

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

1.1. Product identifier

Product form	: Substance
Substance name	: Geranium Organic Essential Oil, Egypt
EC-No.	: 290-140-0
CAS-No.	: 90082-51-2
Product code	: 10194_EGY
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, Professional use
Function or use category	: Cosmetics

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SIRIUS SAS
 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
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

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

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS09

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H319 - Causes serious eye irritation.
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP)

: 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).
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P391 - Collect spillage.

2.3. Other hazards

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

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : Geranium Organic Essential Oil, Egypt
CAS-No. : 90082-51-2
EC-No. : 290-140-0

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Citronellol *	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	25 – 50	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Geraniol *	CAS-No.: 106-24-1 EC-No.: 203-377-1 EC Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49	10 – 20	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 – 10	Skin Sens. 1B, H317
Citronellyl formate	CAS-No.: 105-85-1 EC-No.: 203-338-9	1 – 10	Skin Irrit. 2, H315 Skin Sens. 1B, H317
Isomenthone	CAS-No.: 491-07-6 EC-No.: 207-727-4	1 – 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332
Geranyl formiate	CAS-No.: 105-86-2 EC-No.: 203-339-4	1 – 10	Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Skin Sens. 1B, H317
Menthone	CAS-No.: 89-80-5 EC-No.: 201-941-1	1 – 5	Flam. Liq. 3, H226 Aquatic Chronic 3, H412
Beta Caryophyllene	CAS-No.: 87-44-5 EC-No.: 201-746-1	1 – 5	Skin Sens. 1B, H317 Asp. Tox. 1, H304
Cis rose oxyde	CAS-No.: 3033-23-6 EC-No.: 221-217-9	0.1 – 5	Eye Irrit. 2, H319 Repr. 2, H361 Skin Irrit. 2, H315
Beta Eudesmol	CAS-No.: 473-15-4	0.1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319
(Z) Oxyde de Rose	CAS-No.: 3033-23-6 EC-No.: 221-217-9	0.1 – 5	Eye Irrit. 2, H319 Repr. 2, H361 Skin Irrit. 2, H315
Geranyl acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5	< 5	Skin Sens. 1B, H317 Skin Irrit. 2, H315 Aquatic Chronic 3, H412
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7 REACH-no: 01-2119983244-33	0.1 – 5	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Citronellyl butyrate	CAS-No.: 141-16-2 EC-No.: 205-463-4	0.1 – 5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1B, H317
Citral (neral + geranial) *	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	0.1 – 1	Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 2, H411
Caryophyllene oxide	CAS-No.: 1139-30-6 EC-No.: 214-519-7	0.1 – 1	Aquatic Chronic 2, H411

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Limonene	CAS-No.: 138-86-3 EC-No.: 227-813-5 EC Index-No.: 601-096-00-2 REACH-no: 01-2119529223-47	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Citronellyl acetate	CAS-No.: 150-84-5 EC-No.: 205-775-0	0.1 – 1	Aquatic Chronic 2, H411 Skin Irrit. 2, H315
Alpha terpineol	CAS-No.: 98-55-5 EC-No.: 202-680-6	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Alpha pinene	CAS-No.: 80-56-8 EC-No.: 201-291-9 REACH-no: 01-2119519223-49	0.1 – 1	Asp. Tox. 1, H304 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Rose oxyde	CAS-No.: 16409-43-1 EC-No.: 240-457-5	0.1 – 1	Eye Irrit. 2, H319 Repr. 2, H361 Skin Irrit. 2, H315
Citronellal	CAS-No.: 106-23-0 EC-No.: 203-376-6	0.1 – 1	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Myrcene	CAS-No.: 123-35-3 EC-No.: 204-622-5	< 1	Asp. Tox. 1, H304 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Flam. Liq. 3, H226 Skin Irrit. 2, H315
Methyl heptenone	CAS-No.: 409-02-9 EC-No.: 206-990-2	< 1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1A, H317
Citronellyl tiglate	CAS-No.: 24717-85-9 EC-No.: 246-426-2	0.1 – 1	Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10) Skin Sens. 1B, H317
Terpenyl acetate	CAS-No.: 80-26-2 EC-No.: 201-265-7	0.1 – 1	Aquatic Chronic 2, H411
Beta Pinene	CAS-No.: 127-91-3 EC-No.: 204-872-5	< 1	Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317
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
Paracymene	CAS-No.: 99-87-6 EC-No.: 202-796-7 EC Index-No.: 601-094-00-1	< 1	Repr. 2, H361 Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 2, H411 Acute Tox. 3 (Inhalation), H331
Trans linalool oxide	CAS-No.: 34995-77-2 EC-No.: 252-312-3	0.1 – 1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
Beta Phellandrene	CAS-No.: 555-10-2 EC-No.: 209-081-9	< 1	Asp. Tox. 1, H304 Flam. Liq. 3, H226

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Carvone	CAS-No.: 2244-16-8 EC-No.: 218-827-2 EC Index-No.: 606-148-00-8	0.1 – 1	Skin Sens. 1B, H317
Isopulegol	CAS-No.: 89-79-2 EC-No.: 201-940-6	0.1 – 1	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Irrit. 2, H315
Alpha Phellandrene	CAS-No.: 99-83-2 EC-No.: 202-792-5	< 0.1	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Chronic 1, H410 Aquatic Acute 1, H400
6-Methyl-5-Heptene-2-One	CAS-No.: 110-93-0 EC-No.: 203-816-7	< 0.1	Flam. Liq. 3, H226
Methyl-6-hepten-5-one 2	CAS-No.: 110-93-0 EC-No.: 203-816-7	< 0.1	Flam. Liq. 3, H226
Sabinene	CAS-No.: 3387-41-5 EC-No.: 222-212-4	< 0.1	Acute Tox. 4 (Oral), H302
Methyl-5-hepten-5-one 2	CAS-No.: 110-93-0 EC-No.: 203-816-7	< 0.1	Flam. Liq. 3, H226

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

3.2. Mixtures

Not established.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

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

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
Methods for cleaning up	: Take up liquid spill into absorbent material.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Wash contaminated clothing before reuse. 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 in a well-ventilated place. Keep cool.
--------------------	--

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

Limonene (138-86-3)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	28 mg/m ³
AGW (OEL C)	112 mg/m ³
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	110 mg/m ³
TGG-15min (OEL STEL)	0 mg/m ³

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

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear yellow to greenish yellow.
Appearance	: Clear.
Odour	: sweet odour. Rosaceous, with a variable minty note/.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 86 °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	: 0.885 – 0.905
Relative vapour density at 20°C	: Not available
Particle characteristics	: 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 : 1.461 – 1.475

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.

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

Geranium Organic Essential Oil, Egypt (90082-51-2)

LD50 oral	4279 mg/kg bodyweight
-----------	-----------------------

LD50 dermal	2500 mg/kg bodyweight
-------------	-----------------------

(Z) Oxyde de Rose (3033-23-6)

LD50 oral	4300 mg/kg bodyweight
-----------	-----------------------

Alpha pinene (80-56-8)

LD50 oral	3700 mg/kg bodyweight
-----------	-----------------------

LD50 dermal	> 5000 mg/kg bodyweight
-------------	-------------------------

Alpha terpineol (98-55-5)

LD50 oral rat	4300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2900 - 5700
---------------	---

LD50 oral	4300 mg/kg bodyweight
-----------	-----------------------

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
-----------------	--

LD50 dermal rabbit	> 3000 mg/kg OECD 402
--------------------	-----------------------

Beta Pinene (127-91-3)

LD50 oral rat	300 – 2000 mg/kg OCDE 423
---------------	---------------------------

LD50 dermal rat	> 2000 mg/kg
-----------------	--------------

Carvone (2244-16-8)

LD50 oral	2500 mg/kg bodyweight
-----------	-----------------------

LD50 dermal	3800 mg/kg bodyweight
-------------	-----------------------

Cis Beta Ocimene (3338-55-4)

LD50 oral	5000 mg/kg bodyweight
-----------	-----------------------

Cis rose oxyde (3033-23-6)

LD50 oral	4300 mg/kg bodyweight
-----------	-----------------------

Citral (neral + geranial) * (5392-40-5)

LD50 oral rat	≈ 6800 mg/kg bodyweight Animal: rat
---------------	-------------------------------------

LD50 oral	4960 mg/kg bodyweight
-----------	-----------------------

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat
-----------------	-------------------------------------

Citronellal (106-23-0)

LD50 oral	2500 mg/kg bodyweight
-----------	-----------------------

LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat
-----------------	-------------------------------------

LD50 dermal rabbit	2500 – 5000 mg/kg bodyweight Animal: rabbit
--------------------	---

LD50 dermal	2500 mg/kg bodyweight
-------------	-----------------------

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Citronellol * (106-22-9)	
LD50 oral	3450 mg/kg bodyweight
LD50 dermal	2650 mg/kg bodyweight
Geraniol * (106-24-1)	
LD50 oral rat	3600 mg/kg bodyweight Animal: rat, 95% CL: 2840 - 4570
LD50 oral	2100 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
LD50 dermal	> 5000 mg/kg bodyweight
Isomenthone (491-07-6)	
LD50 oral	1690 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l/4h
Isopulegol (89-79-2)	
LD50 oral	940 mg/kg bodyweight
Limonene (138-86-3)	
LD50 oral	4400 mg/kg bodyweight
LD50 dermal rabbit	5000 mg/kg Source: National Library of Medicine/Hazardous Substances Data Bank
LD50 dermal	> 2000 mg/kg bodyweight
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
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
Menthone (89-80-5)	
LD50 oral	500 mg/kg bodyweight
Methyl heptenone (409-02-9)	
LD50 oral	1410 mg/kg bodyweight
Methyl-5-hepten-5-one 2 (110-93-0)	
LD50 oral	3570 mg/kg bodyweight
Methyl-6-hepten-5-one 2 (110-93-0)	
LD50 oral	3570 mg/kg bodyweight
Nerol (106-25-2)	
LD50 oral	4500 mg/kg bodyweight
LD50 dermal	> 5000 mg/kg bodyweight
Rose oxyde (16409-43-1)	
LD50 oral	4300 mg/kg bodyweight
Paracymene (99-87-6)	
LD50 oral	4750 mg/kg bodyweight
LC50 Inhalation - Rat (Vapours)	9.7 mg/l/4h
Trans linalool oxide (34995-77-2)	
LD50 oral	1140 mg/kg bodyweight
LD50 dermal	2500 mg/kg bodyweight

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Citral (neral + geranial) * (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), Remarks on results: other:Effect type: toxicity (migrated information)
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), Remarks on results: other:Effect type: toxicity (migrated information)
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), Remarks on results: other:
Reproductive toxicity	: Not classified
Alpha terpineol (98-55-5)	
NOAEL (animal/male, F0/P)	≥ 750 mg/kg OECD 422
NOAEL (animal/female, F0/P)	≥ 750 mg/kg OECD 422
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Alpha terpineol (98-55-5)	
NOAEL (oral, rat, 90 days)	≥ 314 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Citral (neral + geranial) * (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)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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)
Citronellol * (106-22-9)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:Specifications for the Conduct of Studies to Evaluate the Toxic and Carcinogenic Potential of Chemical, Biological, and Physical Agents in Laboratory Animals for the National Toxicology Program (NTP)
Geraniol * (106-24-1)	
NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:
Linalool * (78-70-6)	
LOAEL (dermal, rat/rabbit, 90 days)	Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Aspiration hazard	: Not classified

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Linalool * (78-70-6)	
Viscosity, kinematic	5.192 mm ² /s

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

Alpha pinene (80-56-8)	
LC50 - Fish [1]	0.28 mg/l
EC50 - Other aquatic organisms [1]	1.44 mg/l waterflea

Alpha terpineol (98-55-5)	
LC50 - Fish [1]	70 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	73 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	≈ 68 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	≈ 17 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Citral (neral + geranial) * (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 - Other aquatic organisms [1]	7 mg/l waterflea
EC50 - Other aquatic organisms [2]	5 mg/l
EC50 72h - Algae [1]	103.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

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)

Citronellol * (106-22-9)	
LC50 - Fish [1]	10 mg/l
EC50 - Crustacea [1]	17.48 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	17.48 mg/l waterflea
EC50 - Other aquatic organisms [2]	2.38 mg/l
EC50 72h - Algae [1]	2.4 mg/l Test organisms (species):

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 - Other aquatic organisms [1]	10.8 mg/l waterflea
EC50 - Other aquatic organisms [2]	13.1 mg/l

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Geraniol * (106-24-1)	
EC50 72h - Algae [1]	13.1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
Limonene (138-86-3)	
LC50 - Fish [1]	0.72 mg/l
EC50 - Crustacea [1]	17 mg/l Source: The ECOTOXicology database
EC50 - Other aquatic organisms [1]	0.36 mg/l waterflea
EC50 96h - Algae [1]	0.212 mg/l Source: Ecological Structure Activity Relationships
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)

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
Citral (neral + geranial) * (5392-40-5)	
Partition coefficient n-octanol/water (Log Pow)	2.8
Citronellol * (106-22-9)	
Partition coefficient n-octanol/water (Log Pow)	3.1
Geraniol * (106-24-1)	
Partition coefficient n-octanol/water (Log Pow)	3.5
Limonene (138-86-3)	
Partition coefficient n-octanol/water (Log Pow)	4.38
Linalool * (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.84
Nerol (106-25-2)	
Partition coefficient n-octanol/water (Log Pow)	3.47

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.






SECTION 14: Transport information

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

Geranium Organic Essential Oil, Egypt


Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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. (Citronellyl butyrate ; Geranyl formiate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate)	Environmentally hazardous substance, liquid, n.o.s. (Citronellyl butyrate ; Geranyl formiate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Citronellyl butyrate ; Geranyl formiate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellyl butyrate ; Geranyl formiate), 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
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)	: -
EAC code	: •3Z

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

14.7. Maritime transport in bulk according to IMO instruments

Not established.

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

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)

15.1.2. National regulations

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 3815).

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : The substance is not listed

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

: The substance is not listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : The substance is not listed

Denmark

Class for fire hazard : Class III-1

Store unit : 50 liter

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

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
2.2	Precautionary statements (CLP)	Modified	

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

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
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. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2

Geranium Organic Essential Oil, Egypt

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
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.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

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.