

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

1.1. Product identifier

Product form	: Substance
Substance name	: Sweet Fennel Organic Essential Oil
EC-No.	: 282-892-3, 617-025-3
CAS-No.	: 8006-84-6
Product code	: 10177TOC
Type of product	: Essential oil
Product group	: Raw material

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

1.2.1. Relevant identified uses

Main use category	: Industrial use
Function or use category	: Cosmetics, Flavoring agent, Perfuming agent

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SIRIUS
57 Chemin de la Métairie Haute
81580 CAMBUNET SUR LE SOR - France
T + 33 (0)5-32-09-11-72
contact@sirius-bio.com

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 1	H317
Germ cell mutagenicity, Category 2	H341
Carcinogenicity, Category 2	H351
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

Suspected of causing cancer. Suspected of causing genetic defects. Causes skin irritation. May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H341 - Suspected of causing genetic defects.
H351 - Suspected of causing cancer.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P391 - Collect spillage.

2.3. Other hazards

No additional information available

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SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Sweet Fennel Organic Essential Oil
CAS-No. : 8006-84-6
EC-No. : 282-892-3, 617-025-3

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
trans-Anethole	(CAS-No.) 4180-23-8 (EC-No.) 224-052-0	≥ 50	Skin Sens. 1B, H317
Limonene	(CAS-No.) 138-86-3 (EC-No.) 227-813-5 (EC Index-No.) 601-029-00-7 (REACH-no) 01-2119529223-47	1 – 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Alpha pinene	(CAS-No.) 80-56-8 (EC-No.) 201-291-9 (REACH-no) 01-2119519223-49	1 – 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
Methyl chavicol	(CAS-No.) 140-67-0 (EC-No.) 205-427-8	1 – 10	Skin Sens. 1B, H317 Skin Irrit. 2, H315 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 3, H412 Acute Tox. 4 (Oral), H302 (ATE=1230 mg/kg de poids corporel)
Alpha Phellandrene	(CAS-No.) 99-83-2 (EC-No.) 202-792-5	0.1 – 10	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 1, H410 Aquatic Acute 1, H400
anisaldehyde	(CAS-No.) 123-11-5 (EC-No.) 204-602-6	< 5	Aquatic Chronic 3, H412
Beta Pinene	(CAS-No.) 127-91-3 (EC-No.) 204-872-5	< 5	Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Linalyl acetate	(CAS-No.) 115-95-7 (EC-No.) 204-116-4	< 5	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
myrcene beta	(CAS-No.) 123-35-3 (EC-No.) 204-622-5	< 5	Asp. Tox. 1, H304 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Skin Irrit. 2, H315
Gamma terpinene	(CAS-No.) 99-85-4 (EC-No.) 202-794-6	< 5	Repr. 2, H361 Flam. Liq. 3, H226 Asp. Tox. 1, H304
Linalool *	(CAS-No.) 78-70-6 (EC-No.) 201-134-4 (EC Index-No.) 603-235-00-2 (REACH-no) 01-2119474016-42	< 1	Skin Sens. 1B, H317
Carvone	(CAS-No.) 99-49-0 (EC-No.) 202-759-5 (EC Index-No.) 606-148-00-8	< 1	Skin Sens. 1B, H317
Borneol	(CAS-No.) 507-70-0 (EC-No.) 208-080-0	< 1	Skin Irrit. 2, H315 Flam. Sol. 1, H228 Aquatic Chronic 2, H411

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Paracymene	(CAS-No.) 99-87-6 (EC-No.) 202-796-7	< 1	Repr. 2, H361 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Camphene	(CAS-No.) 79-92-5 (EC-No.) 201-234-8	< 1	Flam. Sol. 2, H228 Eye Irrit. 2, H319 Aquatic Chronic 1, H410
Terpinolene	(CAS-No.) 586-62-9 (EC-No.) 209-578-0	< 1	Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1B, H317
Sabinene	(CAS-No.) 3387-41-5 (EC-No.) 222-212-4	< 1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel)
Cis Beta Ocimene	(CAS-No.) 3338-55-4 (EC-No.) 222-081-3	< 1	Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Skin Irrit. 2, H315
1,8 Cineole	(CAS-No.) 470-82-6 (EC-No.) 207-431-5	< 1	Flam. Liq. 3, H226 Skin Sens. 1B, H317 Eye Irrit. 2, H319
Camphor	(CAS-No.) 76-22-2 (EC-No.) 200-945-0	< 1	STOT SE 2, H371 Skin Irrit. 2, H315 Flam. Sol. 2, H228 Eye Dam. 1, H318 Aquatic Chronic 2, H411 Acute Tox. 4 (Oral), H302 (ATE=1500 mg/kg de poids corporel) Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h)
Beta Phellandrene	(CAS-No.) 555-10-2 (EC-No.) 209-081-9	< 1	Asp. Tox. 1, H304 Flam. Liq. 3, H226
Caryophyllene oxide	(CAS-No.) 1139-30-6 (EC-No.) 214-519-7	< 1	Aquatic Chronic 2, H411
Geranyl acetate	(CAS-No.) 105-87-3 (EC-No.) 203-341-5	< 1	Skin Sens. 1B, H317 Skin Irrit. 2, H315 Aquatic Chronic 3, H412
Ethanol	(CAS-No.) 64-17-5 (EC-No.) 200-578-6 (EC Index-No.) 603-002-00-5	< 1	Eye Irrit. 2, H319 Flam. Liq. 2, H225
Neryl acetate	(CAS-No.) 141-12-8 (EC-No.) 205-459-2	< 1	Skin Sens. 1B, H317
Alpha terpineol	(CAS-No.) 98-55-5 (EC-No.) 202-680-6	< 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Beta Caryophyllene	(CAS-No.) 87-44-5 (EC-No.) 201-746-1	< 1	Asp. Tox. 1, H304 Aquatic Chronic 4, H413 Skin Sens. 1B, H317
isovaleraldehyde	(CAS-No.) 590-86-3 (EC-No.) 209-691-5	< 0.1	Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Flam. Liq. 2, H225 Skin Sens. 1B, H317 STOT SE 3, H335
Terpinen-4-ol	(CAS-No.) 562-74-3 (EC-No.) 209-235-5	< 0.1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Skin Irrit. 2, H315 Eye Irrit. 2, H319

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Delta 3-carene	(CAS-No.) 13466-78-9 (EC-No.) 236-719-3	< 0.1	Skin Sens. 1, H317 Skin Irrit. 2, H315 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Aquatic Chronic 2, H411
Geraniol *	(CAS-No.) 106-24-1 (EC-No.) 203-377-1 (EC Index-No.) 603-241-00-5 (REACH-no) 01-2119552430-49	< 0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Longifolene	(CAS-No.) 475-20-7 (EC-No.) 207-491-2	< 0.1	Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 Skin Sens. 1B, H317
Alpha terpinene	(CAS-No.) 99-86-5 (EC-No.) 202-795-1	< 0.1	Asp. Tox. 1, H304 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Aquatic Chronic 2, H411 Flam. Liq. 3, H226
Nerol	(CAS-No.) 106-25-2 (EC-No.) 203-378-7 (REACH-no) 01-2119983244-33	< 0.1	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319
2-METHYL-BUTANAL	(CAS-No.) 96-17-3 (EC-No.) 202-485-6	< 0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Skin Sens. 1B, H317 STOT SE 3, H335 Aquatic Chronic 2, H411 (M=0)
Lauric acid C12:0	(CAS-No.) 143-07-7 (EC-No.) 205-582-1	< 0.1	Eye Dam. 1, H318
Carvacrol	(CAS-No.) 499-75-2 (EC-No.) 207-889-6	< 0.1	Acute Tox. 4 (Oral), H302 (ATE=810 mg/kg de poids corporel) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Cuminol	(CAS-No.) 536-60-7 (EC-No.) 208-640-4	< 0.1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel)
Myrtenal	(CAS-No.) 564-94-3 (EC-No.) 209-274-8	< 0.1	Skin Irrit. 2, H315
Nerolidol	(CAS-No.) 7212-44-4 (EC-No.) 230-597-5	< 0.1	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1B, H317
3-hexene-1-ol	(CAS-No.) 928-96-1 (EC-No.) 213-192-8	< 0.1	Eye Irrit. 2, H319 Flam. Liq. 3, H226
Acetone	(CAS-No.) 67-64-1 (EC-No.) 200-662-2 (EC Index-No.) 606-001-00-8	< 0.1	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Allo ocimene	(CAS-No.) 673-84-7 (EC-No.) 211-614-5	< 0.1	Asp. Tox. 1, H304 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Eye Irrit. 2, H319 Skin Irrit. 2, H315
Neral	(CAS-No.) 106-26-3 (EC-No.) 203-379-2	< 0.1	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Octanal	(CAS-No.) 124-13-0 (EC-No.) 204-683-8	< 0.1	Eye Irrit. 2, H319 Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Skin Irrit. 2, H315

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Menthol	(CAS-No.) 2216-51-5 (EC-No.) 218-690-9	< 0.1	Eye Irrit. 2, H319 Skin Irrit. 2, H315
Alpha trans bergamotene	(CAS-No.) 13474-59-4	< 0.1	Asp. Tox. 1, H304
Octanol	(CAS-No.) 111-87-5 (EC-No.) 203-917-6	< 0.1	Eye Irrit. 2, H319 Aquatic Chronic 3, H412
Eugenol	(CAS-No.) 97-53-0 (EC-No.) 202-589-1	< 0.1	Eye Irrit. 2, H319 Skin Sens. 1B, H317
Thymol	(CAS-No.) 89-83-8 (EC-No.) 201-944-8 (EC Index-No.) 604-032-00-1	< 0.1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg de poids corporel) Skin Corr. 1B, H314 Aquatic Chronic 2, H411

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Menthol	(CAS-No.) 2216-51-5 (EC-No.) 218-690-9	(25 <C < 100) Eye Irrit. 2, H319 (25 <C < 100) Skin Irrit. 2, H315

Full text of H-statements: see section 16

3.2. Mixtures

Not established.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
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	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
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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.
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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
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6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information	: Dispose of materials or solid residues at an authorized site.

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6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. 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

Storage conditions	: Store locked up. Store in a well-ventilated place. Keep cool.
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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Acetone (67-64-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Acetone
IOEL TWA	1210 mg/m ³
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
France - Occupational Exposure Limits	
Local name	Acétone
VME (OEL TWA)	1210 mg/m ³
VME (OEL TWA) [ppm]	500 ppm
VLE (OEL C/STEL)	2420 mg/m ³
VLE (OEL C/STEL) [ppm]	1000 ppm
Note (FR)	Valeurs réglementaires contraignantes
Regulatory reference	Article R4412-149 du Code du travail (réf.: INRS ED 984, 2016; Décret n° 2019-1487; Décret n° 2020-1546; Décret n°2021-434)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



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8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless to clear yellow.
Appearance	: Liquid, more or less crystallized.
Odour	: Citrus fruits. Anisic. spicy. Refreshing.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosive limit (LEL)	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: 60.5 – 65 °C
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	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: 0.95 – 0.981
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable

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Particle specific surface area : Not applicable
Particle dustiness : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

Refractive index : 1.53 – 1.553

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

Sweet Fennel Organic Essential Oil (8006-84-6)

LD50 oral	2808 mg/kg bodyweight
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1,8 Cineole (470-82-6)

LD50 oral	2480 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))

Acetone (67-64-1)

LD50 oral rat	5800 mg/kg bodyweight Animal: rat, Animal sex: female
LC50 Inhalation - Rat	76 mg/l air Animal: rat, Animal sex: female, 95% CL: 65,2 - 88,4

Alpha pinene (80-56-8)

LD50 oral	3700 mg/kg bodyweight
LD50 dermal	> 5000 mg/kg bodyweight

anisaldehyde (123-11-5)

LD50 oral	3210 mg/kg bodyweight
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Linalool * (78-70-6)

LD50 oral rat	2790 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2440 - 3180
LD50 oral	2790 mg/kg bodyweight

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LD50 dermal rabbit	5610 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374
LD50 dermal	5610 mg/kg bodyweight

Beta Pinene (127-91-3)

LD50 oral rat	300 – 2000 mg/kg OCDE 423
LD50 dermal rat	> 2000 mg/kg

Camphene (79-92-5)

LD50 oral rat	> 2000 mg/kg bodyweight Animal: other:rat and mouse
LD50 oral	> 5000 mg/kg bodyweight Animal: mouse
LD50 dermal rat	> 2500 mg/kg bodyweight Animal:
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
LC50 Inhalation - Rat	> 25 mg/l air Animal:

Cis Beta Ocimene (3338-55-4)

LD50 oral	5000 mg/kg bodyweight
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Gamma terpinene (99-85-4)

LD50 oral	3850 mg/kg bodyweight
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Limonene (138-86-3)

LD50 oral	4400 mg/kg bodyweight
LD50 dermal	> 2000 mg/kg bodyweight

Methyl chavicol (140-67-0)

LD50 oral	1230 mg/kg bodyweight
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Paracymene (99-87-6)

LD50 oral	4750 mg/kg bodyweight
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Terpinolene (586-62-9)

LD50 oral	3775 mg/kg bodyweight
LD50 dermal rabbit	> 4300 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

trans-Anethole (4180-23-8)

LD50 oral	3000 mg/kg bodyweight
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Carvone (99-49-0)

LD50 oral	2500 mg/kg bodyweight
LD50 dermal	3800 mg/kg bodyweight

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	: Suspected of causing genetic defects.
Carcinogenicity	: Suspected of causing cancer.

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Reproductive toxicity : Not classified

Acetone (67-64-1)

LOAEL (animal/female, F0/P)	11298 mg/kg bodyweight Animal: mouse, Animal sex: female
NOAEL (animal/male, F0/P)	900 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:Generation not specified (migrated information)

Terpinolene (586-62-9)

NOAEL (animal/male, F0/P)	294.6 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)	161.5 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

STOT-single exposure : Not classified

Acetone (67-64-1)

STOT-single exposure	May cause drowsiness or dizziness.
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STOT-repeated exposure : Not classified

1,8 Cineole (470-82-6)

NOAEL (oral, rat, 90 days)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:japanese Ministry of Economy Trade and Industry Guideline for 28 day repeat oral dose toxicity study., Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Nonrodents)
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Linalool * (78-70-6)

LOAEL (dermal, rat/rabbit, 90 days)	Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
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Aspiration hazard : Not classified

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.
Not rapidly degradable

1,8 Cineole (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): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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Acetone (67-64-1)

LOEC (chronic)	> 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 79 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Alpha pinene (80-56-8)

LC50 - Fish [1]	0.28 mg/l
EC50 - Other aquatic organisms [1]	1.44 mg/l waterflea

Linalool * (78-70-6)

LC50 - Fish [1]	27.8 mg/l
EC50 - Crustacea [1]	59 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	20 mg/l waterflea
EC50 - Other aquatic organisms [2]	88.3 mg/l
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)

Camphene (79-92-5)

LC50 - Fish [1]	0.72 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.72 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1.75 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Limonene (138-86-3)

LC50 - Fish [1]	0.72 mg/l
EC50 - Other aquatic organisms [1]	0.36 mg/l waterflea

Terpinolene (586-62-9)

LC50 - Fish [1]	0.805 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.634 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.692 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.302 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Alpha pinene (80-56-8)

Partition coefficient n-octanol/water (Log Pow)	4.32
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Linalool * (78-70-6)

Partition coefficient n-octanol/water (Log Pow)	2.84
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Limonene (138-86-3)

Partition coefficient n-octanol/water (Log Pow)	4.38
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12.4. Mobility in soil

No additional information available

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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

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

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene)	Environmentally hazardous substance, liquid, n.o.s. (Beta Pinene ; Limonene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Beta Pinene ; Limonene), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Beta Pinene ; Limonene), 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	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)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T4
Portable tank and bulk container special provisions (ADR)	: TP1, TP29

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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
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
Special provisions (IATA) : A97, A158, A197, 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
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

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Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

Not established.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Sweet Fennel Organic Essential Oil is not on the REACH Candidate List

Sweet Fennel Organic Essential Oil is not on the REACH Annex XIV List

Sweet Fennel Organic Essential Oil is not subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Sweet Fennel Organic Essential Oil is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

France

Occupational diseases

Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamide; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

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

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PBT	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 disrupting properties

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
Aquatic Chronic 4	Hazardous to the aquatic environment — Chronic Hazard, Category 4
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
Flam. Sol. 2	Flammable solids, Category 2
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 2	Specific target organ toxicity — Single exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.

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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.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
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.
H413	May cause long lasting harmful effects to aquatic life.

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.