EO Ylang ylang III

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 6/26/2024 Version: 1.0

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

1.1. Product identifier

Product form	:	Substance (UVCB)
Substance name	:	EO Ylang ylang III
IUPAC name	:	Ylang Ylang III oil
EC-No.	:	947-049-2
CAS-No.	:	83863-30-3
Product code	:	20114
Product group	:	Trade product
Other means of identification	:	Essential oil of Ylang Ylang III obtained from the flowers of Cananga odorata (Annonaceae) by steam distillation

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

Relevant identified uses

Intended for general public

Main use category	:	Professional use,Consumer use
Use of the substance/mixture	:	Fragrance raw material

1.3. Details of the supplier of the safety data sheet

De Hekserij
Spoorstraat 57
8271 RG IJsselmuiden
Nederland
www.hekserij.nl

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Skin sensitisation, category 1B	H317
Aspiration hazard, Category 1	H304
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. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Hazard statements (CLP) : H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.

Precautionary statements (CLP)	:	H317 - May cause an allergic skin reaction. H411 - Toxic to aquatic life with long lasting effects. P261 - Avoid breathing vapours, spray, mist, fume. P264 - Wash hands thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective clothing, protective gloves, face protection. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor. P331 - Do NOT induce vomiting. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse. P391 - Collect spillage. P405 - Store locked up. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type	:	UVCB
Name	:	EO Ylang ylang III
CAS-No.	:	83863-30-3
EC-No.	:	947-049-2

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
EO Ylang ylang III	CAS-No.: 83863-30-3 EC-No.: 947-049-2	100	See Section 2.1
alpha-Farnesene	CAS-No.: 502-61-4 EC-No.: 207-948-6	20 – 50	Asp. Tox. 1, H304
beta-Caryophyllene	CAS-No.: 87-44-5 EC-No.: 201-746-1	10 – 20	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9	10 – 20	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Geranyl acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5 REACH-no: 01-2119973480-35	5 – 10	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
Farnesol	CAS-No.: 4602-84-0 EC-No.: 225-004-1 REACH-no: 01-2120763554-49	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Benzyl salicylate	CAS-No.: 118-58-1 EC-No.: 204-262-9 EC Index-No.: 607-754-00-5 REACH-no: 01-2119969442-31	1 – 5	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 3, H412

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzyl acetate	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272-42	1 – 5	Aquatic Chronic 3, H412
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
para-Methyl cresol	CAS-No.: 104-93-8 EC-No.: 203-253-7 REACH-no: 01-2119513371-52	1 – 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361
Methyl benzoate	CAS-No.: 93-58-3 EC-No.: 202-259-7 REACH-no: 01-2119969268-21	1 – 5	Acute Tox. 4 (Oral), H302
Caryophyllene oxide	CAS-No.: 1139-30-6 EC-No.: 214-519-7	1 – 5	Aquatic Chronic 2, H411
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1	0.1 – 1	Eye Irrit. 2, H319 Skin Sens. 1B, H317
Geraniol	CAS-No.: 106-24-1 EC-No.: 203-377-1 REACH-no: 01-2119552430-49	0.1 – 1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Isoeugenol	CAS-No.: 5932-68-3; 97-54-1 EC-No.: 227-678-2; 202-590-7	0.1 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 Skin Sens. 1A, H317 STOT SE 3, H335
Nerolidol	CAS-No.: 7212-44-4 EC-No.: 230-597-5 REACH-no: 01-2119457636-29	0.1 – 1	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Eucalyptol	CAS-No.: 470-82-6 EC-No.: 207-431-5	0.1 – 1	Flam. Liq. 3, H226 Skin Sens. 1B, H317
alpha-Pinene	CAS-No.: 80-56-8 EC-No.: 201-291-9	0.1 – 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
beta-Pinene	CAS-No.: 127-91-3 EC-No.: 204-872-5	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
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 eyes with water as a precaution.
First-aid measures after ingestion : Do not induce vomiting. Call a physician immediately.
First-aid measures for first aider : First aid workers will be equipped with suitable personal protective equipment.

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

Symptoms/effects after inhalation : Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : None under normal conditions.
Symptoms/effects after ingestion : Risk of lung oedema.

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.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : No fire hazard.
Explosion hazard : No direct explosion hazard.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
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

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
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. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store locked up.
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL and PNEC

EO Ylang ylang III (83863-30-3)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	24.31 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	22.24 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	3.79 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6.59 mg/m³
Long-term - systemic effects, dermal	14.59 mg/kg bodyweight/day

8.2. Exposure controls

Appropriate engineering controls

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

Personal protection equipment

Personal protective equipment:
Wear recommended personal protective equipment.

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

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	:	Pale yellow to yellow.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	≤ -80 °C
Freezing point	:	Not available
Boiling point	:	> 125 °C
Flammability	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	112 °C Atm. press.: 1003 hPa
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	3.31 Pa Temp.: 25 °C
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	0.917 Type: 'relative density' Temp.: 20 °C
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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 hazard classes as defined in Regulation (EC) No 1272/2008

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

EO Ylang ylang III (83863-30-3)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

beta-Caryophyllene (87-44-5)	
LD50 oral	> 5000 mg/kg bodyweight Animal: mouse, Animal sex: male, Remarks on results: not determinable due to absence of adverse toxic effects

Benzyl benzoate (120-51-4)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)

Geranyl acetate (105-87-3)	
LD50 oral rat	6330 mg/kg bodyweight Animal: rat, 95% CL: 5450 - 7340
LD50 dermal rabbit	> 2000 mg/kg

Farnesol (4602-84-0)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 15000 mg/kg bodyweight Animal: rat, Remarks on results: no indication of skin irritation up to the relevant limit dose level

Benzyl salicylate (118-58-1)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EU Method B.3 (Acute Toxicity (Dermal))

Benzyl acetate (140-11-4)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5000 mg/kg

Linalool (78-70-6)	
LD50 oral rat	2790 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:, 95% CL: 2440 - 3180
LD50 dermal rabbit	5610 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374

para-Methyl cresol (104-93-8)	
LD50 oral rat	1920 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1510 - 2450
LC50 Inhalation - Rat	> 6.1 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)

Methyl benzoate (93-58-3)	
LD50 oral rat	2000 mg/kg OECD 401
LD50 dermal rabbit	> 2000 mg/kg bodyweight OECD 402

Eugenol (97-53-0)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 oral	1500 – 1500 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)

Geraniol (106-24-1)	
LD50 oral rat	3600 mg/kg bodyweight Animal: rat, 95% CL: 2840 - 4570
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit

Nerolidol (7212-44-4)	
LD50 oral rat	> 2610 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit

alpha-Pinene (80-56-8)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Geraniol (106-24-1)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

Isoeugenol (5932-68-3; 97-54-1)	
NOAEL (chronic, oral, animal/male, 2 years)	300 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies)
NOAEL (chronic, oral, animal/female, 2 years)	150 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 451 (Carcinogenicity Studies)

Reproductive toxicity : Not classified

EO Ylang ylang III (83863-30-3)	
NOAEL (animal/male, F0/P)	1301 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	1590 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/male, F1)	718 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F1)	953 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Benzyl salicylate (118-58-1)	
NOAEL (animal/female, F0/P)	158 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure : Not classified

Isoeugenol (5932-68-3; 97-54-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Benzyl benzoate (120-51-4)	
NOAEL (dermal, rat/rabbit, 90 days)	781 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Geranyl acetate (105-87-3)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:

Benzyl salicylate (118-58-1)	
NOAEL (oral, rat, 90 days)	177 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Linalool (78-70-6)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

para-Methyl cresol (104-93-8)	
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

Eugenol (97-53-0)	
NOAEL (subchronic, oral, animal/male, 90 days)	≥ 900 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: other:
NOAEL (subchronic, oral, animal/female, 90 days)	450 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: other:

Geraniol (106-24-1)	
NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:

Isoeugenol (5932-68-3; 97-54-1)	
NOAEL (subchronic, oral, animal/male, 90 days)	300 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	600 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Eucalyptol (470-82-6)	
NOAEL (oral, rat, 90 days)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Non-rodents)

Aspiration hazard : May be fatal if swallowed and enters airways.

Benzyl salicylate (118-58-1)	
Viscosity, kinematic	17 mm²/s at 20 °C

Linalool (78-70-6)	
Viscosity, kinematic	5191.86 mm²/s

Eugenol (97-53-0)	
Viscosity, kinematic	7.863 mm²/s at 25°C

Nerolidol (7212-44-4)	
Viscosity, kinematic	15.8 mm²/s at 20 °C

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

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

beta-Caryophyllene (87-44-5)	
EC50 - Crustacea [1]	> 0.17 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.033 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Benzyl benzoate (120-51-4)	
LC50 - Fish [1]	2.32 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	3.09 mg/l Test organisms (species): Daphnia magna

Geranyl acetate (105-87-3)	
LC50 - Fish [1]	68.12 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	14.1 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	3.72 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	3.72 mg/l Species: Desmodesmus subspicatus 72 h

Farnesol (4602-84-0)	
LC50 - Fish [1]	1.43 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	0.568 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1.49 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Farnesol (4602-84-0)	
EC50 72h - Algae [2]	0.334 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Benzyl salicylate (118-58-1)	
LC50 - Fish [1]	1.03 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	1.16 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.691 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	1.29 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

Benzyl acetate (140-11-4)	
LC50 - Fish [1]	4 mg/l Test organisms (species): Oryzias latipes
LC50 - Fish [2]	7.9 mg/l Test organism (species): Brachydanio rerio OECD 203
EC50 - Crustacea [1]	17 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	110 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	92 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC chronic fish	0.92 mg/l Test organisms (species): Oryzias latipes Duration: '28 d'

Linalool (78-70-6)	
LC50 - Fish [1]	27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	59 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	88.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [2]	156.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

para-Methyl cresol (104-93-8)	
LC50 - Fish [1]	68.2 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	27 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 500 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	492.05 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Methyl benzoate (93-58-3)	
LC50 - Fish [1]	23 mg/l Test organisms (species): Danio rerio
EC50 72h - Algae [1]	111.9 mg/l Test organisms (species): Desmodesmus subspicatus

Eugenol (97-53-0)	
LC50 - Fish [1]	13 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	1.05 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	24 mg/l

Geraniol (106-24-1)	
LC50 - Fish [1]	≈ 22 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	10.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	13.1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
ErC50 algae	≈ 13.1 mg/l
NOEC chronic fish	≈ 10 mg/l
NOEC chronic algae	≈ 1 ml/l

Isoeugenol (5932-68-3; 97-54-1)	
LC50 - Fish [1]	3.6 mg/l Test organisms (species): other:
EC50 - Other aquatic organisms [1]	3 mg/l Test organisms (species): other:
EC50 72h - Algae [1]	5.6 mg/l Test organisms (species): other:
EC50 96h - Algae [1]	34.3 mg/l Test organisms (species): other:

Nerolidol (7212-44-4)	
LC50 - Fish [1]	1.43 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	510.3 µg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	2 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

Eucalyptol (470-82-6)	
LC50 - Fish [1]	57 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 74 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 74 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)

alpha-Pinene (80-56-8)	
LC50 - Fish [1]	0.303 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.475 mg/l Test organisms (species): Daphnia magna

12.2. Persistence and degradability

EO Ylang ylang III (83863-30-3)	
Persistence and degradability	Not rapidly degradable

alpha-Farnesene (502-61-4)	
Persistence and degradability	Not rapidly degradable

beta-Caryophyllene (87-44-5)	
Persistence and degradability	Not rapidly degradable

Benzyl benzoate (120-51-4)	
Persistence and degradability	Not rapidly degradable

Geranyl acetate (105-87-3)	
Persistence and degradability	Not rapidly degradable

Farnesol (4602-84-0)	
Persistence and degradability	Not rapidly degradable

Benzyl salicylate (118-58-1)	
Persistence and degradability	Not rapidly degradable

Benzyl acetate (140-11-4)	
Persistence and degradability	Not rapidly degradable

Linalool (78-70-6)	
Persistence and degradability	Not rapidly degradable

para-Methyl cresol (104-93-8)	
Persistence and degradability	Not rapidly degradable

Methyl benzoate (93-58-3)	
Persistence and degradability	Not rapidly degradable

Caryophyllene oxide (1139-30-6)	
Persistence and degradability	Not rapidly degradable

Eugenol (97-53-0)	
Persistence and degradability	Not rapidly degradable

Geraniol (106-24-1)	
Persistence and degradability	Not rapidly degradable

Isoeugenol (5932-68-3; 97-54-1)	
Persistence and degradability	Not rapidly degradable

Nerolidol (7212-44-4)	
Persistence and degradability	Not rapidly degradable

Eucalyptol (470-82-6)	
Persistence and degradability	Not rapidly degradable

alpha-Pinene (80-56-8)	
Persistence and degradability	Not rapidly degradable

beta-Pinene (127-91-3)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Benzyl benzoate (120-51-4)	
Partition coefficient n-octanol/water (Log Kow)	3.97 Temp.: 25 °C

Farnesol (4602-84-0)	
Partition coefficient n-octanol/water (Log Pow)	> 4.8

Benzyl salicylate (118-58-1)	
Partition coefficient n-octanol/water (Log Pow)	4

Benzyl acetate (140-11-4)	
Partition coefficient n-octanol/water (Log Pow)	2

Linalool (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	≥ 2.84

Methyl benzoate (93-58-3)	
Partition coefficient n-octanol/water (Log Pow)	2.2

Eugenol (97-53-0)	
Partition coefficient n-octanol/water (Log Pow)	1.83 pH: 55, 30 °C

Geraniol (106-24-1)	
Partition coefficient n-octanol/water (Log Pow)	≈ 2.6

Isoeugenol (5932-68-3; 97-54-1)	
Partition coefficient n-octanol/water (Log Kow)	2.1 25 °C

Nerolidol (7212-44-4)	
Partition coefficient n-octanol/water (Log Pow)	≥ 4.5 (pH value: ~7, 24 °C) (ECHA)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

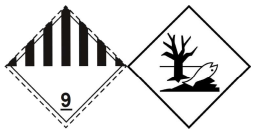
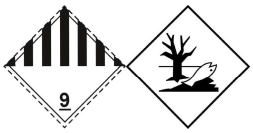
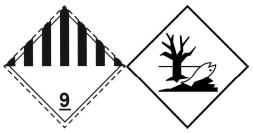
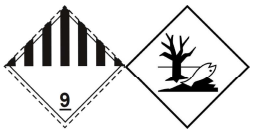
13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Disposal must be done according to official regulations.
Additional information : Do not re-use empty containers.

SECTION 14: Transport information

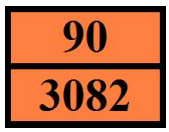
In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082

ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III)	Environmentally hazardous substance, liquid, n.o.s. (EO Ylang ylang III)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (EO Ylang ylang III), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EO Ylang ylang III), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-A EmS-No. (Spillage): S-F	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
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)	:	5l
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
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13
Hazard identification number (Kemler No.)	:	90
Orange plates	:	
Tunnel restriction code (ADR)	:	-

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)	:	TP1, TP29
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, A215
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
Carriage permitted (ADN)	:	T
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

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(a)	Eucalyptol ; beta-Pinene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	EO Ylang ylang III ; alpha-Farnesene ; beta-Caryophyllene ; Benzyl benzoate ; Geranyl acetate ; Farnesol ; Benzyl salicylate ; Linalool ; para-Methyl cresol ; Methyl benzoate ; Eugenol ; Geraniol ; Isoeugenol ; Nerolidol ; Eucalyptol ; alpha-Pinene ; beta-Pinene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	EO Ylang ylang III ; beta-Caryophyllene ; Benzyl benzoate ; Geranyl acetate ; Farnesol ; Benzyl salicylate ; Benzyl acetate ; Caryophyllene oxide ; Nerolidol	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Eucalyptol ; beta-Pinene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

National regulations

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

Abbreviations and acronyms:	
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), 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 Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful 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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility or the unborn child.
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.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Full text of H- and EUH-statements:	
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

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.