RAVENSARA ANISATA OIL

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Issue date: 3/26/2015 Revision date: 4/22/2022 Supersedes version of: 10/2/2020 Version: 1.3

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

1.1. Product identifier

Product form	:	Substance
Substance name	:	RAVENSARA ANISATA OIL
EC-No.	:	294-842-8
CAS-No.	:	91770-86-8
Product code	:	RAVHE01
Product group	:	Essential oil

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

1.2.1. Relevant identified uses

Main use category	:	Industrial use,Professional use
Industrial/Professional use spec	:	For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

EXAFLOR
5 rue des Pyrénées
P.O. Box CP 30561
94653 Rungis Cedex - France
T +33 (0)1 41 73 23 10
exaflor@orange.fr - www.exaflor.co

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
	ORFILA (FRANCE)		+33 1 45 42 59 59	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 4	H302
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-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Suspected of causing cancer. Suspected of causing genetic defects. Harmful if swallowed. 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) :

GHS02 GHS07 GHS08 GHS09

Signal word (CLP)	:	Warning
Hazard statements (CLP)	:	H226 - Flammable liquid and vapour. H302 - Harmful if swallowed. 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. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing mist, fume, dust, vapours. P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective clothing, protective gloves. P308+P313 - IF exposed or concerned: Get medical advice/attention. 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.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	:	RAVENSARA ANISATA OIL
CAS-No.	:	91770-86-8
EC-No.	:	294-842-8

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ESTRAGOLE (METHYL CHAVICOL)	CAS-No.: 140-67-0 EC-No.: 205-427-8	86 – 94	Acute Tox. 4 (Oral), H302 (ATE=1230 mg/kg de poids corporel) Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351
ANETHOL	CAS-No.: 4180-23-8 EC-No.: 224-052-0	0 – 5.2	Skin Sens. 1, H317 Aquatic Chronic 2, H411
D-LIMONENE	CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-029-00-7	1.2 – 3.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
LINALOOL	CAS-No.: 78-70-6 EC-No.: 201-134-4	1 – 3.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
METHYL EUGENOL	CAS-No.: 93-15-2 EC-No.: 202-223-0	0.1 – 2.9	Acute Tox. 4 (Oral), H302 (ATE=810 mg/kg de poids corporel) Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 2, H411

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

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

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all 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 : Rinse mouth. 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 : May cause an allergic skin reaction.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

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

5.3. Advice for firefighters

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

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. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	:	Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Ground/bond container and receiving equipment.
Storage conditions	:	Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.
Maximum storage period	:	3 year Shelf life to guarantee the quality and properties of the product; After this period, it is recommended to control organoleptic and physicochemical properties before using the raw material.
Storage temperature	:	≈ 18 (10 – 25) °C

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

No additional information available

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):

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	:	Yellow.
Appearance	:	Clear.
Odour	:	characteristic. anise note. spicy.
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	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Insoluble in water.
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	:	0.96 – 0.995
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
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	:	1.5 – 1.53

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

D-LIMONENE (5989-27-5)	
LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

LINALOOL (78-70-6)	
LD50 oral rat	2790 mg/kg
LD50 oral	3120 mg/kg LD50 oral mouse
LD50 dermal rabbit	5610 mg/kg

ESTRAGOLE (METHYL CHAVICOL) (140-67-0)	
LD50 oral rat	1230 mg/kg
LD50 oral	1250 mg/kg mouse
LD50 dermal rabbit	> 5000 mg/kg

METHYL EUGENOL (93-15-2)	
LD50 oral rat	810 mg/kg
LD50 dermal rabbit	> 2025
LC50 Inhalation - Rat	> 4800 mg/kg

ANETHOL (4180-23-8)	
LD50 oral rat	2090 mg/g

Skin corrosion/irritation : Not classified
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.

D-LIMONENE (5989-27-5)	
IARC group	3 - Not classifiable

METHYL EUGENOL (93-15-2)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

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.

D-LIMONENE (5989-27-5)	
LC50 - Fish [1]	0.702 mg/l Pimephales promela (fathead minnow) -96h
EC50 - Crustacea [1]	69.6 daphnia - 48h

LINALOOL (78-70-6)	
LC50 - Fish [1]	27.8 mg/l EC 50 (fish : rainbow trout) : - 96h
LC50 - Other aquatic organisms [1]	88.3 mg/l Desmodesmus subspicatus (green algae) - 96h
EC50 - Crustacea [1]	59 mg/l EC50 48h - Daphnia magna [mg/l]
NOEC chronic fish	3.5 mg/l Oncorhynchus mykiss (Rainbow trout)- 96h
NOEC chronic crustacea	25 mg/l daphnia - 48h

METHYL EUGENOL (93-15-2)	
LC50 - Fish [1]	6 mg/l Oncorhynchus mykiss (Rainbow trout) - 96h

12.2. Persistence and degradability

D-LIMONENE (5989-27-5)	
Persistence and degradability	May cause long-term adverse effects in the environment.

LINALOOL (78-70-6)	
Persistence and degradability	Readily biodegradable. Not established.
Biodegradation	100 % 13 DAYS- ZAHN-WELLENS TEST OECD N° 302 B

ESTRAGOLE (METHYL CHAVICOL) (140-67-0)	
Persistence and degradability	Not established.

METHYL EUGENOL (93-15-2)	
Persistence and degradability	May cause long-term adverse effects in the environment.

ANETHOL (4180-23-8)	
Persistence and degradability	May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

D-LIMONENE (5989-27-5)	
Bioaccumulative potential	Not established.

LINALOOL (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.97
Bioaccumulative potential	Not established.

ESTRAGOLE (METHYL CHAVICOL) (140-67-0)	
Partition coefficient n-octanol/water (Log Kow)	3.47
Bioaccumulative potential	Not established.

METHYL EUGENOL (93-15-2)	
Partition coefficient n-octanol/water (Log Kow)	3.03
Bioaccumulative potential	Not established.

ANETHOL (4180-23-8)	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR

14.1. UN number or ID number

UN-No. (ADR) : UN 1169

14.2. UN proper shipping name

Proper Shipping Name (ADR) : EXTRACTS, AROMATIC, LIQUID

Transport document description (ADR) : UN 1169 EXTRACTS, AROMATIC, LIQUID, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3

Danger labels (ADR) : 3

:

14.4. Packing group

Packing group (ADR) : III

14.5. Environmental hazards

Dangerous for the environment : Yes

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1

Special provisions (ADR) : 601, 640E

Limited quantities (ADR) : 5l

Excepted quantities (ADR) : E1

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

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T2

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

Transport category (ADR) : 3

Special provisions for carriage - Packages (ADR) : V12

Special provisions for carriage - Operation (ADR) : S2

Hazard identification number (Kemler No.) : 30

Orange plates :

Tunnel restriction code (ADR) : D/E

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3.	RAVENSARA ANISATA OIL	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008
28.	RAVENSARA ANISATA OIL	Substances which are classified as carcinogen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 1 or Appendix 2, respectively.

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
29.	RAVENSARA ANISATA OIL	Substances which are classified as germ cell mutagen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 3 or Appendix 4, respectively.
40.	RAVENSARA ANISATA OIL	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.

RAVENSARA ANISATA OIL is not on the REACH Candidate List
RAVENSARA ANISATA OIL is not on the REACH Annex XIV List
RAVENSARA ANISATA 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.
RAVENSARA ANISATA 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

Germany

Water hazard class (WGK) : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)

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

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

Abbreviations and acronyms	
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
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 (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
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Muta. 2	Germ cell mutagenicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
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.

The classification complies with : ATP 12

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.