

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 7/3/2024 Version: 1.0

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

1.1. Product identifier

Product form	: Mixture
Product name	: Birch Leaf Givco 166
Product code	: 23127
Product group	: Trade product

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

Relevant identified uses

Intended for general public Main use category Use of the substance/mixture

: Consumer use,Professional use : 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
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard,	H411
Category 2	
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. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/	2008 [CLP]
Hazard pictograms (CLP)	GHS05 GHS07 GHS09
Signal word (CLP)	: Danger
Hazard statements (CLP)	: H315 - Causes skin irritation.
	H317 - May cause an allergic skin reaction.
	H318 - Causes serious eye damage.
	H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing vapours, spray, mist.
	P264 - Wash hands thoroughly after handling.
	P273 - Avoid release to the environment.
	P280 - Wear protective gloves, protective clothing, eye protection.
	P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

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contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a doctor, a POISON CENTER.
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.
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

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Geraniol	CAS-No.: 106-24-1 EC-No.: 203-377-1 REACH-no: 01-2119552430- 49	10 – 20	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1	10 – 20	Eye Irrit. 2, H319 Skin Sens. 1B, H317
Citronellol	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995- 23	5 – 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Bergamot acetoacetate	CAS-No.: 69103-01-1 EC-No.: 273-868-3 REACH-no: 01-2120260055- 65	5 – 10	Skin Sens. 1B, H317 Aquatic Chronic 3, H412
Guaiacwood acetate	CAS-No.: 94333-88-7 EC-No.: 305-067-2	5 – 10	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 1, H410
cis-3-Hexenol	CAS-No.: 928-96-1 EC-No.: 213-192-8	5 – 10	Flam. Liq. 3, H226 Eye Irrit. 2, H319
Undecavertol (Giv)	CAS-No.: 81782-77-6 EC-No.: 279-815-0 REACH-no: 01-2119983528- 21	2.5 – 5	Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Phenyl ethyl alcohol	CAS-No.: 60-12-8 EC-No.: 200-456-2	1 – 5	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7	1 – 5	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Citral	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829- 23	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
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
Benzyl alcohol	CAS-No.: 100-51-6 EC-No.: 202-859-9 EC Index-No.: 603-057-00-5 REACH-no: 01-2119492630- 38	1 – 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1, H317
Vernaldehyde	CAS-No.: 66327-54-6 EC-No.: 266-314-7, 945-920- 1 REACH-no: 01-2120735782- 50	1 – 2.5	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
EO Eucalyptus globulus	CAS-No.: 84625-32-1 EC-No.: 283-406-2 REACH-no: 01-2119978250- 37	1 – 2.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
cis-3-Hexenyl benzoate	CAS-No.: 25152-85-6 EC-No.: 249-669-4	1 – 2.5	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Farenal (Sym)	CAS-No.: 141-13-9 EC-No.: 205-460-8 REACH-no: 01-2120139915- 49	1 – 2.5	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
d-Limonene	CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-096-00-2	1 – 2.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Stemone (Giv)	CAS-No.: 22457-23-4 EC-No.: 245-010-8 REACH-no: 01-2120747610- 59	1 – 2.5	Aquatic Chronic 3, H412
Myrcenyl acetate	CAS-No.: 1118-39-4 EC-No.: 214-262-0	0.25 – 1	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Triplal (IFF)	CAS-No.: 68039-49-6 EC-No.: 268-264-1; 943-728- 2 REACH-no: 01-2119982384- 28	0.25 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Citronellal	CAS-No.: 106-23-0 EC-No.: 203-376-6	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
beta-Pinene	CAS-No.: 127-91-3 EC-No.: 204-872-5	0.25 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
2-Methoxy-p-cresol	CAS-No.: 93-51-6 EC-No.: 202-252-9	0.1 – 1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
delta-3-Carene	CAS-No.: 13466-78-9 EC-No.: 236-719-3	0.1 – 0.25	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	: If you feel unwell, seek medical advice.	
irst-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.	
irst-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.	
irst-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.	
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.	
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	: Serious damage to eyes.	
Symptoms/effects after ingestion	: None under normal conditions.	
First-aid measures after ingestion First-aid measures for first aider 4.2. Most important symptoms and effects, I Symptoms/effects after inhalation Symptoms/effects after skin contact Symptoms/effects after eye contact	 to do. Continue rinsing. Call a physician immediately. Call a poison center or a doctor if you feel unwell. First aid workers will be equipped with suitable personal protective equipment. both acute and delayed Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard. Irritation. May cause an allergic skin reaction. Serious damage to eyes. 	

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 Unsuitable extinguishing media	Water spray. Dry powder. Foam. Carbon dioxide.Do not use a heavy water stream.		
5.2. Special hazards arising from the substance or mixture			
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	 No fire hazard. No direct explosion hazard. Toxic fumes may be released. 		
5.3. Advice for firefighters			
Firefighting instructions Protection during firefighting	 Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. 		

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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 Emergency procedures	 Wear recommended personal protective equipment. Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. 		
For emergency responders			
Protective equipment Emergency procedures	 Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". 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 Methods for cleaning up Other information	 Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. Take up liquid spill into absorbent material. 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 Precautions for safe handling Hygiene measures	 Not expected to present a significant hazard under anticipated conditions of normal use. 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. 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, includin	g any incompatibilities		
Technical measures Storage conditions Packaging materials	 Keep in a cool, well-ventilated place away from heat. Keep cool. Protect from sunlight. 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

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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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

Colour	: pale yellow to brown-yellow.
	· pare jenen te zrenn jenem
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 75 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
рН	: Not available
Viscosity, kinematic	: Not available
Solubility	: Practically insoluble.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.3705 hPa Temp.: 20 °C
Vapour pressure at 50°C	: Not available
Density	: 923.33 kg/m³ Temp.: 20 °C
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

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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):Acute toxicity (dermal):Acute toxicity (inhalation):	Not classified Not classified Not classified	
Birch Leaf Givco 166		
LD50 oral	> 2000 mg/kg	
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	
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)	
Bergamot acetoacetate (69103-01-1)		
LD50 oral	> 5000 mg/kg	
LD50 dermal	> 5000 mg/kg	
Guaiacwood acetate (94333-88-7)		
LD50 oral	10000 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
cis-3-Hexenol (928-96-1)		
LD50 oral rat	4615 mg/kg bodyweight Animal: rat, 95% CL: 4045 - 6265	
LC50 Inhalation - Rat	> 4.99 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)	

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Phenyl ethyl alcohol (60-12-8)	
LD50 dermal rabbit	2535 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 1769 - 3634
LC50 Inhalation - Rat	> 4.63 mg/l air Animal: rat
Nerol (106-25-2)	
LD50 oral rat	4500 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 3400 - 5600
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Citral (5392-40-5)	
LD50 oral rat	≈ 6800 mg/kg bodyweight Animal: rat
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat
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
Vernaldehyde (66327-54-6)	
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
EO Eucalyptus globulus (84625-32-1)	
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
cis-3-Hexenyl benzoate (25152-85-6)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
Farenal (Sym) (141-13-9)	
LD50 oral rat	> 4250 mg/kg
LD50 dermal rat	> 5000 mg/kg
d-Limonene (5989-27-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
Benzyl alcohol (100-51-6)	
LD50 oral rat	1620 mg/kg Species: rat
LD50 oral	1580 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1410 - 1770
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 4.178 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Stemone (Giv) (22457-23-4)	
LD50 oral rat	3500 mg/kg
LD50 dermal rat	> 5000 mg/kg

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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) Citral (5392-40-5) 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) 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) 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) Reproductive toxicity : Not classified EO Eucalyptus globulus (84625-32-1) (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) NOAEL (animal/male, F0/P) 1000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Farenal (Sym) (141-13-9) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: Other: NOAEL (animal/female, F0/P) \$300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline:	Myrcenyl acetate (1118-39-4)			
Triplal (IFF) (68039-49-6) LD50 oral rat 3900 mg/kg LD50 demal rabbit 2500 mg/kg Citronellal (106-23-0) 2500 mg/kg bodyweight Animal: rat LD50 demal rat > 2000 mg/kg bodyweight Animal: rat LD50 demal rat > 2000 mg/kg bodyweight Animal: rat LD50 demal ratbit 2500 - 5000 mg/kg bodyweight Animal: rabbit 24Methoxy-p-cresol (93-51-6) E LD50 oral 623 mg/kg Skin correson/inflation : Causes skin versus ear allergic skin reaction. Germ cell mulagenicity : Not classified Caricnogenicity : Not classified Geraniol (106-24-1) Work classified NOAEL (chronic, oral, animal/male, 2 years) 80 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citronelial (106-23-0) 80 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citronelial (106-23-0) 80 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Repeated Deso Toxicity Studies) Reproductive toxicity : Not classified EO Eucalyptus globulus (24625-32-1) 1000 mg/kg bodyweight Animal: milli mais, classified i Combined Repeated Deso Toxic	LD50 oral rat			
L050 oral rat 3900 mg/kg L050 demal rabbit 2500 mg/kg Citronalial (106-23-0) 2000 mg/kg bodyweight Animal: rat L050 demal rat > 2000 mg/kg bodyweight Animal: rat L050 demal rabbit 2500 - 5000 mg/kg bodyweight Animal: rat L050 oral 623 mg/kg Skin corresion/inflation : Causes skin inflation. Serious sey damage/inflation : Causes skin inflation. Serious sey damage/inflation : Causes serious sey damage. Respiratory of skin sensitisation : May cause an allergic skin reaction. Gem call mutagenicity : Not classified Carcinogenicity : Not classified Carcinogenicity : Not classified Coranio (106-24-1) 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citral (5392-40-5) 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) Citronalial (106-23-0) I000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Reproductive toxicity : Not classified EO Eucalyptus globulus (84626-32-1) NOAEL (animal/male, F0/P) : 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guidelin	LD50 dermal	> 5000 mg/kg		
L050 dermal rabbit 2500 mg/kg Circonellal (106-23-0) 2000 mg/kg bodyweight Animal: rat L050 dermal rat > 2000 mg/kg bodyweight Animal: rat L050 dermal rabbit 2500 - 5000 mg/kg bodyweight Animal: rat 24dethoxy-p-crosol (33-51-6) Edited and an experimentation L050 oral 623 mg/kg Skin corrosion/initiation : Causes skin initiation. Serious eye damage/irritation : Causes skin initiation. Serious eye damage/irritation : Causes skin initiation. Serious eye damage/irritation : Causes serious eye damage. Respiratory or skin sematitication : May cause an allerigic skin reaction. Germ entitistion : Cause serious eye damage. Respiratory or skin sematitication : May cause an allerigic skin reaction. Germ ind (106-24-1) : Not classified 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) Cirtonellal (106-23-0) : Not classified 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) Cirtonellal (106-23-0) : Not classified NOAEL (chronic, oral, animal/male, 2 years) : 60 mg/kg bodyweight Animal: rat, Animal sex: male, Gu	Triplal (IFF) (68039-49-6)			
Interview Provide C Citronellal (106-23-0) 2000 mg/kg bodyweight Animal: rat LD50 dermal rat 2 2000 mg/kg bodyweight Animal: rat LD50 dermal rabbit 2500 - 5000 mg/kg bodyweight Animal: rat 2.Methoxy-p-cresol (83-51-6) Causes skin initiation. Scious sye damage/initiation Causes skin sinitiation. Respiratory or skin sensitisation May cause an altergic skin reaction. Germ cell mulage/initiation May cause an altergic skin reaction. Germ cell mulage/initiation May cause an altergic skin reaction. Germ cell mulage/initiation May cause an altergic skin reaction. Germ cell mulage/initiation May cause an altergic skin reaction. Germ cell mulage/initiation 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) Citronellal (106-23-0) 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) Reproductive toxicity NoAEL (chronic, oral, animal/male, 2 years) 60 mg/kg bodyweight Animal: mouse, Animal sex: m	LD50 oral rat	3900 mg/kg		
L050 dermal rat > 2000 mg/kg bodyweight Animal: rat L050 dermal rabbit 2500 - 5000 mg/kg bodyweight Animal: ratbit 2-Methoxy-p-cresol (83-51-6) Exaces skin initiation. L050 oral 623 mg/kg Skin corrosion/initiation : Causes skin initiation. Serious avy damagé/initiation : Causes avait initiation. Respiratory or skin sensitisation : May cause an allergic skin reaction. Geranical (106-24-1) Not classified 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) Citral (5392-40-5) 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) Citranellal (106-23-0) 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) Reproductive toxicity : Not classified ED Eucalyptus globulus (84625-32-1) NoAEL (animal/male, FOIP) NOAEL (animal/male, FOIP) 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Streening Test)	LD50 dermal rabbit	2500 mg/kg		
LD50 dermal rabbit 2500 – 5000 mg/kg bodyweight Animal: rabbit 2-Mothoxy-p-cresol (93-51-6) E023 mg/kg LD50 oral 623 mg/kg Skin corrosion/inflation : Causes skin inflation. Serious eye damage/inflation : Causes skin inflation. Serious eye damage/inflation : Causes an allergic skin reaction. Ger neil mutagenicity : Not classified Carcinogenicity : Not classified Geranici (106-24-1) 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citral (5392-40-5) 60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citronellal (106-23-0) 80 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) Citronellal (106-23-0) 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) NDAEL (chronic, oral, animal/male, 2 years) 100 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies) NDAEL (animal/male, F0/P) 100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeate	Citronellal (106-23-0)			
2-Methoxy-p-cresol (93-51-6) LD50 oral 623 mg/kg Skin corrosion/irritation : Causes skin irritation. Serious sey damage/irritation : Causes serious eye damage. Respiratory or skin sensitisation : May cause an altergic skin reaction. Ger call mutagenicity : Not classified Carcinogenicity : Not classified Geraniol (106-24-1) NOAEL (chronic, oral, animal/male, 2 years) 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) Citronellal (106-23-0) NOAEL (chronic, oral, animal/male, 2 years) 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) Citronellal (106-23-0) NOAEL (chronic, oral, animal/male, 2 years) 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) Reproductive toxicity : Not classified EO Eucalyptus globulus (84625-32-1) NOAE (animal/male, F0/P) NOAEL (animal/male, F0/P) : 3000 mg/kg bodyweight Animal: rat, Animal sex: female,	LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat		
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EO Eucalyptus globulus (84625-32-1) NOAEL (animal/male, F0/P) 1000 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) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Farenal (Sym) (141-13-9) NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure STOT-repeated exposure Not classified Geraniol (106-24-1) NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other: Guideline: other: Stot classified Geraniol (106-24-1) NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other: Eugenol (97-53-0)	NOAEL (chronic, oral, animal/male, 2 years)			
NOAEL (animal/male, F0/P) 1000 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) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Farenal (Sym) (141-13-9) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1) 300 mg/kg bodyweight Animal: rat, Guideline: other: NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other:	Reproductive toxicity :	Not classified		
(Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) NOAEL (animal/female, F0/P) 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Farenal (Sym) (141-13-9) Farenal (Sym) (141-13-9) NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1) 300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other: NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:	EO Eucalyptus globulus (84625-32-1)			
(Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test) Farenal (Sym) (141-13-9) NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1) NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:	NOAEL (animal/male, F0/P)	(Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity		
NOAEL (animal/female, F0/P) ≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1) NOAEL (dermal, rat/rabbit, 90 days) NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:	NOAEL (animal/female, F0/P)	(Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity		
NOAEL (animal/female, F1) > 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other: STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1)	Farenal (Sym) (141-13-9)			
STOT-single exposure : Not classified STOT-repeated exposure : Not classified Geraniol (106-24-1)	NOAEL (animal/female, F0/P)	≥ 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:		
STOT-repeated exposure : Not classified Geraniol (106-24-1)	NOAEL (animal/female, F1)	> 300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:		
NOAEL (dermal, rat/rabbit, 90 days) 300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other: Eugenol (97-53-0)	STOT-single exposure : STOT-repeated exposure :			
Eugenol (97-53-0)	Geraniol (106-24-1)			
	NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:		
NOAEL (subchronic, oral, animal/male, 90 days) ≥ 900 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: other:	Eugenol (97-53-0)			
	NOAEL (subchronic, oral, animal/male, 90 days)	≥ 900 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: other:		

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Eugenol (97-53-0)	
NOAEL (subchronic, oral, animal/female, 90 days)	450 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: other:
Citronellol (106-22-9)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.063 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
cis-3-Hexenol (928-96-1)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Phenyl ethyl alcohol (60-12-8)	
NOAEL (dermal, rat/rabbit, 90 days)	510 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Citral (5392-40-5)	
LOAEC (inhalation, rat, gas, 90 days)	68 ppm Animal: rat, Animal sex: female
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEC (inhalation, rat, gas, 90 days)	34 ppm Animal: rat, Animal sex: female
NOAEL (subchronic, oral, animal/male, 90 days)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
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)
Farenal (Sym) (141-13-9)	
NOAEL (oral, rat, 90 days)	≥ 335 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:
Benzyl alcohol (100-51-6)	
NOAEL (oral, rat, 90 days)	400 mg/kg bodyweight Animal: rat, Guideline: other:
Stemone (Giv) (22457-23-4)	·
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Remarks on results: other:
Citronellal (106-23-0)	·
LOAEC (inhalation, rat, gas, 90 days)	68 ppm Animal: rat, Animal sex: female
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEC (inhalation, rat, gas, 90 days)	34 ppm Animal: rat, Animal sex: female
NOAEL (subchronic, oral, animal/male, 90 days)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
Aspiration hazard :	Not classified
Eugenol (97-53-0)	

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cis-3-Hexenol (928-96-1)		
Viscosity, kinematic	3.91 mm²/s at 20 °C	
Undecavertol (Giv) (81782-77-6)		
Viscosity, kinematic	18 mm²/s at 20 °C	
Nerol (106-25-2)		
Viscosity, kinematic	10.37 mm²/s at 20 °C	
Citral (5392-40-5)		
Viscosity, kinematic	2.42 mm²/s at 20 °C	
Linalool (78-70-6)		
Viscosity, kinematic	5191.86 mm²/s	
EO Eucalyptus globulus (84625-32-1)		
Viscosity, kinematic	1.79 mm²/s Temp.: '40 °C' Parameter: 'kinematic viscosity (in mm²/s)'	
Benzyl alcohol (100-51-6)		
Viscosity, kinematic	4.851 mm²/s	
11.2. Information on other hazards		

No additional information available

SECTION 12: Ecological information			
12.1. Toxicity			
Hazardous to the aquatic environment, short–term : (acute)	Toxic to aquatic life with long lasting effects. Not classified Toxic to aquatic life with long lasting effects.		
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		
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		
Citronellol (106-22-9)			
LC50 - Fish [1]	14.66 mg/l Test organisms (species): Leuciscus idus		
EC50 - Crustacea [1]	17.48 mg/l Test organisms (species): Daphnia magna		
EC50 72h - Algae [1]	2.4 mg/l Test organisms (species):		

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Bergamot acetoacetate (69103-01-1)	
EC50 - Crustacea [1]	> 18 mg/l Test organisms (species): Daphnia magna
Guaiacwood acetate (94333-88-7)	
EC50 - Crustacea [1]	0.33 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.31 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
cis-3-Hexenol (928-96-1)	
LC50 - Fish [1]	> 100 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]	> 76 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Undecavertol (Giv) (81782-77-6)	
EC50 72h - Algae [1]	3.6 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	3.8 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Phenyl ethyl alcohol (60-12-8)	
LC50 - Fish [1]	215 – 464 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	287.17 mg/l Test organisms (species): Daphnia magna
Nerol (106-25-2)	
LC50 - Fish [1]	20.3 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	32.4 mg/l Test organisms (species): Daphnia magna
Citral (5392-40-5)	
LC50 - Fish [1]	6.78 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	6.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	103.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
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)
Vernaldehyde (66327-54-6)	
EC50 - Crustacea [1]	0.17 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1.8 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
EO Eucalyptus globulus (84625-32-1)	
EC50 - Crustacea [1]	0.307 mg/l Test organisms (species): Daphnia magna

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EO Eucalyptus globulus (84625-32-1)		
EC50 - Crustacea [2]	0.475 mg/l Test organisms (species): Daphnia magna	
EC50 96h - Algae [1]	> 74 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
cis-3-Hexenyl benzoate (25152-85-6)		
EC50 - Crustacea [1]	1.5 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	1.3 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
Farenal (Sym) (141-13-9)		
LC50 - Fish [1]	> 0.6087 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
LC50 - Fish [2]	> 0.4738 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)	
EC50 - Crustacea [1]	0.9 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	> 0.5877 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
d-Limonene (5989-27-5)		
LC50 - Fish [1]	720 μg/l Test organisms (species): Pimephales promelas	
LC50 - Fish [2]	702 μg/l Test organisms (species): Pimephales promelas	
EC50 - Crustacea [1]	0.307 mg/l Test organisms (species): Daphnia magna	
EC50 - Crustacea [2]	0.51 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	0.32 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	0.214 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
Benzyl alcohol (100-51-6)		
LC50 - Fish [1]	460 mg/l Test organisms (species): Pimephales promelas	
EC50 - Crustacea [1]	230 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	770 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	500 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [1]	76.828 mg/l Test organisms (species): other:	
NOEC chronic fish	48.897 mg/l Test organisms (species): other: Duration: '30 d'	
NOEC chronic crustacea	51 mg/l Species: Daphnia magna, duration: 21 days	
Stemone (Giv) (22457-23-4)		
LC50 - Fish [1]	51451 mg/l Test organisms (species):	
EC50 - Crustacea [1]	44 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	62 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
NOEC chronic algae	10 mg/l 72 h, Pseudokirchneriella subcapitata, OECD Test Guideline 201	

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Myrcenyl acetate (1118-39-4)	
EC50 - Crustacea [1]	6.3 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	19 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Triplal (IFF) (68039-49-6)	
EC50 - Crustacea [1]	76 mg/l
Citronellal (106-23-0)	
LC50 - Fish [1]	≈ 22 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	8.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	13.33 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	6.74 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
12.2. Persistence and degradability	
Birch Leaf Givco 166	
Persistence and degradability	Not rapidly degradable
Geraniol (106-24-1)	
Persistence and degradability	Not rapidly degradable
Eugenol (97-53-0)	
Persistence and degradability	Not rapidly degradable
Citronellol (106-22-9)	
Persistence and degradability	Not rapidly degradable
Bergamot acetoacetate (69103-01-1)	
Persistence and degradability	Not rapidly degradable
Guaiacwood acetate (94333-88-7)	
Persistence and degradability	Not rapidly degradable
cis-3-Hexenol (928-96-1)	
Persistence and degradability	Not rapidly degradable
Undecavertol (Giv) (81782-77-6)	
Persistence and degradability	Not rapidly degradable
Phenyl ethyl alcohol (60-12-8)	
Persistence and degradability	Not rapidly degradable
Nerol (106-25-2)	
Persistence and degradability	Not rapidly degradable
Citral (5392-40-5)	
Persistence and degradability	Not rapidly degradable
Linalool (78-70-6)	
Persistence and degradability	Not rapidly degradable

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Vernaldehyde (66327-54-6)			
Persistence and degradability	Not rapidly degradable		
EO Eucalyptus globulus (84625-32-1)			
Persistence and degradability	Not rapidly degradable		
cis-3-Hexenyl benzoate (25152-85-6)			
Persistence and degradability	Not rapidly degradable		
Farenal (Sym) (141-13-9)			
Persistence and degradability	Not rapidly degradable		
d-Limonene (5989-27-5)			
Persistence and degradability	Not rapidly degradable		
Benzyl alcohol (100-51-6)			
Persistence and degradability	Not rapidly degradable		
Stemone (Giv) (22457-23-4)			
Persistence and degradability	Not rapidly degradable		
Myrcenyl acetate (1118-39-4)			
Persistence and degradability	Not rapidly degradable		
Triplal (IFF) (68039-49-6)			
Persistence and degradability	Not rapidly degradable		
Citronellal (106-23-0)			
Persistence and degradability	Not rapidly degradable		
beta-Pinene (127-91-3)			
Persistence and degradability	Not rapidly degradable		
delta-3-Carene (13466-78-9)			
Persistence and degradability	Not rapidly degradable		
2-Methoxy-p-cresol (93-51-6)			
Persistence and degradability	Not rapidly degradable		
12.3. Bioaccumulative potential			
Geraniol (106-24-1)			
Partition coefficient n-octanol/water (Log Pow)	≈2.6		
Eugenol (97-53-0)			
Partition coefficient n-octanol/water (Log Pow)	1.83 pH: 55, 30 °C		
Citronellol (106-22-9)			
BCF - Fish [1]	82.59		
Partition coefficient n-octanol/water (Log Pow)	3.3		
Undecavertol (Giv) (81782-77-6)			
Partition coefficient n-octanol/water (Log Pow)	3.9		

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Phenyl ethyl alcohol (60-12-8)		
Partition coefficient n-octanol/water (Log Pow)	0.8 pH value : 7, 20 °C	
Nerol (106-25-2)		
Partition coefficient n-octanol/water (Log Kow)	2.76 pH value: ~6.5, 30 °C	
Citral (5392-40-5)		
Partition coefficient n-octanol/water (Log Kow)	2.76 at 25 °C	
Linalool (78-70-6)		
Partition coefficient n-octanol/water (Log Pow)	≥ 2.84	
Farenal (Sym) (141-13-9)		
Partition coefficient n-octanol/water (Log Pow)	6.2	
Benzyl alcohol (100-51-6)		
Bioconcentration factor (BCF REACH)	1.37	
Partition coefficient n-octanol/water (Log Pow)	1.1	
Stemone (Giv) (22457-23-4)		
Partition coefficient n-octanol/water (Log Pow)	2.3	
Triplal (IFF) (68039-49-6)		
Partition coefficient n-octanol/water (Log Pow)	2.34	
12.4. Mobility in soil		
Citral (5392-40-5)		
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.169	
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 Waste treatment methods : Disposal must be done according to official regulations. 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

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ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID n	umber			I
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shippin	g name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166)	Environmentally hazardous substance, liquid, n.o.s. (Birch Leaf Givco 166)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166)
Transport document descr	iption	·		
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Birch Leaf Givco 166), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Birch Leaf Givco 166), 9, III
14.3. Transport hazard o	lass(es)			
9	9	9	9	9
14.4. Packing group				
III	III	III	III	111
14.5. Environmental haz	ards			
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 informatio	n available			
14.6. Special precaution	s for user			
Dverland transport Classification code (ADR) Special provisions (ADR) imited quantities (ADR) Excepted quantities (ADR) Packing instructions (ADR) Special packing provisions (A Mixed packing provisions (AD Portable tank and bulk contain Portable tank and bulk contain Portable tank and bulk contain ADR) Fank code (ADR) /ehicle for tank carriage Fransport category (ADR) Special provisions for carriage	: M : 2 : 5 : E : F DR) : F R) : M ner instructions (ADR) : T ner special provisions : T	74, 335, 375, 601 I :1 001, IBC03, LP01, R001 IP1 IP19 4 P1, TP29 GBV T		

and handling (ADR)

Hazard identification number (Kemler No.)

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Orange plates	90
Tunnel restriction code (ADR)	3082
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)	: 5L
Excepted quantities (ADN) Carriage permitted (ADN)	: E1 : T
Equipment required (ADN)	· PP
Number of blue cones/lights (ADN)	: 0
Rail transport	
Classification code (RID)	: M6
Special provisions (RID) Limited quantities (RID)	: 274, 335, 375, 601
Excepted quantities (RID)	: 5L : 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	: TP1, TP29
(RID)	
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading	: CW13, CW31
and handling (RID)	
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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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)	cis-3-Hexenol ; EO Eucalyptus globulus ; d- Limonene ; beta-Pinene ; delta-3-Carene	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)	Birch Leaf Givco 166 ; Geraniol ; Eugenol ; Citronellol ; Bergamot acetoacetate ; Guaiacwood acetate ; cis- 3-Hexenol ; Phenyl ethyl alcohol ; Nerol ; Citral ; Linalool ; Vernaldehyde ; EO Eucalyptus globulus ; cis-3-Hexenyl benzoate ; Farenal (Sym) ; d- Limonene ; Benzyl alcohol ; Myrcenyl acetate ; Triplal (IFF) ; Citronellal ; beta- Pinene ; delta-3-Carene ; 2-Methoxy-p-cresol	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)	Birch Leaf Givco 166 ; Bergamot acetoacetate ; Guaiacwood acetate ; Undecavertol (Giv) ; Vernaldehyde ; EO Eucalyptus globulus ; cis- 3-Hexenyl benzoate ; Farenal (Sym) ; d- Limonene ; Stemone (Giv) ; Myrcenyl acetate ; Triplal (IFF)	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.	cis-3-Hexenol ; EO Eucalyptus globulus ; d- Limonene ; beta-Pinene ; delta-3-Carene	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)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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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	: Bergamot acetoacetate,Guaiacwood acetate,Vernaldehyde,EO Eucalyptus globulus,Triplal (IFF) are listed
SZW-lijst van mutagene stoffen	: Bergamot acetoacetate,Guaiacwood acetate,Vernaldehyde,EO Eucalyptus globulus,Triplal (IFF) 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

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	
ΙΑΤΑ	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	

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Abbreviations and acronyms:		
NOEC	No-Observed Effect Concentration	
OECD	Organisation for Economic Co-operation and Development	
OEL	Occupational Exposure Limit	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
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 (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.	
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.	
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.	

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Full text of H- and EUH-statements:		
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.