



SAFETY DATA SHEET JUNIPERBERRY OIL

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

1.1. Product identifier

Product name	JUNIPERBERRY OIL
Product number	55578
Synonyms; trade names	JUNIPERBERRY OIL ORGANIC, JUNIPERBERRY ESSENTIAL OIL, JUNIPER (TWIGS AND BERRIES) ESSENTIAL OIL
REACH registration notes	If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration (1mT/year)
CAS number	8002-68-4
EC number	283-268-3

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

Identified uses	Cosmetics Food industry Aromatherapy Fragrance
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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
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1.4. Emergency telephone number

Emergency telephone	SGS - +32 (0)3 575 55 55 (24h)
Sds No.	55578

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

2.2. Label elements

EC number	283-268-3
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JUNIPERBERRY OIL

Hazard pictograms



Signal word

Danger

Hazard statements

H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.
 H304 May be fatal if swallowed and enters airways.
 H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.
 P261 Avoid breathing vapour/ spray.
 P273 Avoid release to the environment.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

2-PINENE, PIN-2-(10) ENE, MYRCENE, CARYOPHYLLENE, LIMONENE, PARA CYMENE, (1E,6E)-1-METHYL-5-METHYLIDENE-8-PROPAN-2-YLCYCLODECA-1,6-DIENE, P-MENTHA-1,4-DIENE, 5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE, p-MENTHA-1,4(8)-DIENE

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

2-PINENE		30-60%
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		

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PIN-2-(10) ENE			5-10%
CAS number: 127-91-3	EC number: 204-872-5		
M factor (Acute) = 1	M factor (Chronic) = 1		
Classification			
Flam. Liq. 3 - H226			
Skin Irrit. 2 - H315			
Skin Sens. 1B - H317			
Asp. Tox. 1 - H304			
Aquatic Acute 1 - H400			
Aquatic Chronic 1 - H410			

MYRCENE			5-10%
CAS number: 123-35-3	EC number: 204-622-5		
Classification			
Flam. Liq. 3 - H226			
Skin Irrit. 2 - H315			
Eye Irrit. 2 - H319			
Asp. Tox. 1 - H304			

CARYOPHYLLENE			5-10%
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			

LIMONENE			1-5%
CAS number: 138-86-3	EC number: 205-341-0		
M factor (Acute) = 1	M factor (Chronic) = 1		
Classification			
Flam. Liq. 3 - H226			
Skin Irrit. 2 - H315			
Skin Sens. 1 - H317			
Aquatic Acute 1 - H400			
Aquatic Chronic 1 - H410			

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PARA CYMENE			1-5%
CAS number: 99-87-6		EC number: 202-796-7	
Classification Flam. Liq. 3 - H226 Acute Tox. 3 - H331 Repr. 2 - H361 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411			
(1E,6E)-1-METHYL-5-METHYLIDENE-8-PROPAN-2-YLCYCLODECA-1,6-DIENE			1-5%
CAS number: 23986-74-5			
Classification Acute Tox. 4 - H302 Asp. Tox. 1 - H304			
P-MENTHA-1,4-DIENE			1-5%
CAS number: 99-85-4		EC number: 202-794-6	
Classification Flam. Liq. 3 - H226 Repr. 2 - H361d Asp. Tox. 1 - H304			
5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE			<1%
CAS number: 2867-05-2		EC number: 220-686-7	
Classification Flam. Liq. 3 - H226 Skin Sens. 1 - H317			
p-MENTHA-1,4(8)-DIENE			<1%
CAS number: 586-62-9		EC number: 209-578-0	REACH registration number: 01-2119982324-34-XXXX
M factor (Acute) = 1		M factor (Chronic) = 1	
Classification Flam. Liq. 3 - H226 Skin Sens. 1B - 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 JUNIPERBERRY OIL

JUNIPERBERRY OIL

REACH registration notes	If REACH registration numbers do not appear the substance is either exempt from registration, does not meet the minimum volume threshold for registration (1mT/year)
CAS number	8002-68-4
EC number	283-268-3
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.
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.
Eye contact	Causes serious eye irritation.

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

Notes for the doctor	Treat symptomatically. Contact specialist immediately poison treatment if large quantities have been ingested or inhaled
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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.
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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

JUNIPERBERRY OIL

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

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.

Storage class Flammable liquid storage.

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

LIMONENE (CAS: 138-86-3)

Ingredient comments	No exposure limits known for ingredient(s).
DNEL	Workers - Dermal; Short term : 222 µg/cm ² Workers - Inhalation; Long term : 33.3 mg/m ³ General population - Dermal; Short term : 111 µg/cm ² General population - Inhalation; Long term : 8.33 mg/m ³ General population - Oral; Long term : 4.76 mg/kg
PNEC	Fresh water; 5.4 µg/l marine water; 0.54 µg/l STP; 1.8 mg/l Sediment (Freshwater); 1.649 mg/kg/day Sediment (Marinewater); 0.165 mg/kg/day Soil; 0.328 mg/kg

JUNIPERBERRY OIL

p-MENTHA-1,4(8)-DIENE (CAS: 586-62-9)

DNEL

Workers - Inhalation; Long term systemic effects: 5.12 mg/m³
 Workers - Dermal; Long term systemic effects: 1.45 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 1.26 mg/m³
 Consumer - Dermal; Long term systemic effects: 0.73 mg/kg/day
 Consumer - Oral; Long term systemic effects: 0.73 mg/kg/day

PNEC

Fresh water; 5.2 µg/l
 marine water; 0.52 µg/l
 STP; 3 mg/l
 Sediment (Freshwater); 0.581 mg/kg
 Sediment (Marinewater); 58.1 mg/kg
 Soil; 113 µg/l

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	Colourless to pale yellow.
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	41°C Closed cup.

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Evaporation rate	No information available.
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	0.854 - 0.879 @ 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	1.474 - 1.484
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.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Under normal conditions of storage and use, no hazardous reactions will occur.
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10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid Oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Does not decompose when used and stored as recommended. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

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.

Eye contact

Causes serious eye irritation.

Toxicological information on ingredients.

2-PINENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 500.0

JUNIPERBERRY OIL

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 (LD₅₀ 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.

PIN-2-(10) ENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.0

Species	Rat
Notes (oral LD ₅₀)	LD ₅₀ 5000 mg/kg, Oral, Rat
ATE oral (mg/kg)	5,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.0

Species	Rabbit
Notes (dermal LD ₅₀)	LD ₅₀ 5000 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,000.0

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Inhalation	Irritating to respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Irritating to skin.
Eye contact	Irritating to eyes.

MYRCENE

JUNIPERBERRY OIL

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 5000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 5000 mg/kg, Dermal, Rabbit

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.

Toxicokinetics

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

LIMONENE

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

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.

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

JUNIPERBERRY OIL

Aspiration hazard	No information available.
Inhalation	Irritating to respiratory system. May cause damage to mucous membranes in nose, throat, lungs and bronchial system.
Ingestion	Liquid irritates mucous membranes and may cause abdominal pain if swallowed.
Skin contact	Irritating to skin. May cause an allergic skin reaction.
Eye contact	May cause temporary eye irritation.

PARA CYMENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,669.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 3669 mg/kg, Oral, Rat

ATE oral (mg/kg) 3,669.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 3.0

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

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.

(1E,6E)-1-METHYL-5-METHYLIDENE-8-PROPAN-2-YLCYCLODECA-1,6-DIENE

Acute toxicity - oral

ATE oral (mg/kg) 500.0

ALPHA-TERPINENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 680.0

Species Rat

ATE oral (mg/kg) 680.0

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

JUNIPERBERRY OIL

p-MENTHA-1,4(8)-DIENE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 3850 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rabbit

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.
Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

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

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,300.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 4300 mg/kg, Oral, Rat

ATE oral (mg/kg) 4,300.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 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.

Specific target organ toxicity - repeated exposure

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

SECTION 12: Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

2-PINENE

JUNIPERBERRY OIL

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

PIN-2-(10) ENE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

CARYOPHYLLENE

Ecotoxicity May cause long lasting harmful effects to aquatic life.

LIMONENE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

PARA CYMENE

Ecotoxicity Toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Very toxic to aquatic life.

Ecological information on ingredients.

2-PINENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - aquatic invertebrates LC₅₀, 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

PIN-2-(10) ENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - aquatic invertebrates LC₅₀, 48 hour: 2.2 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic) 1

CARYOPHYLLENE

Toxicity May cause long lasting harmful effects to aquatic life.

JUNIPERBERRY OIL

LIMONENE

Toxicity	Very toxic to aquatic organisms.
<u>Acute aquatic toxicity</u>	
LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.702 - 0.720 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 70 mg/l, Daphnia magna
Acute toxicity - aquatic plants	ErC ₅₀ , 72 hours: 8 mg/l, Algae
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.27 mg/l, Daphnia magna

PARA CYMENE

Toxicity	Toxic to aquatic life.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hour: 48 ppm, Fish
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hour: 6500 µg/l, Daphnia magna

ALPHA-TERPINENE

<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 1.48 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1.85 mg/l, Daphnia magna

p-MENTHA-1,4(8)-DIENE

<u>Acute aquatic toxicity</u>	
LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.72 - 6.104 mg/l, Fish
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hour: 5.184 mg/kg, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hour: 5.4 mg/l, Algae Chronic, NOEC, 72 hour: 3.47 mg/l, Algae
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1

JUNIPERBERRY OIL

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

12.2. Persistence and degradability

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

Ecological information on ingredients.

2-PINENE

Persistence and degradability	The product is readily biodegradable.
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PIN-2-(10) ENE

Persistence and degradability	The product is readily biodegradable.
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LIMONENE

Persistence and degradability	The product is not expected to be biodegradable.
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PARA CYMENE

Persistence and degradability	There are no data on the degradability of this product.
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p-MENTHA-1,4(8)-DIENE

Persistence and degradability	The product is readily biodegradable.
Biodegradation	- Degradation 72%: 28 day OECD 301D

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

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

12.3. Bioaccumulative potential

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

JUNIPERBERRY OIL

Ecological information on ingredients.

CARYOPHYLLENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 6.23

LIMONENE

Bioaccumulative potential BCF: 490 - 1460,

Partition coefficient log Pow: 4.59

PARA CYMENE

Bioaccumulative potential No data available on bioaccumulation.

p-MENTHA-1,4(8)-DIENE

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.7

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.

2-PINENE

Mobility The product is insoluble in water.

PIN-2-(10) ENE

Mobility The product is insoluble in water.

LIMONENE

Mobility The product is insoluble in water.

PARA CYMENE

Mobility Not determined.

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.

LIMONENE

JUNIPERBERRY OIL

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.

CARYOPHYLLENE

Other adverse effects

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

LIMONENE

Other adverse effects

No information available.

PARA CYMENE

Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information

Do not puncture or incinerate, even when empty. Empty containers or liners may retain some product residues and hence be potentially hazardous.

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

Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

UN No. (ADR/RID) 1197

UN No. (IMDG) 1197

UN No. (ICAO) 1197

UN No. (ADN) 1197

14.2. UN proper shipping name

Proper shipping name (ADR/RID) EXTRACTS, LIQUID

Proper shipping name (IMDG) EXTRACTS, LIQUID

Proper shipping name (ICAO) EXTRACTS, LIQUID

Proper shipping name (ADN) EXTRACTS, LIQUID

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14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	3
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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 No information required.

Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

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

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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

Seveso Directive - Control of major accident hazards P5c E1

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Korea - KECI

Not listed.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

SECTION 16: Other information

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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.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: 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.
 EC₅₀: 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

30/05/2023

Version number

3.000

Supersedes date

09/09/2021

SDS number

55578

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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. H319 Causes serious eye irritation. H361 Suspected of damaging fertility or the unborn child. H361d Suspected of damaging the unborn child. 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. H413 May cause long lasting harmful effects to aquatic life.
Signature	Jitendra Panchal

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