EarthOil
By Univar Solutions

SAFETY DATA SHEET
ORGANIC ROSE GERANIUM BOURBON TYPE

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

1.1. Product identifier

Product name ORGANIC ROSE GERANIUM BOURBON TYPE

Product number 55870

CAS number 8000-46-2

EC number 290-140-0

FEMA 2508

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

Identified uses Cosmetics Fragrance Flavouring

1.3. Details of the supplier of the safety data sheet

Supplier

Univar
Aquarius House
6 Mid Point Business Park
Bradford
BD3 7AY
+44 1274 267300
+44 1274 267306
SDS.EMEA@univarsolutions.com

1.4. Emergency telephone number

Emergency telephone SGS - +32 (0)3 575 55 55 (24h)

Sds No. 55870

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Asp. Tox. 1 - H304

Environmental hazards Aquatic Chronic 3 - H412

2.2. Label elements

EC number 290-140-0

Hazard pictograms

Signal word Danger

ORGANIC ROSE GERANIUM BOURBON TYPE

Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P273 Avoid release to the environment. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
Contains	CITRONELLOL, GERANIOL, CARYOPHYLLENE, LINALOOL, CITRAL, PARA CYMENE, NEROL, 2-PINENE, GERANYL ACETATE, P-MENTHAN-3-ONE

2.3. Other hazards

This substance is not classified as PBT or vPvB according to current EU criteria.

SECTION 3: Composition/information on ingredients

3.1. Substances

CITRONELLOL **30-60%**

CAS number: 106-22-9 EC number: 203-375-0 REACH registration number: 01-2119453995-23-XXXX

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Skin Sens. 1 - H317

GERANIOL **10-30%**

CAS number: 106-24-1 EC number: 203-377-1 REACH registration number: 01-2119552430-49-XXXX

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Skin Sens. 1 - H317

CARYOPHYLLENE **1-5%**

CAS number: 87-44-5 EC number: 201-746-1 REACH registration number: 01-2120745237-53-XXXX

Classification
Skin Sens. 1 - H317
Asp. Tox. 1 - H304
Aquatic Chronic 4 - H413

ORGANIC ROSE GERANIUM BOURBON TYPE

LINALOOL **1-5%**

CAS number: 78-70-6 EC number: 201-134-4 REACH registration number: 01-2119474016-42-XXXX

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Skin Sens. 1B - H317

CITRAL **1-5%**

CAS number: 5392-40-5 EC number: 226-394-6 REACH registration number: 01-2119462829-23-XXXX

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Skin Sens. 1 - H317

PARA CYMENE **1-5%**

CAS number: 99-87-6 EC number: 202-796-7

Classification
Flam. Liq. 3 - H226
Asp. Tox. 1 - H304
Aquatic Chronic 2 - H411

NEROL **1-5%**

CAS number: 106-25-2 EC number: 203-378-7

Classification
Skin Irrit. 2 - H315
Eye Dam. 1 - H318
Skin Sens. 1B - H317

P-MENTHAN-3-ONE **1-5%**

CAS number: 10458-14-7 EC number: 233-944-9

Classification
Skin Irrit. 2 - H315
Skin Sens. 1 - H317

ORGANIC ROSE GERANIUM BOURBON TYPE

GERANYL ACETATE		**1-5%**
CAS number: 105-87-3	EC number: 203-341-5	REACH registration number: 01-2119973480-35-XXXX

Classification
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Aquatic Chronic 3 - H412

CITRONELLYL ACETATE		**1-5%**
CAS number: 150-84-5	EC number: 205-775-0	REACH registration number: 01-2119959860-27-XXXX

Classification
Skin Irrit. 2 - H315
Aquatic Chronic 2 - H411

1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL		**1-5%**
CAS number: 98-55-5	EC number: 202-680-6	REACH registration number: 01-2119980717-23-XXXX

Classification
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319

2-PINENE		**1-5%**
CAS number: 80-56-8	EC number: 201-291-9	
M factor (Acute) = 1	M factor (Chronic) = 1	

Classification
Flam. Liq. 3 - H226
Acute Tox. 4 - H302
Skin Irrit. 2 - H315
Skin Sens. 1 - H317
Asp. Tox. 1 - H304
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

Product name ORGANIC ROSE GERANIUM BOURBON TYPE

CAS number 8000-46-2

EC number 290-140-0

Composition comments The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if symptoms are severe or persist.

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Ingestion Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Get medical attention if symptoms are severe or persist.

Skin contact Take off immediately all contaminated clothing. Wash skin thoroughly with soap and water. Continue to rinse. Get medical attention if symptoms are severe or persist.

Eye contact Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if symptoms are severe or persist.

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

Ingestion May be fatal if swallowed and enters airways.

Skin contact Causes skin irritation. May cause an allergic skin reaction. Symptoms following overexposure may include the following: Irritation. Redness.

Eye contact Causes serious eye damage. Symptoms following overexposure may include the following: Pain or irritation. Profuse watering of the eyes. Redness.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation.

6.2. Environmental precautions

Environmental precautions Avoid the spillage or runoff entering drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with inert, damp, non-combustible material. Flush contaminated area with plenty of water. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation.

6.4. Reference to other sections

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Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. In case of insufficient ventilation, wear suitable respiratory equipment. Provide adequate ventilation.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid exposure to high temperatures or direct sunlight. Keep under Nitrogen Suitable container materials: Stainless steel. Glass.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

CITRONELLOL (CAS: 106-22-9)

DNEL

Workers - Dermal; Long term systemic effects: 45.8 mg/kg/day
Workers - Inhalation; Long term systemic effects: 161.6 mg/m³
Workers - Dermal; Long term local effects: 29.5 mg/cm²
Consumer - Dermal; Long term systemic effects: 27.5 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 47.8 mg/m³
Consumer - Oral; Long term systemic effects: 13.8 mg/kg/day
Consumer - Dermal; Long term local effects: 29.5 mg/cm²

PNEC

- Fresh water; 0.0024 mg/l
- marine water; 0.00024 mg/l
- STP; 580 mg/l
- Sediment (Freshwater); 0.0256 mg/l
- Sediment (Marinewater); 0.00256 mg/l
- Soil; 0.00371 mg/l

GERANIOL (CAS: 106-24-1)

DNEL

Workers - Inhalation; Long term systemic effects: 161.6 mg/l
Workers - Dermal; Long term systemic effects: 12.5 mg/kg
Consumer - Oral; Long term systemic effects: 13.75 mg/kg
Consumer - Inhalation; Long term systemic effects: 47.8 mg/m³
Consumer - Dermal; Long term systemic effects: 7.5 mg/kg

LINALOOL (CAS: 78-70-6)

Ingredient comments No exposure limits known for ingredient(s).

ORGANIC ROSE GERANIUM BOURBON TYPE

DNEL

Industry - Dermal; Short term systemic effects: 5 mg/kg/day
Industry - Inhalation; Short term systemic effects: 16.5 mg/m³
Industry - Dermal; Long term systemic effects: 2.5 mg/kg/day
Industry - Inhalation; Long term systemic effects: 2.8 mg/m³
Consumer - Dermal; Short term systemic effects: 2.5 mg/kg/day
Consumer - Inhalation; Short term systemic effects: 4.1 mg/m³
Consumer - Oral; Short term systemic effects: 1.2 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 0.7 mg/m³
Consumer - Oral; Long term systemic effects: 0.2 mg/kg/day
Consumer - Dermal; Short term local effects: 15 mg/cm²
Workers - Dermal; Long term local effects: 15 mg/cm²
Consumer - Dermal; Long term local effects: 15 mg/cm²

PNEC

- Fresh water; 0.2 mg/l
- marine water; 0.02 mg/l
- Sediment (Freshwater); 2.22 mg/kg
- Sediment (Marinewater); 0.222 mg/kg
- Soil; 0.327 mg/kg
- STP; > 10 mg/l

CITRAL (CAS: 5392-40-5)

DNEL

Workers - Inhalation; Long term systemic effects: 9 mg/m³
Workers - Dermal; Long term systemic effects: 1.7 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 2.7 mg/m³
Consumer - Dermal; Long term systemic effects: 1 mg/kg/day
Consumer - Oral; Long term systemic effects: 0.6 mg/kg/day

PNEC

Fresh water; 0.007 mg/l
marine water; 0.001 mg/l
STP; 1.6 mg/l
Sediment (Freshwater); 0.125 mg/kg
Sediment (Marinewater); 0.013 mg/kg
Soil; 0.021 mg/kg

CITRONELLYL ACETATE (CAS: 150-84-5)

DNEL

Workers - Inhalation; Long term systemic effects: 17 mg/m³
Workers - Dermal; Long term systemic effects: 4.8 mg/kg
Consumer - Inhalation; Long term systemic effects: 4.2 mg/m³
Consumer - Dermal; Long term systemic effects: 2.4 mg/kg
Consumer - Oral; Long term systemic effects: 2.4 mg/kg

PNEC

- Fresh water; 0.00348 mg/l
- marine water; 0.000348 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 0.851 mg/kg
- Sediment (Marinewater); 0.0851 mg/kg
- Soil; 0.168 mg/kg

GERANYL ACETATE (CAS: 105-87-3)

ORGANIC ROSE GERANIUM BOURBON TYPE

DNEL	Workers - Inhalation; Long term systemic effects: 62.59 mg/m³ Workers - Dermal; Long term systemic effects: 35.5 mg/kg Consumer - Inhalation; Long term systemic effects: 15.4 mg/m³ Consumer - Dermal; : 17.75 mg/kg Consumer - Oral; : 8.9 mg/kg
PNEC	- Fresh water; 3.72 mg/l - marine water; 0.372 mg/l - STP; 8 mg/l - Sediment (Freshwater); 0.442 mg/kg - Sediment (Marinewater); 0.0442 mg/kg - Soil; 0.0859 mg/kg

8.2. Exposure controls

Protective equipment

Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.
Hand protection	The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site.
Respiratory protection	Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/141/145/143/149

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green. or Dark. Green.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.
Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	64°C
Evaporation rate	No information available.

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Evaporation factor	No information available.
Flammability (solid, gas)	No information available.
Upper/lower flammability or explosive limits	No information available.
Other flammability	No information available.
Vapour pressure	No information available.
Vapour density	No information available.
Relative density	0.883 - 0.905 @ 20°C
Bulk density	No information available.
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	1.461 - 1.477
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No test data specifically related to reactivity available for this product or its ingredients.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Under normal conditions of storage and use, no hazardous reactions will occur.

10.4. Conditions to avoid

Conditions to avoid Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

ORGANIC ROSE GERANIUM BOURBON TYPE

Materials to avoid Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg) 26,315.79

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity - development No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Inhalation Gas or vapour in high concentrations may irritate the respiratory system.

Ingestion May be fatal if swallowed and enters airways.

Skin contact Causes skin irritation. May cause an allergic skin reaction. Symptoms following overexposure may include the following: Irritation. Redness.

Eye contact Causes serious eye irritation. Symptoms following overexposure may include the following: Pain or irritation. Profuse watering of the eyes. Redness.

Toxicological information on ingredients.

CITRONELLOL

ORGANIC ROSE GERANIUM BOURBON TYPE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,450.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 3450 mg/kg, Oral, Rat
ATE oral (mg/kg)	3,450.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	2,650.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} 2650 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	2,650.0

Skin corrosion/irritation

Skin corrosion/irritation	Irritating to skin. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation	Irritating to eyes. Rabbit

Skin sensitisation

Skin sensitisation	- Rabbit: Sensitising.

GERANIOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	3,600.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 3600 mg/kg, Oral, Rat
ATE oral (mg/kg)	3,600.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,001.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} > 5000 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,001.0

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation. Severe skin irritation. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage. Severe irritation. Cornea score: 3.1 - Rabbit

ORGANIC ROSE GERANIUM BOURBON TYPE

Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction. Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

CARYOPHYLLENE

Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.

Aspiration hazard

Aspiration hazard	May be fatal if swallowed and enters airways.

LINALOOL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,790.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 2790 mg/kg, Oral, Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,610.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} 5610 mg/kg, Dermal, Rabbit

Skin corrosion/irritation

Skin corrosion/irritation	Irritating to skin. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation	Slightly irritating. Rabbit

Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction. - Rabbit: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.

Carcinogenicity

Carcinogenicity	No information available.

Reproductive toxicity

Reproductive toxicity - fertility	No information available.

Specific target organ toxicity - single exposure

STOT - single exposure	No information available.

Specific target organ toxicity - repeated exposure

ORGANIC ROSE GERANIUM BOURBON TYPE

STOT - repeated exposure	NOAEL 117 mg/kg, Oral, Rat NOAEL 250 mg/kg, Dermal, Rat
Aspiration hazard	
Aspiration hazard	No information available.
Inhalation	May cause respiratory irritation.
Ingestion	Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.
Skin contact	Irritating to skin. May cause an allergic skin reaction.
Eye contact	Causes eye irritation.

CITRAL

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	6,800.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 6800 mg/kg, Oral, Rat
ATE oral (mg/kg)	6,800.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,250.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} 2250 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	2,250.0
Skin corrosion/irritation	
Animal data	Irritating. Rabbit
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.

PARA CYMENE

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	3,669.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 3669 mg/kg, Oral, Rat
ATE oral (mg/kg)	3,669.0
Aspiration hazard	
Aspiration hazard	May be fatal if swallowed and enters airways.

ORGANIC ROSE GERANIUM BOURBON TYPE

Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May be fatal if swallowed and enters airways.
Skin contact	Liquid may irritate skin. Repeated exposure may cause skin dryness or cracking.
Eye contact	Vapour or spray in the eyes may cause irritation and smarting.

NEROL

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	4,500.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 4500 mg/kg, Oral, Rat
ATE oral (mg/kg)	4,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,001.0
Species	Rabbit
Notes (dermal LD_{50})	LD_{50} > 5000 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,001.0

P-MENTHAN-3-ONE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	2,500.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 2500 mg/kg, Oral, Rat
ATE oral (mg/kg)	2,500.0

GERANYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	6,330.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 6330 mg/kg, Oral, Rat
ATE oral (mg/kg)	6,330.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,460.0
Species	Rabbit

ORGANIC ROSE GERANIUM BOURBON TYPE

Notes (dermal LD_{50})	LD_{50} 5460 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,460.0
Skin corrosion/irritation	
Skin corrosion/irritation	Irritating to skin. Rabbit
Skin sensitisation	
Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.

CITRONELLYL ACETATE

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	6,800.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 6800 mg/kg, Oral, Rat
ATE oral (mg/kg)	6,800.0
Acute toxicity - dermal	
Notes (dermal LD_{50})	LD_{50} 2000 mg/kg, Dermal, Rabbit
Skin corrosion/irritation	
Skin corrosion/irritation	Irritating to skin. Rabbit
Skin sensitisation	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	4,300.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 4300 mg/kg, Oral, Rat
ATE oral (mg/kg)	4,300.0
Acute toxicity - dermal	
Notes (dermal LD_{50})	LD_{50} > 3000 mg/kg, Dermal, Rabbit
Skin corrosion/irritation	
Skin corrosion/irritation	Irritating to skin. Rabbit
Serious eye damage/irritation	
Serious eye damage/irritation	Irritating to eyes. Rabbit
Skin sensitisation	
Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.

ORGANIC ROSE GERANIUM BOURBON TYPE

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 314 mg/kg, Oral, Rat (90 days ; 7 days/week)

2-PINENE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	500.0
Species	Rat
Notes (oral LD_{50})	LD_{50} 3700 mg/kg, Oral, Rat
ATE oral (mg/kg)	500.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	5,000.0
Species	Rat
Notes (dermal LD_{50})	LD_{50} 5000 mg/kg, Dermal, Rat
ATE dermal (mg/kg)	5,000.0

Inhalation	May cause respiratory system irritation.
Ingestion	Harmful: may cause lung damage if swallowed.
Skin contact	May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.

SECTION 12: Ecological information

Ecotoxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

CARYOPHYLLENE

Ecotoxicity May cause long lasting harmful effects to aquatic life.

LINALOOL

Ecotoxicity The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

PARA CYMENE

Ecotoxicity Toxic to aquatic life with long lasting effects.

2-PINENE

Ecotoxicity The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

ORGANIC ROSE GERANIUM BOURBON TYPE

Toxicity Harmful to aquatic life with long lasting effects.

Ecological information on ingredients.

CITRONELLOL

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 14.6 mg/l,
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 17.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 2.4 mg/l, Algae

GERANIOL

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hour: 14 - 22 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hour: 10.8 mg/l, Daphnia magna OECD 202
Acute toxicity - aquatic plants	IC_{50}, 72 hour: 13.1 mg/l, Algae OECD 201

CARYOPHYLLENE

Toxicity May cause long lasting harmful effects to aquatic life.

LINALOOL

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 27.8 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 59 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 156.7 mg/l, Algae

CITRAL

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hours: 4.6 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 6.8 mg/l, Daphnia magna
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 103.8 mg/l, Algae

PARA CYMENE

Toxicity Toxic to aquatic life.

ORGANIC ROSE GERANIUM BOURBON TYPE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hour: 48 ppm, Fish
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hour: 6500 µg/l, Daphnia magna

GERANYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC50, 96 hours: 68.12 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 14.1 mg/l, Daphnia magna OECD 202
Acute toxicity - aquatic plants	IC_{50}, 72 hours: 3.72 mg/l, OECD 201 NOEC, 72 hour: 0.585 mg/l, Algae OECD 201

CITRONELLYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hour: 6.1 mg/l, Fish OECD 203

1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL

Acute aquatic toxicity

Acute toxicity - fish	LC_{50}, 96 hour: 70 mg/l, Fish OECD 203
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hour: 73 mg/l, Daphnia magna OECD 202
Acute toxicity - aquatic plants	EC_{50}, 72 hour: 68 mg/l, Algae OECD 201 Chronic, NOEC, 72 hour: 3.9 mg/l, Algae OECD 201

2-PINENE

Acute aquatic toxicity

LE(C)$_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - aquatic invertebrates	LC_{50}, 48 hour: 6.74 mg/l, Daphnia magna

Chronic aquatic toxicity

NOEC	0.01 < NOEC ≤ 0.1
Degradability	Non-rapidly degradable
M factor (Chronic)	1

12.2. Persistence and degradability

ORGANIC ROSE GERANIUM BOURBON TYPE

Persistence and degradability There are no data on the degradability of this product.

Ecological information on ingredients.

CITRONELLOL

Persistence and degradability	The substance is readily biodegradable.
Biodegradation	- Degradation 80 - 90%: 28 days OECD 301F

GERANIOL

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Degradation 90 - 100%: 28 day OECD 301A - Degradation 82%: 28 day OECD 301D

LINALOOL

Persistence and degradability	The product is readily biodegradable.
Biodegradation	The substance is readily biodegradable. - Degradation (%) 64.2%: 28 days OECD 301D

CITRAL

Persistence and degradability	The substance is readily biodegradable.
Biodegradation	- Degradation 85 - 95%: 28 days OECD 301C

PARA CYMENE

Persistence and degradability	There are no data on the degradability of this product.

GERANYL ACETATE

Persistence and degradability	The substance is readily biodegradable.
Biodegradation	- Degradation > 70%: 28 days OECD 301F

CITRONELLYL ACETATE

Persistence and degradability	The product is readily biodegradable.

1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL

ORGANIC ROSE GERANIUM BOURBON TYPE

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Degradation 80%: 28 day

2-PINENE

Persistence and degradability	The product is readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential	No data available on bioaccumulation.
Partition coefficient	No information available.

Ecological information on ingredients.

CITRONELLOL

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	log Pow: 3.41

GERANIOL

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	log Pow: 2.6

CARYOPHYLLENE

Bioaccumulative potential	Potentially bioaccumulating.
Partition coefficient	log Pow: 6.23

LINALOOL

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	log Kow: 2.7

CITRAL

Bioaccumulative potential	Bioaccumulation is unlikely. BCF: 89.72,
Partition coefficient	log Pow: 2.76

PARA CYMENE

Bioaccumulative potential	No data available on bioaccumulation.

GERANYL ACETATE

Bioaccumulative potential	Potentially bioaccumulating.
Partition coefficient	log Pow: 4.5

CITRONELLYL ACETATE

ORGANIC ROSE GERANIUM BOURBON TYPE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.9

1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 2.67

12.4. Mobility in soil

Mobility Insoluble in water.

Ecological information on ingredients.

LINALOOL

Mobility The product is insoluble in water.

PARA CYMENE

Mobility Not determined.

2-PINENE

Mobility The product is insoluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

Ecological information on ingredients.

LINALOOL

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

PARA CYMENE

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

LINALOOL

Other adverse effects Not determined.

PARA CYMENE

Other adverse effects No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

ORGANIC ROSE GERANIUM BOURBON TYPE

General information Do not puncture or incinerate, even when empty. Waste is classified as hazardous waste.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

SECTION 15: Regulatory information

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

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Commission Regulation (EU) No 2015/830 of 28 May 2015.
This product may impact SEVESO storage regulations.

Restrictions (Annex XVII Regulation 1907/2006) This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

ORGANIC ROSE GERANIUM BOURBON TYPE

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
CAS: Chemical Abstracts Service.
DNEL: Derived No Effect Level.
IATA: International Air Transport Association.
IMDG: International Maritime Dangerous Goods.
Kow: Octanol-water partition coefficient.
LC_{50}: Lethal Concentration to 50 % of a test population.
LD_{50}: Lethal Dose to 50% of a test population (Median Lethal Dose).
PBT: Persistent, Bioaccumulative and Toxic substance.
PNEC: Predicted No Effect Concentration.
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
vPvB: Very Persistent and Very Bioaccumulative.
IARC: International Agency for Research on Cancer.
MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
cATpE: Converted Acute Toxicity Point Estimate.
BCF: Bioconcentration Factor.
BOD: Biochemical Oxygen Demand.
EC_{50}: 50% of maximal Effective Concentration.
LOAEC: Lowest Observed Adverse Effect Concentration.
LOAEL: Lowest Observed Adverse Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
NOEC: No Observed Effect Concentration.
LOEC: Lowest Observed Effect Concentration.
DMEL: Derived Minimal Effect Level.
EL50: Exposure Limit 50
hPa: Hectopascal
LL50: Lethal Loading fifty
OECD: Organisation for Economic Co-operation and Development
POW: Octanol-water partition coefficient
SCBA: self-contained breathing apparatus
STP: Sewage Treatment Plant
VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

Acute Tox. = Acute toxicity
Aquatic Acute = Hazardous to the aquatic environment (acute)
Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Key literature references and sources for data

Supplier's information.

Revision comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision date

16/12/2020

ORGANIC ROSE GERANIUM BOURBON TYPE

Version number	2.000
Supersedes date	22/08/2018
SDS number	55870
SDS status	Approved.
Hazard statements in full	H226 Flammable liquid and vapour. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. 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.
Signature	Jitendra Panchal