CAS-No.: 103-26-4 EC-No.: 203-093-8 REACH-no: 01-2119979458-16	0.1 – 0.25	Skin Sens. 1B, H317

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hydroxy	CAS-No.: 107-75-5 EC-No.: 203-518-7 REACH-no: 01-2119973482-31	0.10836 – 0.21285	Eye Irrit. 2, H319 Skin Sens. 1B, H317
2-Methyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	CAS-No.: 28219-60-5 EC-No.: 248-907-2	0.1 – 0.15	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Skin Irrit. 2, H315
Clove leaf oil	CAS-No.: 8000-34-8 EC-No.: 616-772-2	0.1 – 0.15	Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304
Eucalyptus oil	CAS-No.: 8000-48-4 EC-No.: 283-406-2;286-249-8;616-775-9 REACH-no: 01-2119978250-37	0.1 – 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Geranyl acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5 REACH-no: 01-2119973480-35	0.1 – 0.1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412

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

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures 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 or a doctor if you feel unwell.

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

- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

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

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material.
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. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.
Storage temperature : 25 °C
Storage area : Store in a well-ventilated place. Store away from heat.
Special rules on packaging : Store in a closed container.
Packaging materials : Do not store in corrodable metal.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

d-Limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	140 mg/m ³
HTP (OEL TWA) [2]	25 ppm
HTP (OEL STEL)	280 mg/m ³
HTP (OEL STEL) [ppm]	50 ppm

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

d-Limonene (5989-27-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	28 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation, Skin sensitization
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m ³
OEL TWA [ppm]	5 ppm
OEL STEL	112 mg/m ³
OEL STEL [ppm]	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	168 mg/m ³
VLA-ED (OEL TWA) [2]	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m ³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)
OEL chemical category	Allergenic substance
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	40 mg/m ³
MAK (OEL TWA) [2]	7 ppm
KZGW (OEL STEL)	80 mg/m ³
KZGW (OEL STEL) [ppm]	14 ppm
OEL chemical category	Sensitizer

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light yellow. amber.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 90 °C (closed cup) ASTM D7094
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 0.95
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

None under recommended storage and handling conditions (see section 7).

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

Vanillin (121-33-5)	
LD50 dermal rabbit	> 5010 mg/kg
LD50 dermal	2600 mg/kg bodyweight
Verdox (88-41-5)	
LD50 oral rat	4600 mg/kg
LD50 oral	4600 mg/kg bodyweight
Grapefruit oil (8016-20-4)	
LD50 oral rat	> 5 g/kg
d-Limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5 g/kg
Linalool (78-70-6)	
LD50 oral	2790 mg/kg bodyweight
Hexamethylindanopyran (1222-05-5)	
LD50 oral rat	> 3250 mg/kg
LD50 dermal rabbit	> 3250 mg/kg
Majantol (103694-68-4)	
LD50 oral	3440 mg/kg bodyweight
LD50 dermal rabbit	> 5 ml/kg

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hydroxy (107-75-5)	
LD50 oral rat	> 5 g/kg
LD50 dermal rabbit	> 2000 mg/kg
Ethyl maltol (4940-11-8)	
LD50 oral rat	1150 mg/kg
LD50 oral	1200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg
Hexyl cinnamic aldehyde (101-86-0)	
LD50 oral rat	3100 mg/kg
LD50 oral	3100 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg
LC50 Inhalation - Rat	> 5 mg/l/4h
Aldehyde C-16 (77-83-8)	
LD50 oral rat	5470 mg/kg
LD50 dermal rat	> 2000 mg/kg
Diethyl malonate (105-53-3)	
LD50 oral rat	14900 µl/kg
LD50 dermal rabbit	> 16960 mg/kg
Phenylpropyl alcohol (122-97-4)	
LD50 oral	2275 mg/kg bodyweight
LD50 dermal	5000 mg/kg bodyweight
COUMARIN (91-64-5)	
LD50 oral rat	> 5000 mg/kg
LD50 oral	500 mg/kg bodyweight
LD50 dermal rat	293 mg/kg
Eugenol (97-53-0)	
LD50 oral rat	1930 mg/kg
LD50 oral	2500 mg/kg bodyweight
Citronellol Pure (106-22-9)	
LD50 oral rat	3450 mg/kg
LD50 oral	3450 mg/kg bodyweight
LD50 dermal rabbit	2650 mg/kg
LD50 dermal	2650 mg/kg bodyweight
Heliotropine (120-57-0)	
LD50 oral rat	2700 mg/kg
LD50 oral	2700 mg/kg bodyweight
LD50 dermal rat	> 5000 mg/kg

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Linalyl acetate (115-95-7)	
LD50 oral rat	14550 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
Cinnamic aldehyde (104-55-2)	
LD50 oral rat	2220 mg/kg
LD50 oral	2200 mg/kg bodyweight
LD50 dermal rabbit	1260 mg/kg
LD50 dermal	1100 mg/kg bodyweight
Methyl cinnamate (103-26-4)	
LD50 oral rat	2610 mg/kg
LD50 oral	2610 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg
Clove leaf oil (8000-34-8)	
LD50 oral rat	1370 mg/kg
LD50 oral	2650 mg/kg bodyweight
LD50 dermal rabbit	1200 mg/kg
LD50 dermal	2500 mg/kg bodyweight
Eucalyptus oil (8000-48-4)	
LD50 oral rat	2480 mg/kg
Geranyl acetate (105-87-3)	
LD50 oral rat	6330 mg/kg
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
d-Limonene (5989-27-5)	
IARC group	3 - Not classifiable
COUMARIN (91-64-5)	
IARC group	3 - Not classifiable
Eugenol (97-53-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Vanillin (121-33-5)	
LC50 - Fish [1]	53 – 61.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
NOEC (acute)	10000 mg/kg (Exposure time: 42 Days - Species: Eisenia foetida [soil dry weight])
d-Limonene (5989-27-5)	
LC50 - Fish [1]	0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 - Fish [2]	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
Linalool (78-70-6)	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)
Hexamethylindanopyran (1222-05-5)	
LC50 - Fish [1]	0.452 mg/l Wolf, 1996d-27682
LC50 - Other aquatic organisms [1]	> 0.14 mg/l REACH DOSSIER Pimephales promelas
EC50 - Crustacea [2]	260 µg/l REACH Dossier
EC50 - Other aquatic organisms [1]	0.131 mg/l REACH Dossier
Ethyl maltol (4940-11-8)	
LC50 - Fish [1]	> 85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss)
Aldehyde C-16 (77-83-8)	
LC50 - Fish [1]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static])
Diethyl malonate (105-53-3)	
LC50 - Fish [1]	10.3 – 13.4 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	202.3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	508.2 mg/l (Species: Desmodesmus subspicatus)
Eugenol (97-53-0)	
LC50 - Fish [1]	13 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])
Heliotropine (120-57-0)	
LC50 - Fish [1]	2.5 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])
Linalyl acetate (115-95-7)	
LC50 - Fish [1]	11 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through])
Methyl cinnamate (103-26-4)	
LC50 - Fish [1]	2.76 mg/l (Exposure time: 96 h - Species: Danio rerio [static])
12.2. Persistence and degradability	
Methyl cinnamate (103-26-4)	
Persistence and degradability	Not established.
Eucalyptus oil (8000-48-4)	
Persistence and degradability	Not established.

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.3. Bioaccumulative potential	
Vanillin (121-33-5)	
Partition coefficient n-octanol/water (Log Pow)	1.23 (at 22 °C)
d-Limonene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4.38 (at 37 °C (at pH 7.2))
Hexamethylindanopyran (1222-05-5)	
BCF - Fish [1]	(1618 dimensionless (whole body w.w.))
Partition coefficient n-octanol/water (Log Pow)	5.3 (at 25 °C (at pH 7))
Majantol (103694-68-4)	
Partition coefficient n-octanol/water (Log Pow)	3.07 (at 20 °C)
Hydroxy (107-75-5)	
Partition coefficient n-octanol/water (Log Pow)	1.68 (at 25 °C)
Ethyl maltol (4940-11-8)	
Partition coefficient n-octanol/water (Log Pow)	2.9 (at 25 °C)
Aldehyde C-16 (77-83-8)	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C (cis isomer))
Diethyl malonate (105-53-3)	
Partition coefficient n-octanol/water (Log Pow)	0.96
Phenylpropyl alcohol (122-97-4)	
Partition coefficient n-octanol/water (Log Pow)	1.6 (at 35 °C (at pH 7))
Eugenol (97-53-0)	
Partition coefficient n-octanol/water (Log Pow)	1.83 (at 30 °C (at pH 5.5))
Citronellol Pure (106-22-9)	
Partition coefficient n-octanol/water (Log Pow)	3.41 (at 25 °C)
Heliotropine (120-57-0)	
Partition coefficient n-octanol/water (Log Pow)	1.2 (at 35 °C)
Linalyl acetate (115-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 (at 25 °C)
Cinnamic aldehyde (104-55-2)	
Partition coefficient n-octanol/water (Log Pow)	2.1065 (at 25 °C)
Methyl cinnamate (103-26-4)	
Partition coefficient n-octanol/water (Log Pow)	2.68 (at 25 °C (at pH >4.73-<7.06))
Bioaccumulative potential	Not established.
Eucalyptus oil (8000-48-4)	
Bioaccumulative potential	Not established.
Geranyl acetate (105-87-3)	
Partition coefficient n-octanol/water (Log Pow)	4.04

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

SECTION 14: Transport information

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

14.1 UN number

UN-No. (ADR) : UN 3082
UN-No. (IMDG) : UN 3082
UN-No. (IATA) : UN 3082
UN-No. (ADN) : UN 3082
UN-No. (RID) : UN 3082

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA) : Environmentally hazardous substance, liquid, n.o.s.
Proper Shipping Name (ADN) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (RID) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description (ADR) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(HEXAMETHYLINDANOPYRAN), 9, III, (-)
Transport document description (IMDG) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(HEXAMETHYLINDANOPYRAN), 9, III, MARINE POLLUTANT
Transport document description (IATA) : UN 3082 Environmentally hazardous substance, liquid, n.o.s.
(HEXAMETHYLINDANOPYRAN), 9, III
Transport document description (ADN) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(HEXAMETHYLINDANOPYRAN), 9, III
Transport document description (RID) : UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 9
Danger labels (ADR) : 9



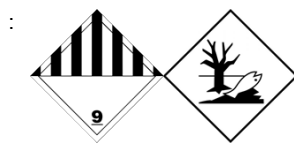
IMDG

Transport hazard class(es) (IMDG) : 9
Danger labels (IMDG) : 9

Zig Zag #EU37266F

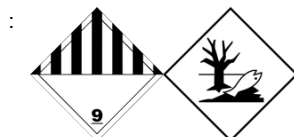
Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830



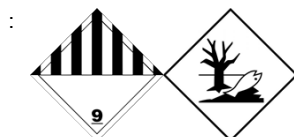
IATA

Transport hazard class(es) (IATA) : 9
Danger labels (IATA) : 9



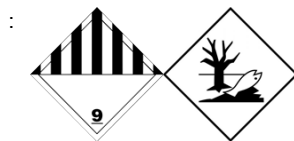
ADN

Transport hazard class(es) (ADN) : 9
Danger labels (ADN) : 9



RID

Transport hazard class(es) (RID) : 9
Danger labels (RID) : 9



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Special provisions for carriage - Loading, unloading and handling (ADR) : CV13

Hazard identification number (Kemler No.) : 90

Orange plates :



Tunnel restriction code (ADR) : -

EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG) : LP01, P001

Special packing provisions (IMDG) : PP1

IBC packing instructions (IMDG) : IBC03

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP2, TP29

EmS-No. (Fire) : F-A

EmS-No. (Spillage) : S-F

Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1

PCA Limited quantities (IATA) : Y964

PCA limited quantity max net quantity (IATA) : 30kgG

PCA packing instructions (IATA) : 964

PCA max net quantity (IATA) : 450L

CAO packing instructions (IATA) : 964

CAO max net quantity (IATA) : 450L

Special provisions (IATA) : A97, A158, A197

ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6

Special provisions (ADN) : 274, 335, 375, 601

Limited quantities (ADN) : 5 L

Excepted quantities (ADN) : E1

Equipment required (ADN) : PP

Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6

Special provisions (RID) : 274, 335, 375, 601

Limited quantities (RID) : 5L

Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Special packing provisions (RID) : PP1

Mixed packing provisions (RID) : MP19

Portable tank and bulk container instructions (RID) : T4

Portable tank and bulk container special provisions (RID) : TP1, TP29

Tank codes for RID tanks (RID) : LGBV

Transport category (RID) : 3

Special provisions for carriage – Packages (RID) : W12

Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31

Colis express (express parcels) (RID) : CE8

Hazard identification number (RID) : 90

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)

Reference code	Applicable on
3(a)	Grapefruit oil ; Eucalyptus oil
3(b)	Zig Zag #EU37266F ; Grapefruit oil ; Linalool ; Aldehyde C-16 ; Phenylpropyl alcohol ; Diethyl malonate ; Eugenol ; Citronellol Pure ; Linalyl acetate ; Cinnamic aldehyde ; Clove leaf oil ; Geranyl acetate ; Eucalyptus oil
3(c)	Zig Zag #EU37266F ; Grapefruit oil ; Verdox ; Aldehyde C-16 ; Geranyl acetate ; Eucalyptus oil ; Hexamethylindanopyran
40.	Grapefruit oil ; Eucalyptus oil

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

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

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Piperonal		120-57-0	2932 93 00	Category 1		Annex I

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

List of sensitizing substances (TRGS 907) : Contains sensitizing substances according TRGS 907

Netherlands

SZW-lijst van kankerverwekkende stoffen : Grapefruit oil, Eucalyptus oil are listed

SZW-lijst van mutagene stoffen : Grapefruit oil, Eucalyptus oil are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with the product

Switzerland

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

Zig Zag #EU37266F

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
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.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.