



SAFETY DATA SHEET GRAPEFRUIT OIL LOW FURANOCOUMARIN

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

1.1. Product identifier

Product name	GRAPEFRUIT OIL LOW FURANOCOUMARIN
Product number	55639
REACH registration number	01-2120119763-56-XXXX
CAS number	8016-20-4
EC number	289-904-6

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

Identified uses	Cosmetics Fragrance Personal Care
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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.	55639

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

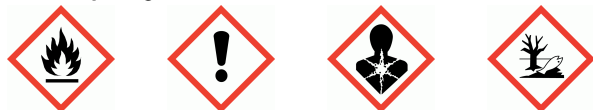
Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Chronic 2 - H411

2.2. Label elements

EC number	289-904-6
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Hazard pictograms



Signal word

Danger

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Hazard statements

H226 Flammable liquid and vapour.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H304 May be fatal if swallowed and enters airways.
 H411 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

(R)-P-MENTHA-1,8-DIENE, 2-PINENE, LINALOOL, BETA PINENE

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

(R)-P-MENTHA-1,8-DIENE			60-100%
CAS number: 5989-27-5	EC number: 227-813-5	REACH registration number: 01-2119529223-47-XXXX	
M factor (Acute) = 1	M factor (Chronic) = 1		
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1 - H317 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

β-MYRCENE			1-5%
CAS number: 123-35-3	EC number: 204-622-5		
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335			

GRAPEFRUIT OIL LOW FURANOCOUMARIN

2-PINENE	<1%
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

LINALOOL			<1%
CAS number: 78-70-6	EC number: 201-134-4	REACH registration number: 01-2119474016-42-XXXX	

Acute Toxicity Estimate (oral):
 LD₅₀ 2790 mg/kg, Oral, Rat
 Acute Toxicity Estimate (dermal):
 LD₅₀ 5610 mg/kg, Dermal, Rabbit

Classification

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

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

Classification

Flam. Liq. 3 - H226
 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	GRAPEFRUIT OIL LOW FURANOCOUMARIN
REACH registration number	01-2120119763-56-XXXX
CAS number	8016-20-4
EC number	289-904-6
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

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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.

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

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.
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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.
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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.
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6.4. Reference to other sections

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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

(R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5)

DNEL	Workers - Inhalation; Long term systemic effects: 66.7 mg/m ³ Workers - Dermal; Long term systemic effects: 9.5 mg/kg/day Consumer - Inhalation; Long term systemic effects: 16.6 mg/m ³ Consumer - Dermal; Long term systemic effects: 4.8 mg/kg/day Consumer - Oral; Long term systemic effects: 4.8 mg/kg/day
PNEC	Fresh water; 14 µg/l marine water; 1.4 µg/l STP; 1.8 mg/l Sediment (Freshwater); 3.85 mg/kg Sediment (Marinewater); 0.385 mg/kg Soil; 0.763 mg/kg

LINALOOL (CAS: 78-70-6)

Ingredient comments	No exposure limits known for ingredient(s).
DNEL	Industry - Dermal; Short term systemic effects: 5 mg/kg/day Industry - Inhalation; Short term systemic effects: 16.5 mg/m ³ Industry - Dermal; Long term systemic effects: 2.5 mg/kg/day Industry - Inhalation; Long term systemic effects: 2.8 mg/m ³ Consumer - Dermal; Short term systemic effects: 2.5 mg/kg/day Consumer - Inhalation; Short term systemic effects: 4.1 mg/m ³ Consumer - Oral; Short term systemic effects: 1.2 mg/kg/day Consumer - Inhalation; Long term systemic effects: 0.7 mg/m ³ Consumer - Oral; Long term systemic effects: 0.2 mg/kg/day Consumer - Dermal; Short term local effects: 15 mg/cm ² Workers - Dermal; Long term local effects: 15 mg/cm ² Consumer - Dermal; Long term local effects: 15 mg/cm ²

GRAPEFRUIT OIL LOW FURANOCOUMARIN**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

DECANAL (CAS: 112-31-2)**DNEL**

Industry - Inhalation; Long term systemic effects: 24.9 mg/m³
Industry - Dermal; Long term systemic effects: 7 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 6.1 mg/m³
Consumer - Dermal; Long term systemic effects: 3.5 mg/kg/day
Consumer - Oral; Long term systemic effects: 3.5 mg/kg/day

PNEC

- Fresh water; 0.00117 mg/l
- marine water; 0.000117 mg/l
- STP; 3.16 mg/l

OCTANAL (CAS: 124-13-0)**DNEL**

Workers - Inhalation; Long term systemic effects: 1.3 mg/m³
Workers - Dermal; Long term systemic effects: 0.37 mg/kg/day
Consumer - Inhalation; Long term systemic effects: 0.32 mg/m³
Consumer - Dermal; Long term systemic effects: 0.19 mg/kg/day
Consumer - Oral; Long term systemic effects: 0.19 mg/kg/day

PNEC

Fresh water; 0.00154 mg/l
marine water; 0.000154 mg/l
STP; 3.16 mg/l

GERANYL ACETATE (CAS: 105-87-3)**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

OCTANOL (CAS: 111-87-5)

GRAPEFRUIT OIL LOW FURANOCOUMARIN

DNEL

Workers - Dermal; Short term systemic effects: 125 mg/kg/day
 Workers - Inhalation; Short term systemic effects: 220 mg/m³
 Workers - Dermal; Long term systemic effects: 125 mg/kg/day
 Workers - Inhalation; Long term systemic effects: 220 mg/m³
 Consumer - Inhalation; Short term systemic effects: 65 mg/m³
 Consumer - Oral; Short term systemic effects: 75 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 75 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 65 mg/m³
 Consumer - Oral; Long term systemic effects: 75 mg/kg/day

PNEC

Fresh water; 0.2 mg/l
 marine water; 0.02 mg/l
 STP; 55.5 mg/l
 Sediment (Freshwater); 2.1 mg/kg
 Sediment (Marinewater); 0.21 mg/kg
 Soil; 1.6 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	Colourless. or Light (or pale). Yellow. Green.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.
Melting point	-74°C
Initial boiling point and range	176°C

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Flash point	51°C
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	< 3 mm Hg @ 14°C
Vapour density	4.70
Relative density	0.844 @ 20°C
Bulk density	No information available.
Solubility(ies)	Slightly soluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	237°C
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	No information available.
Particle size	No information available.
Molecular weight	136.23
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

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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

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 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.

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. Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact May cause temporary eye irritation.

Toxicological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Acute toxicity - oral

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Notes (oral LD ₅₀)	LD ₅₀ 4400 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD ₅₀)	LD ₅₀ 5000 mg/kg, Dermal, Rabbit
<u>Skin corrosion/irritation</u>	
Animal data	No information available.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	No information available.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	No information available.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	No information available.
<u>Carcinogenicity</u>	
IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	No information available.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	No information available.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	No information available.
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
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Inhalation	May cause respiratory system irritation.
Ingestion	Harmful: possible risk of irreversible effects if swallowed.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	May cause temporary eye irritation.

2-PINENE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD ₅₀ mg/kg)	500.0
Species	Rat
Notes (oral LD ₅₀)	LD ₅₀ 3700 mg/kg, Oral, Rat

GRAPEFRUIT OIL LOW FURANOCOUMARIN

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

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

Species Rat

Notes (dermal LD₅₀) LD₅₀ 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.

LINALOOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ 2,790.0 mg/kg)

Species Rat

Notes (oral LD₅₀) LD₅₀ 2790 mg/kg, Oral, Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ 5,610.0 mg/kg)

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 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.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL 117 mg/kg, Oral, Rat NOAEL 250 mg/kg, Dermal, Rat

Aspiration hazard

Aspiration hazard No information available.

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.

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.

BETA PINENE

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.

DECANAL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 33,320.0

Species Rat

ATE oral (mg/kg) 33,320.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,040.0

Species Rabbit

ATE dermal (mg/kg) 5,040.0

Skin corrosion/irritation

Animal data Erythema/eschar score: Well defined erythema (2).

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation. Conjunctivae score: 2 Rabbit

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation - Human: Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative. OECD 471
DNA damage and/or repair: Negative. OECD 474

Reproductive toxicity

Reproductive toxicity - fertility This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL (90d) 20,000 mg/kg, Oral, Rat

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.

OCTANAL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,617.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 4617 mg/kg, Oral, Rat

ATE oral (mg/kg) 4,617.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,207.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 5207 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 5,207.0

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 Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative., OECD 471
Gene mutation: Negative., OECD 476

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Fertility - Dose level: (3d/w) 300 mg/kg, Oral, Rat, Female Negative.

Reproductive toxicity - development Maternal toxicity:, Developmental toxicity: - Dose level:: (3d/w) 300 mg/kg, Oral, Rat, Female, Negative. Teratogenicity: - Dose level:: (9d) 1500 mg/kg, Oral, Rat, Female, Negative.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEL > 37 mg/kg, Oral, Rat

Aspiration hazard

Aspiration hazard No information available.

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

Ingestion Ingestion may cause severe irritation of the mouth, the oesophagus and the gastrointestinal tract.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye irritation.

L-P-MENTHA-1(6),8-DIEN-2-ONE

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 3800 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.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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
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
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Skin sensitisation

Skin sensitisation	Local Lymph Node Assay (LLNA) - Mouse: Sensitising.
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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
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Skin corrosion/irritation

Skin corrosion/irritation	Irritating to skin. Rabbit
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Serious eye damage/irritation

Serious eye damage/irritation	Irritating to eyes. Rabbit
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Skin sensitisation

Skin sensitisation	Guinea pig maximization test (GPMT) - Guinea pig: Not sensitising.
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Germ cell mutagenicity

Genotoxicity - in vitro	Bacterial reverse mutation test: Negative.
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Specific target organ toxicity - repeated exposure

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

OCTANOL

Acute toxicity - oral

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

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 - <4000 mg/kg, Dermal, Rabbit Calculation method.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Not determined.

Skin corrosion/irritation

Skin corrosion/irritation May be slightly irritating to skin. Redness. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation. OECD 405

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Human

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies.

Reproductive toxicity

Reproductive toxicity - fertility No evidence of reproductive toxicity in animal studies.

Specific target organ toxicity - single exposure

STOT - single exposure Not classified as a specific target organ toxicant after a single exposure.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Based on available data the classification criteria are not met.

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.

Inhalation

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

Ingestion

The product irritates mucous membranes and may cause abdominal discomfort if swallowed.

Skin contact

May be slightly irritating to skin. Redness.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Eye contact Causes serious eye irritation.

NONANAL

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

Serious eye damage/irritation No information available.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

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 No information available.

Inhalation Vapour may irritate respiratory system/lungs.

Ingestion Gastrointestinal symptoms, including upset stomach.

Skin contact May be slightly irritating to skin.

Eye contact May cause temporary eye irritation.

SECTION 12: Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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.

LINALOOL

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

BETA 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.

OCTANAL

Ecotoxicity Toxic to aquatic life with long lasting effects.

CARYOPHYLLENE

Ecotoxicity May cause long lasting harmful effects to aquatic life.

OCTANOL

Ecotoxicity Harmful to aquatic life with long lasting effects.

NONANAL

Ecotoxicity Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Toxic to aquatic life.

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.8 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 69.6 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic) 1

2-PINENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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

LINALOOL

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 27.8 mg/l, Fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 59 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 72 hours: 156.7 mg/l, Algae

BETA PINENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Chronic aquatic toxicity

M factor (Chronic) 1

DECANAL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1.45 mg/l, Freshwater fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.17 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 72 hours: 4.5 mg/l, Freshwater algae
OECD 201
Chronic, NOEC, 72 hour: 0.759 mg/l, Algae
OECD 201

OCTANAL

Toxicity Toxic to aquatic life.

Acute aquatic toxicity

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 1.54 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 72 hour: 2.9 mg/l, Algae
OECD 201

GRAPEFRUIT OIL LOW FURANOCOUMARIN

CARYOPHYLLENE

Toxicity May cause long lasting harmful effects to aquatic life.

GERANYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 68.12 mg/l, Fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 14.1 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants IC₅₀, 72 hours: 3.72 mg/l,
OECD 201
NOEC, 72 hour: 0.585 mg/l, Algae
OECD 201

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

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 70 mg/l, Fish
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 73 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 72 hour: 68 mg/l, Algae
OECD 201
Chronic, NOEC, 72 hour: 3.9 mg/l, Algae
OECD 201

OCTANOL

Toxicity Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, : > 10 - 100 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, : > 10 - 100 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, : > 10 - 100 mg/l, Desmodismus subspicatus
OECD 201

Acute toxicity - microorganisms EC₅₀, : > 100 mg/l, Activated sludge
OECD 209

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, : <= 1 mg/l, Daphnia magna

NONANAL

Toxicity Harmful to aquatic life.

12.2. Persistence and degradability

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

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Persistence and degradability Not readily biodegradable.

2-PINENE

Persistence and degradability The product is readily biodegradable.

LINALOOL

Persistence and degradability The product is readily biodegradable.

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

DECANAL

Biodegradation The substance is readily biodegradable.
- Degradation 82%: 28 days
OECD 301F

OCTANAL

Persistence and degradability Inherently biodegradable.

Biodegradation - Degradation 77%: 28 day
OECD 302C
- Degradation 46%: 28 day
OECD 310

GERANYL ACETATE

Persistence and degradability The substance is readily biodegradable.

Biodegradation - Degradation > 70%: 28 days
OECD 301F

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

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 80%: 28 day

OCTANOL

Persistence and degradability The product is readily biodegradable.

GRAPEFRUIT OIL LOW FURANOCOUMARIN**NONANAL****Persistence and
degradability**

There are no data on the degradability of this product.

12.3. Bioaccumulative potential**Bioaccumulative potential** No data available on bioaccumulation.**Partition coefficient** No information available.**Ecological information on ingredients.****(R)-P-MENTHA-1,8-DIENE****Bioaccumulative potential** Potentially bioaccumulating.**Partition coefficient** log Pow: 4.38**LINALOOL****Bioaccumulative potential** The product is not bioaccumulating.**Partition coefficient** log Kow: 2.7**DECANAL****Bioaccumulative potential** May accumulate in soil and water systems. BCF: 190,**Partition coefficient** log Pow: 3.8**OCTANAL****Bioaccumulative potential** Bioaccumulation is unlikely.**Partition coefficient** log Pow: 3.05**CARYOPHYLLENE****Bioaccumulative potential** Potentially bioaccumulating.**Partition coefficient** log Pow: 6.23**GERANYL ACETATE****Bioaccumulative potential** Potentially bioaccumulating.**Partition coefficient** log Pow: 4.5**1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL****Bioaccumulative potential** Bioaccumulation is unlikely.**Partition coefficient** log Pow: 2.67**OCTANOL****Bioaccumulative potential** Bioaccumulation is unlikely.**Partition coefficient** log Kow: 3.5

GRAPEFRUIT OIL LOW FURANOCOUMARIN

NONANAL

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient No information available.

12.4. Mobility in soil

Mobility The product is partly soluble in water and may spread in the aquatic environment.

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Mobility The product is insoluble in water.

2-PINENE

Mobility The product is insoluble in water.

LINALOOL

Mobility The product is insoluble in water.

BETA PINENE

Mobility The product is insoluble in water.

OCTANAL

Mobility No information available.

OCTANOL

Mobility Immiscible with water.

NONANAL

Mobility Insoluble in water.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

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

LINALOOL

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

OCTANAL

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

OCTANOL

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

NONANAL

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

(R)-P-MENTHA-1,8-DIENE

Other adverse effects Not determined.

LINALOOL

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.

DECANAL

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.

OCTANAL

Other adverse effects None known.

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.

OCTANOL

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.

NONANAL

GRAPEFRUIT OIL LOW FURANOCOUMARIN

Other adverse effects None known.

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

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

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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.

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
Seveso Directive - Control of major accident hazards	P5c E2

15.2. Chemical safety assessment

A chemical safety assessment has been carried out.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDL

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.

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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

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)

GRAPEFRUIT OIL LOW FURANOCOUMARIN

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	09/08/2021
SDS number	55639
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. H335 May cause respiratory 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.
Signature	Jitendra Panchal

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