



SAFETY DATA SHEET PETITGRAIN OIL ORGANIC

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

1.1. Product identifier

Product name	PETITGRAIN OIL ORGANIC
Product number	62124
Synonyms; trade names	PETITGRAIN OIL ORGANIC PY
CAS number	8014-17-3

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

Identified uses	Cosmetics 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.	62124

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 2 - H411

2.2. Label elements

Hazard pictograms



Signal word

Danger

PETITGRAIN OIL ORGANIC

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. H411 Toxic to aquatic life with long lasting effects.
Precautionary statements	P273 Avoid release to the environment. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor. 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	LINALYL ACETATE, LINALOOL, GERANYL ACETATE, GERANIOL, MYRCENE, NERYL ACETATE, PIN-2-(10) ENE, (R)-P-MENTHA-1,8-DIENE, NEROL, CARYOPHYLLENE, p-MENTHA-1,4(8)-DIENE, 3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE, 2-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

LINALYL ACETATE CAS number: 115-95-7 EC number: 204-116-4 REACH registration number: 01-2119454789-19-XXXX	30-60%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317	
LINALOOL CAS number: 78-70-6 EC number: 201-134-4 REACH registration number: 01-2119474016-42-XXXX	30-60%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1B - H317	
1-METHYL 4-ISO PROPYL-1-CYCLOHEXEN-8-OL CAS number: 98-55-5 EC number: 202-680-6 REACH registration number: 01-2119980717-23-XXXX	5-10%
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	

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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		
GERANIOL 1-5%		
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		
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 Asp. Tox. 1 - H304		
NERYL ACETATE 1-5%		
CAS number: 141-12-8	EC number: 205-459-2	
Classification Skin Irrit. 2 - H315 Skin Sens. 1B - H317 Aquatic Chronic 3 - H412		
PIN-2-(10) ENE 1-5%		
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		

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(R)-P-MENTHA-1,8-DIENE			1-5%
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			

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			

(Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE			<1%
CAS number: 3338-55-4	EC number: 222-081-3		
M factor (Acute) = 1			
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411			

CARYOPHYLLENE			<1%
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			

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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			

3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE			<1%
CAS number: 13466-78-9	EC number: 236-719-3		
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			

THUJ-4-(10)-ENE			<1%
CAS number: 3387-41-5	EC number: 222-212-4		
Classification Flam. Liq. 3 - H226			

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			

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P-MENTH-1-EN-4-OL			<1%
CAS number: 562-74-3	EC number: 209-235-5		
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319			
(E)-3,7-DIMETHYLOCTA-2,6-DIENAL			<0.1%
CAS number: 141-27-5	EC number: 205-476-5		
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1B - H317			
p-MENTHA-1,5-DIENE			<0.1%
CAS number: 99-83-2	EC number: 202-792-5		
Classification Flam. Liq. 3 - H226 Asp. Tox. 1 - H304			
EUCALYPTOL			<0.1%
CAS number: 470-82-6	EC number: 207-431-5	REACH registration number: 01-2119967772-24-XXXX	
Classification Flam. Liq. 3 - H226 Skin Sens. 1B - H317			
(Z)-3,7-DIMETHYLOCTA-2,6-DIENAL			<0.1%
CAS number: 106-26-3	EC number: 203-379-2		
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1B - H317			
2-(TETRAHYDRO-5-METHYL-5-VINYL-2-FURYL)PROPAN-2-OL			<0.1%
CAS number: 60047-17-8	EC number: 262-038-6		
Classification Acute Tox. 4 - H302 Eye Irrit. 2 - H319			

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P-MENTHA-1,4-DIENE		<0.1%
CAS number: 99-85-4	EC number: 202-794-6	
Classification Flam. Liq. 3 - H226 Repr. 2 - H361d Asp. Tox. 1 - H304		
(E)-3,7,11-TRIMETHYLDODECA-1,6,10-TRIEN-3-OL		<0.1%
CAS number: 40716-66-3	EC number: 255-053-4	
Classification Aquatic Chronic 2 - H411		
PARA CYMENE		<0.1%
CAS number: 99-87-6	EC number: 202-796-7	
Classification Flam. Liq. 3 - H226 Repr. 2 - H361 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411		
P MENTHA 1(7) 2 DIENE		<0.1%
CAS number: 555-10-2	EC number: 209-081-9	
Classification Flam. Liq. 3 - H226 Asp. Tox. 1 - H304		
2-[(2S,5S)-5-ETHENYL-5-METHYLOXOLAN-2-YL]PROPAN-2-OL		<0.1%
CAS number: 34995-77-2	EC number: 252-312-3	
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319		
ALPHA-TERPINENE		<0.1%
CAS number: 99-86-5	EC number: 202-795-1	
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Asp. Tox. 1 - H304 Aquatic Chronic 2 - H411		

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ETHANOL			<0.1%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43-XXXX	
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319			
6 METHYLHEPT 5 EN 2 ONE			<0.1%
CAS number: 110-93-0	EC number: 203-816-7		
Classification Flam. Liq. 3 - H226			
5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE			<0.1%
CAS number: 2867-05-2	EC number: 220-686-7		
Classification Flam. Liq. 3 - H226 Skin Sens. 1 - H317			
2,6,10-TRIMETHYLDODECA-2,6,9,11-TETRAENE			<0.1%
CAS number: 502-61-4	EC number: 207-948-6		
Classification Asp. Tox. 1 - H304			
CITRONELLYL ACETATE			<0.1%
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			
CIS-HEX-3-EN-1-OL			<0.1%
CAS number: 928-96-1	EC number: 213-192-8		
Classification Flam. Liq. 3 - H226 Eye Irrit. 2 - H319			
[1R-(1R*,4R*,6R*,10S*)]-4,12,12-TRIMETHYL-9-METHYLENE-5-OXATRICYCLO[8.2.0.04,6]DODECANE			<0.1%
CAS number: 1139-30-6	EC number: 214-519-7		
Classification Aquatic Chronic 2 - H411			

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CITRONELLOL			<0.1%
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			

(E)-7,11-DIMETHYL-3-METHYLENEDODECA-1,6,10-TRIENE			<0.1%
CAS number: 18794-84-8	EC number: 242-582-0		
Classification Asp. Tox. 1 - H304			

2,2-DIMETHYL-3-[(2E)-3-METHYL-2,4-PENTADIEN-1-YL]OXIRANE			<0.1%
CAS number: 28977-57-3			
Classification Skin Sens. 1B - H317			

ACETIC ACID ...%			<0.1%
CAS number: 64-19-7	EC number: 200-580-7	REACH registration number: 01-2119475328-30-XXXX	
Classification Flam. Liq. 3 - H226 Skin Corr. 1A - H314 Eye Dam. 1 - H318			

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE			<0.1%
CAS number: 7216-56-0	EC number: 230-603-6	REACH registration number: 01-2120763500-62-XXXX	
M factor (Acute) = 1		M factor (Chronic) = 1	
Classification Skin Irrit. 2 - H315 Skin Sens. 1B - H317 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

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HEXAN-1-OL <0.1%		
CAS number: 111-27-3	EC number: 203-852-3	REACH registration number: 01-2119487967-12-XXXX
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H302 Acute Tox. 4 - H312 Eye Irrit. 2 - H319		
CAMPHENE <0.1%		
CAS number: 79-92-5	EC number: 201-234-8	
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification Flam. Sol. 2 - H228 Eye Irrit. 2 - H319 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410		
METHYL N-METHYLANTHRANILATE <0.1%		
CAS number: 85-91-6	EC number: 201-642-6	
Classification Aquatic Chronic 3 - H412		
8-ISOPROPYL-1,3-DIMETHYLTRICYCLO[4.4.0.0^{2,7}]DEC-3-ENE <0.1%		
CAS number: 3856-25-5	EC number: 223-364-4	
Classification Asp. Tox. 1 - H304		

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

Product name	PETITGRAIN OIL ORGANIC
CAS number	8014-17-3
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.

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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 damage.

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

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.

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

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

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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.
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7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.
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SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

ACETIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 10 ppm 25 mg/m³

Short-term exposure limit (15-minute): WEL 20 ppm 50 mg/m³

WEL = Workplace Exposure Limit.

LINALYL ACETATE (CAS: 115-95-7)

DNEL	Industry - Dermal; Long term systemic effects: 2.5 mg/kg/day Industry - Inhalation; Long term systemic effects: 2.75 mg/m ³ Consumer - Inhalation; Long term systemic effects: 0.68 mg/m ³ Workers - Dermal; Short term local effects: 8 mg/cm ² Workers - Dermal; Long term local effects: 8 mg/cm ² Consumer - Dermal; Short term local effects: 8 mg/cm ² Consumer - Dermal; Long term local effects: 8 mg/cm ²
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PNEC	- Fresh water; 0.011 mg/l - marine water; 0.0011 mg/l - Sediment (Freshwater); 0.609 mg/kg - Sediment (Marinewater); 0.0609 mg/kg - Soil; 0.115 mg/kg - STP; 10 mg/l
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LINALOOL (CAS: 78-70-6)

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

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

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

DNEL	Workers - Inhalation; Long term systemic effects: 66.7 mg/m³ Workers - Dermal; Long term systemic effects: 9.5 mg/kg/day Consumer - Inhalation; Long term systemic effects: 16.6 mg/m³ Consumer - Dermal; Long term systemic effects: 4.8 mg/kg/day Consumer - Oral; Long term systemic effects: 4.8 mg/kg/day
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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

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

EUCALYPTOL (CAS: 470-82-6)

DNEL

Workers - Dermal; Long term systemic effects: 2 mg/kg
 Workers - Inhalation; Long term systemic effects: 7.05 mg/kg
 Consumer - Dermal; Long term systemic effects: 1 mg/kg/day
 Consumer - Inhalation; Long term systemic effects: 1.74 mg/m³

PNEC

STP; 10 mg/l
 Soil; 0.2 mg/kg
 Fresh water; 0.057 mg/l
 marine water; 0.0057 mg/l
 Sediment (Freshwater); 0.06732 mg/kg
 Sediment (Marinewater); 0.00673 mg/kg

ETHANOL (CAS: 64-17-5)

Ingredient comments

WEL = Workplace Exposure Limits

DNEL

Workers - Inhalation; Long term systemic effects: 950 mg/m³
 Workers - Inhalation; Short term local effects: 1900 mg/m³
 Workers - Dermal; Long term systemic effects: 343 mg/kg/day
 General population - Inhalation; Long term systemic effects: 114 mg/m³
 General population - Inhalation; Short term local effects: 950 mg/m³
 General population - Dermal; Long term systemic effects: 206 mg/kg/day
 General population - Oral; Long term systemic effects: 87 mg/kg/day

PNEC

- Fresh water; 0.96 mg/l
 - marine water; 0.79 mg/l
 - Intermittent release; 2.75 mg/l
 - STP; 580 mg/l
 - Sediment (Freshwater); 3.6 mg/kg
 - Sediment (Marinewater); 2.9 mg/kg
 - Soil; 0.63 mg/kg

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CITRONELLYL ACETATE (CAS: 150-84-5)

DNEL	Workers - Inhalation; Long term systemic effects: 17 mg/m ³
	Workers - Dermal; Long term systemic effects: 4.8 mg/kg
	Consumer - Inhalation; Long term systemic effects: 4.2 mg/m ³
	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

ACETIC ACID ...% (CAS: 64-19-7)

DNEL	Workers - Inhalation; Short term local effects: 25 mg/m ³
	Workers - Inhalation; Long term local effects: 25 mg/m ³
	Consumer - Inhalation; Short term local effects: 25 mg/m ³
	Consumer - Inhalation; Long term local effects: 25 mg/m ³
PNEC	- Fresh water; 3.058 mg/l
	- marine water; 0.3058 mg/l
	- Intermittent release; 30.58 mg/l
	- STP; 85 mg/l
	- Sediment (Freshwater); 11.36 mg/l
	- Sediment (Marinewater); 1.136 mg/kg
	- Soil; 0.47 mg/kg

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/m ³
	Workers - Dermal; Long term local effects: 29.5 mg/cm ²
	Consumer - Dermal; Long term systemic effects: 27.5 mg/kg/day
	Consumer - Inhalation; Long term systemic effects: 47.8 mg/m ³
	Consumer - Oral; Long term systemic effects: 13.8 mg/kg/day
	Consumer - Dermal; Long term local effects: 29.5 mg/cm ²
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

HEXAN-1-OL (CAS: 111-27-3)

PETITGRAIN OIL ORGANIC

DNEL

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

PNEC

- Fresh water; 2.6 mg/l
 - marine water; 0.256 mg/l
 - STP; 63.2 mg/l
 - Sediment (Freshwater); 5.08 mg/kg
 - Sediment (Marinewater); 0.5 mg/kg
 - Soil; 2.8 mg/kg

METHYL N-METHYLANTHRANILATE (CAS: 85-91-6)

DNEL

Workers - Inhalation; Long term systemic effects: 12 mg/m³
 Workers - Dermal; Long term systemic effects: 3.42 mg/kg/day
 General population - Inhalation; Long term systemic effects: 2.12 mg/m³
 General population - Oral; Long term systemic effects: 1.22 mg/kg/day
 General population - Dermal; Long term systemic effects: 1.22 mg/kg/day

PNEC

Fresh water; 12.5 µg/l
 marine water; 1.25 µg/l
 STP; 49.852 mg/l
 Sediment (Freshwater); 0.17 mg/kg
 Sediment (Marinewater); 17 µg/l
 Soil; 26.7 µg/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.

PETITGRAIN OIL ORGANIC

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	Yellow. Brownish.
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	75°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	No information available.
Vapour density	No information available.
Relative density	0.882 – 0.893 @ 20°C
Bulk density	No information available.
Solubility(ies)	No information available.
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	1.450 – 1.465
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.

PETITGRAIN OIL ORGANIC

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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10.5. Incompatible materials

Materials to avoid	Oxidising agents. Acids. Alkalis.
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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.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Skin corrosion/irritation

Skin corrosion/irritation	Causes skin irritation.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	May cause an allergic skin reaction.
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Germ cell mutagenicity

Genotoxicity - in vitro	No information available.
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Carcinogenicity

Carcinogenicity	No information available.
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Reproductive toxicity

Reproductive toxicity - fertility	No information available.
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Reproductive toxicity - development	No information available.
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Specific target organ toxicity - single exposure

STOT - single exposure	No information available.
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Specific target organ toxicity - repeated exposure

PETITGRAIN OIL ORGANIC

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 damage.

Toxicological information on ingredients.

LINALYL ACETATE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 9000 mg/kg, Oral, Rat

Acute toxicity - dermal

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

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.
Irritating to skin. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.
Irritating to eyes. Rabbit

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation - Guinea pig: Not sensitising.

Specific target organ toxicity - repeated exposure

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

LINALOOL

Acute toxicity - oral

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

Species Rat

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

Acute toxicity - dermal

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

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 5610 mg/kg, Dermal, Rabbit

Skin corrosion/irritation

PETITGRAIN OIL ORGANIC

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

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.

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

PETITGRAIN OIL ORGANIC

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)

GERANYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 6,330.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 6330 mg/kg, Oral, Rat

ATE oral (mg/kg) 6,330.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,460.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 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.

GERANIOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,600.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 3600 mg/kg, Oral, Rat

ATE oral (mg/kg) 3,600.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,001.0

Species Rabbit

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

PETITGRAIN OIL ORGANIC

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

Skin sensitisation

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

MYRCENE

Acute toxicity - oral

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

Acute toxicity - dermal

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

NERYL ACETATE

Acute toxicity - oral

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

Acute toxicity - dermal

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

Skin sensitisation

Summary May cause an allergic skin reaction.

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

PIN-2-(10) ENE

Acute toxicity - oral

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

Species Rat

Notes (oral LD₅₀) LD₅₀ 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 LD₅₀) LD₅₀ 5000 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 5,000.0

Aspiration hazard

PETITGRAIN OIL ORGANIC

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.

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

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 4400 mg/kg, Oral, Rat

Acute toxicity - dermal

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

Skin corrosion/irritation

Animal data 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

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

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

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

Inhalation May cause respiratory system irritation.

Ingestion Harmful: possible risk of irreversible effects if swallowed.

PETITGRAIN OIL ORGANIC

Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	May cause temporary eye irritation.

NEROL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,500.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 4500 mg/kg, Oral, Rat

ATE oral (mg/kg) 4,500.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,001.0

Species Rabbit

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

ATE dermal (mg/kg) 5,001.0

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.

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.

3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE

Acute toxicity - oral

PETITGRAIN OIL ORGANIC

Acute toxicity oral (LD ₅₀ mg/kg)	4,800.0
Species	Rat
Notes (oral LD ₅₀)	LD ₅₀ 4800 mg/kg, Oral, Rat
ATE oral (mg/kg)	4,800.0
<u>Acute toxicity - dermal</u>	
Notes (dermal LD ₅₀)	LD ₅₀ 1.5 mg/kg, Inhalation, Dust/Mist, Rat

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
ATE oral (mg/kg)	500.0
<u>Acute toxicity - dermal</u>	
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.

P-MENTH-1-EN-4-OL

<u>Acute toxicity - oral</u>	
ATE oral (mg/kg)	500.0

p-MENTHA-1,5-DIENE

Inhalation	May cause respiratory system irritation.
Ingestion	Swallowing concentrated chemical may cause severe internal injury.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritating to eyes.

EUCALYPTOL

PETITGRAIN OIL ORGANIC

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,480.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 2480 mg/kg, Oral, Rat

ATE oral (mg/kg) 2,480.0

Acute toxicity - dermal

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

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 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 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 May cause an allergic skin reaction.

Eye contact May cause temporary eye irritation.

PETITGRAIN OIL ORGANIC

2-(TETRAHYDRO-5-METHYL-5-VINYL-2-FURYL)PROPAN-2-OL

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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

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.

2-[(2S,5S)-5-ETHENYL-5-METHYLOXOLAN-2-YL]PROPAN-2-OL

Acute toxicity - oral

ATE oral (mg/kg) 500.0

ALPHA-TERPINENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,680.0

Species Rat

ATE oral (mg/kg) 1,680.0

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

ETHANOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,470.0

Species Rat

Acute toxicity - dermal

PETITGRAIN OIL ORGANIC

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rat

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 20.0

Species Rat

ATE inhalation (vapours mg/l) 20.0

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation Not sensitising.

Skin sensitisation

Skin sensitisation Not sensitising. Mouse OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Vapours in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.

Ingestion Ingestion of large amounts may cause unconsciousness. May cause nausea, headache, dizziness and intoxication.

Skin contact Prolonged contact may cause dryness of the skin.

Eye contact Causes serious eye irritation.

PETITGRAIN OIL ORGANIC

CITRONELLYL ACETATE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 6,800.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 6800 mg/kg, Oral, Rat

ATE oral (mg/kg) 6,800.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 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.

CIS-HEX-3-EN-1-OL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,700.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 4700 mg/kg, Oral, Rat

ATE oral (mg/kg) 4,700.0

Acute toxicity - dermal

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

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

Serious eye damage/irritation Causes eye irritation.

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

PETITGRAIN OIL ORGANIC

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 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 Slightly irritating.

Eye contact Causes serious eye irritation.

CITRONELLOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 3,450.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 3450 mg/kg, Oral, Rat

ATE oral (mg/kg) 3,450.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,650.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ 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.

ACETIC ACID ...%

PETITGRAIN OIL ORGANIC

Skin corrosion/irritation

Skin corrosion/irritation Corrosive to skin.

Animal data No information available.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation No information available.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

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

Aspiration hazard No information available.

Inhalation Vapour may irritate respiratory system/lungs.

Ingestion May cause burns in mucous membranes, throat, oesophagus and stomach.

Skin contact Causes severe burns.

Eye contact Causes serious eye damage.

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ > 2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) No information available.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

Skin corrosion/irritation

PETITGRAIN OIL ORGANIC

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction. - Mouse: Sensitising. OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met. OECD 471

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

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 May cause temporary eye irritation.

HEXAN-1-OL

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ >300-2000 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >1000-2000 mg/kg, Dermal, Rabbit

ATE dermal (mg/kg) 1,100.0

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LD₅₀ >21 mg/l, Inhalation, Rat

Skin corrosion/irritation

Animal data Slightly irritating. Rabbit OECD 404

PETITGRAIN OIL ORGANIC

Serious eye damage/irritation

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

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising. Draize test Guinea pig

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met. NOAEL 1127 mg/kg, Dermal, Rat

Aspiration hazard

Aspiration hazard No information available.

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

Ingestion Harmful if swallowed. Liquid irritates mucous membranes and may cause abdominal pain if swallowed.

Skin contact Harmful in contact with skin.

Eye contact Causes serious eye irritation.

CAMPHENE

Acute toxicity - oral

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

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ >2500 mg/kg, Dermal, Rabbit

Inhalation May cause respiratory system irritation.

Ingestion May cause stomach pain or vomiting.

Skin contact Slightly irritating.

Eye contact Irritating to eyes.

PETITGRAIN OIL ORGANIC**METHYL N-METHYLANTHRANILATE****Acute toxicity - oral****Notes (oral LD₅₀)** LD₅₀ 2250 mg/kg, Oral, Rat**Acute toxicity - dermal****Notes (dermal LD₅₀)** LD₅₀ 5000 mg/kg, Dermal, Rat**SECTION 12: Ecological information****Ecotoxicity** Toxic to aquatic life with long lasting effects.**Ecological information on ingredients.****LINALOOL****Ecotoxicity** The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.**PIN-2-(10) ENE****Ecotoxicity** Very toxic to aquatic life with long lasting effects.**(R)-P-MENTHA-1,8-DIENE****Ecotoxicity** Very toxic to aquatic life with long lasting effects.**CARYOPHYLLENE****Ecotoxicity** May cause long lasting harmful effects to aquatic life.**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.**p-MENTHA-1,5-DIENE****Ecotoxicity** The product contains a substance which is toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.**EUCALYPTOL****Ecotoxicity** The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.**PARA CYMENE****Ecotoxicity** Toxic to aquatic life with long lasting effects.**ETHANOL****Ecotoxicity** The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.**CIS-HEX-3-EN-1-OL**

PETITGRAIN OIL ORGANIC

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

ACETIC ACID ... %

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

HEXAN-1-OL

Ecotoxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

CAMPHENE

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity Toxic to aquatic life.

Ecological information on ingredients.

LINALYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: 7.9 mg/l, Freshwater fish
OECD 203

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: 15 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants

IC₅₀, 72 hours: 62 mg/l, Freshwater algae
OECD 201

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

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

Acute aquatic toxicity

PETITGRAIN OIL ORGANIC

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

GERANYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 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

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

PIN-2-(10) ENE

Acute aquatic toxicity

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hour: 2.2 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	1
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(R)-P-MENTHA-1,8-DIENE

Acute aquatic toxicity

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.8 mg/l, Pimephales promelas (Fat-head Minnow)

PETITGRAIN OIL ORGANIC

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

Chronic aquatic toxicity

M factor (Chronic) 1

(Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

CARYOPHYLLENE

Toxicity May cause long lasting harmful effects to aquatic life.

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

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.72 - 6.104 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 5.184 mg/kg, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hour: 5.4 mg/l, Algae
Chronic, NOEC, 72 hour: 3.47 mg/l, Algae

Chronic aquatic toxicity

M factor (Chronic) 1

3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 10 - 100 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

Acute toxicity - aquatic invertebrates LC₅₀, 48 hour: 6.74 mg/l, Daphnia magna

Chronic aquatic toxicity

PETITGRAIN OIL ORGANIC

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

EUCALYPTOL

Toxicity	Not considered toxic to fish.
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Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 102 mg/l, Fish
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PARA CYMENE

Toxicity	Toxic to aquatic life.
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Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hour: 48 ppm, Fish
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Acute toxicity - aquatic invertebrates	LC ₅₀ , 48 hour: 6500 µg/l, Daphnia magna
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ALPHA-TERPINENE

Acute aquatic toxicity

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

Toxicity	Not considered toxic to fish.
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Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 48 hours: > 100 mg/l, Leuciscus idus (Golden orfe) LC ₅₀ , 96 hour: 14200 mg/l, Pimephales promelas (Fat-head Minnow) LC ₅₀ , 96 hour: 13000 mg/l, Oncorhynchus mykiss (Rainbow trout) LC ₅₀ , 96 hour: 12000 - 16000 mg/l, Oryzias latipes (Red killifish)
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Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 12340 mg/l, Daphnia magna
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Acute toxicity - aquatic plants	EC ₅₀ , 48 hours: > 100 mg/l, Selenastrum capricornutum EC ₅₀ , 72 hour: 275 mg/l, (Chlorella vulgaris)
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Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	NOEC, 9 day: 9.6 mg/l, Daphnia magna
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CITRONELLYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hour: 6.1 mg/l, Fish OECD 203
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PETITGRAIN OIL ORGANIC

CIS-HEX-3-EN-1-OL

Toxicity Not considered toxic to fish.

CITRONELLOL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 14.6 mg/l,
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 17.5 mg/l, Daphnia magna
Acute toxicity - aquatic plants IC₅₀, 72 hours: 2.4 mg/l, Algae

ACETIC ACID ...%

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 75 mg/l, Lepomis macrochirus (Bluegill)
 LC₅₀, 96 hour: 79 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 65 mg/l, Daphnia magna

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Toxicity Very toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1
M factor (Acute) 1
Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.61 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic) 1

HEXAN-1-OL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >10-100 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: >100 mg/l, Daphnia magna
 OECD 202
Acute toxicity - aquatic plants EC₅₀, 48 hours: >10-100 mg/l, Pseudokirchneriella subcapitata
 OECD 201

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates NOEC, 21 days: >1-10 mg/l, Daphnia magna

CAMPHENE

PETITGRAIN OIL ORGANIC

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 0.1-1 mg/l, Fish

Chronic aquatic toxicity

M factor (Chronic)	1
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METHYL N-METHYLANTHRANILATE

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hour: 12.5 mg/l, Fish
Acute toxicity - aquatic plants	IC ₅₀ , 72 hour: 111.7 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.

LINALYL ACETATE

Biodegradation	The substance is readily biodegradable. - Degradation 70 - 80%: 28 days OECD 301F
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LINALOOL

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

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

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

GERANYL ACETATE

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

GERANIOL

Persistence and degradability	The product is readily biodegradable.
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PETITGRAIN OIL ORGANIC

Biodegradation

- Degradation 90 - 100%: 28 day
OECD 301A
- Degradation 82%: 28 day
OECD 301D

NERYL ACETATE

Persistence and degradability

The product is readily biodegradable.

PIN-2-(10) ENE

Persistence and degradability

The product is readily biodegradable.

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

Persistence and degradability

Not readily biodegradable.

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

Persistence and degradability

The product is readily biodegradable.

Biodegradation

- Degradation 72%: 28 day
OECD 301D

3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE

Persistence and degradability

The product is readily biodegradable.

2-PINENE

Persistence and degradability

The product is readily biodegradable.

EUCALYPTOL

Persistence and degradability

The substance is readily biodegradable.

PARA CYMENE

Persistence and degradability

There are no data on the degradability of this product.

ETHANOL

Persistence and degradability

The product is readily biodegradable. The product is degraded completely by photochemical oxidation.

Biodegradation

- Degradation 84%: 20 day
- Half-life : 1 - <10 days

PETITGRAIN OIL ORGANIC

CITRONELLYL ACETATE

Persistence and degradability

The product is readily biodegradable.

CIS-HEX-3-EN-1-OL

Persistence and degradability

There are no data on the degradability of this product.

CITRONELLOL

Persistence and degradability

The substance is readily biodegradable.

Biodegradation

- Degradation 80 - 90%: 28 days
OECD 301F

ACETIC ACID ...%

Persistence and degradability

The product is readily biodegradable.

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Persistence and degradability

There are no data on the degradability of this product.

Biodegradation

- Degradation 50%: 28 days
OECD 301D

HEXAN-1-OL

Persistence and degradability

The product is readily biodegradable.

Biodegradation

- Degradation >60: 30 days
OECD 301D

METHYL N-METHYLANTHRANILATE

Persistence and degradability

The product is not readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential

No data available on bioaccumulation.

Partition coefficient

No information available.

Ecological information on ingredients.

LINALYL ACETATE

Bioaccumulative potential

Bioaccumulation is unlikely.

Partition coefficient

log Pow: 3.9

LINALOOL

PETITGRAIN OIL ORGANIC

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient log Kow: 2.7

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

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 2.67

GERANYL ACETATE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.5

GERANIOL

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 2.6

NERYL ACETATE

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.67

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

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.38

CARYOPHYLLENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 6.23

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

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.7

EUCALYPTOL

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 2.97

PARA CYMENE

Bioaccumulative potential No data available on bioaccumulation.

ETHANOL

Bioaccumulative potential The product is not bioaccumulating.

PETITGRAIN OIL ORGANIC

Partition coefficient log Pow: - 0.31

CITRONELLYL ACETATE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.9

CIS-HEX-3-EN-1-OL

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 1.697

CITRONELLOL

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.41

ACETIC ACID ...%

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

Partition coefficient No information available.

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 4.71

HEXAN-1-OL

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 1.8

CAMPHENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.5

12.4. Mobility in soil

Mobility No information available.

Ecological information on ingredients.**LINALOOL**

Mobility The product is insoluble in water.

PIN-2-(10) ENE

Mobility The product is insoluble in water.

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

PETITGRAIN OIL ORGANIC

Mobility The product is insoluble in water.

2-PINENE

Mobility The product is insoluble in water.

p-MENTHA-1,5-DIENE

Mobility The product is insoluble in water.

EUCALYPTOL

Mobility The product is insoluble in water.

PARA CYMENE

Mobility Not determined.

ETHANOL

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces. The product is water-soluble and may spread in water systems.

CIS-HEX-3-EN-1-OL

Mobility No information available.

ACETIC ACID ...%

Mobility The product is soluble in water.

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Mobility No information available.

HEXAN-1-OL

Mobility No information available.

CAMPHENE

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.

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

PETITGRAIN OIL ORGANIC

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

EUCALYPTOL

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

PARA CYMENE

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

ETHANOL

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

CIS-HEX-3-EN-1-OL

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

ACETIC ACID ...%

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

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

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

HEXAN-1-OL

Results of PBT and vPvB assessment Based on available data the classification criteria are not met.

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

LINALOOL

Other adverse effects Not determined.

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

Other adverse effects Not determined.

EUCALYPTOL

Other adverse effects None known.

PARA CYMENE

PETITGRAIN OIL ORGANIC

Other adverse effects No information available.

ETHANOL

Other adverse effects The product contains volatile organic compounds (VOCs) which have a photochemical ozone creation potential.

CIS-HEX-3-EN-1-OL

Other adverse effects None known.

ACETIC ACID ...%

Cod 1.07

(E,Z)-2,6-DIMETHYLOCTA-2,4,6-TRIENE

Other adverse effects No information available.

HEXAN-1-OL

Other adverse effects Not determined.

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) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

UN No. (ADN) 3082

14.2. UN proper shipping name

Proper shipping name (ADR/RID) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS (Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE, (±)-1-METHYL-4-(1-METHYLVINYL)CYCLOHEXENE)

Proper shipping name (IMDG) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS (Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE, (±)-1-METHYL-4-(1-METHYLVINYL)CYCLOHEXENE)

Proper shipping name (ICAO) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS (Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE, (±)-1-METHYL-4-(1-METHYLVINYL)CYCLOHEXENE)

Proper shipping name (ADN) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS (Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE, (±)-1-METHYL-4-(1-METHYLVINYL)CYCLOHEXENE)

14.3. Transport hazard class(es)

PETITGRAIN OIL ORGANIC

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

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-A, S-F
ADR transport category	3
Emergency Action Code	•3Z
Hazard Identification Number (ADR/RID)	90
Tunnel restriction code	(-)

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

Transport in bulk according to Not applicable.

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

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.
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PETITGRAIN OIL ORGANIC

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 E2

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

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

PETITGRAIN OIL ORGANIC

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	07/07/2021
Version number	2.000
Supersedes date	20/04/2021
SDS number	62124
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H228 Flammable solid. H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. 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. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.
Signature	Jitendra Panchal

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



Exposure scenario

Industrial use of Ethanol as fuel source

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Industrial use of Ethanol as fuel source
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC7 Use of functional fluid at industrial site
<u>Worker</u>	
Process category	PROC16 Use of fuels

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Regional use tonnage: 30000 tonnes/year
Annual amount used in the EU: 300000 tonnes

Frequency and duration of use

Continuous.
Emission days: 300 days/year

Industrial use of Ethanol as fuel source

Environmental factors not influenced by risk management measures

Dilution Receiving water dilution (fresh or marine): 18000 m³/day

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Technical measures When not in use, keep containers tightly closed. Avoid discharge into drains and the aquatic environment.

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day
Removal efficiency (total): 90%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Sludge is disposed of or recovered.

Disposal method Contain and dispose of waste according to local regulations. Incineration, disposal or recycling at specific offsite provider.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Vapour pressure 5.73 kPa @ 20°C

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 240 cm².

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.053 mg/l, PNEC 580 mg/l, RCR 0.0000914
Fresh water: Exposure 0.0152 mg/l, PNEC 0.96 mg/l, RCR 0.000158
Soil: Exposure 0.0006 mg/kg, PNEC 0.63 mg/kg, RCR 0.000952
Marine water: Exposure 0.0016 mg/l, PNEC 0.79 mg/l, RCR 0.00203

Industrial use of Ethanol as fuel source

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker

Exposure Worker - inhalation: Exposure 9.6 mg/m³, DNEL 950 mg/m³, RCR 0.0101
Worker - dermal: Exposure 0.3 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.000875
Worker - all relevant routes: Exposure 1.7 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.00496
Worst case assumption



Exposure scenario

Professional use of Ethanol as fuel source

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Professional use of Ethanol as fuel source
Process scope	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.
Main sector	SU22 Professional uses
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
<u>Worker</u>	
Process category	PROC16 Use of fuels

2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Regional use tonnage: 380000 tonnes/year
Annual amount used in the EU: 3800000 tonnes

Frequency and duration of use

Continuous.
Emission days: 365 days/year

Professional use of Ethanol as fuel source

Environmental factors not influenced by risk management measures

Dilution Receiving water dilution (fresh or marine): 18000 m³/day

Risk management measures

Good practice Carefully handle the substance to minimise releases.

Technical measures When not in use, keep containers tightly closed. Avoid discharge into drains and the aquatic environment.

STP type Municipal STP.

STP details Assumed domestic sewage treatment plant flow: 2000 m³/day
Removal efficiency (total): 90%

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Sludge is disposed of or recovered.

Disposal method Contain and dispose of waste according to local regulations. Incineration, disposal or recycling at specific offsite provider.

2. Conditions of use affecting exposure (Workers - Health 1)

Product characteristics

Physical state Liquid

Vapour pressure 5.73 kPa @ 20°C

Concentration details Covers concentrations up to 100 %.

Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 240 cm².

Other given operational conditions affecting workers exposure

Setting Indoor.

Temperature Assumes activities are at ambient temperature (unless stated differently).

Technical conditions and measures at process level (source) to prevent release

Technical protective measures No specific risk management measure identified beyond those operational conditions stated.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

No specific measures identified.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.065 mg/l, PNEC 580 mg/l, RCR 0.000112
Fresh water: Exposure 0.0240 mg/l, PNEC 0.96 mg/l, RCR 0.025
Soil: Exposure 0.0273 mg/kg, PNEC 0.63 mg/kg, RCR 0.0433
Marine water: Exposure 0.0016 mg/l, PNEC 0.79 mg/l, RCR 0.00203

Professional use of Ethanol as fuel source

3. Exposure estimation (Health 1)

Assessment method ECETOC TRA v2.0 Worker

Exposure Worker - inhalation: Exposure 9.6 mg/m³, DNEL 950 mg/m³, RCR 0.0101
Worker - dermal: Exposure 0.3 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.000875
Worker - all relevant routes: Exposure 1.7 mg/kg/day, DNEL 343 mg/kg/day, RCR 0.00496
Worst case assumption



Exposure scenario

Consumer use of Ethanol as automotive fuel

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of Ethanol as automotive fuel
Process scope	Covers consumer uses of automotive fuels only.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Amounts used

Annual amount for wide dispersive uses: 3800000 tonnes

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
Other factors	Covers use at ambient temperatures.

Risk management measures

Consumer use of Ethanol as automotive fuel

Good practice	Carefully pour from containers.
Technical measures	Do not discharge into drains or watercourses or onto the ground.

Conditions and measures related to external treatment of waste for disposal

Waste treatment	This substance is consumed during use and no waste of the substance is generated.
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2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state	Liquid
Concentration details	Covers concentrations up to 100 %.

Amounts used

Amount per use: 100 litre

Frequency and duration of use

Covers frequency up to 1 day/week, , .
Application duration: <5 minutes

Other given operational conditions affecting Non-industrial exposure

Setting	Outdoor.
Temperature	Covers use at ambient temperatures.

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method	ECETOC TRA v2.0 Environment
Environmental exposure	STP: Exposure 0.065 mg/l, PNEC 580 mg/l, RCR 0.000112 Fresh water: Exposure 0.0240 mg/l, PNEC 0.96 mg/l, RCR 0.025 Soil: Exposure 0.0273 mg/kg, PNEC 0.63 mg/kg, RCR 0.0433 Marine water: Exposure 0.0034 mg/l, PNEC 0.79 mg/l, RCR 0.00430

3. Exposure estimation (Health 1)

Assessment method	ConsExpo v4.1
Exposure	Consumer - dermal: Exposure 35.00 mg/kg/day, DNEL 206 mg/kg/day, RCR 0.170 Consumer - inhalation: Exposure 1.54 mg/m³, DNEL 144 mg/m³, RCR 0.0107 Worst case assumption



Exposure scenario

Consumer use of Ethanol as domestic fuel

Identification

Product name	Ethanol
REACH registration number	01-2119457610-43-XXXX
CAS number	64-17-5
EC number	200-578-6
EU index number	603-002-00-5
Supplier	Univar Solutions UK Ltd Aquarius House 6 Mid Point Business Park Bradford BD3 7AY +44 1274 267300 +44 1274 267306 SDS.EMEA@univarsolutions.com

1. Title of exposure scenario

Main title	Consumer use of Ethanol as domestic fuel
Process scope	Covers consumer uses in liquid fuels.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Product characteristics

Physical state	Liquid
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Amounts used

Annual amount for wide dispersive uses: 10000 tonnes

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Receiving surface water flow: 18000 m ³ /day
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Consumer use of Ethanol as domestic fuel

Other factors Covers use at ambient temperatures.

Risk management measures

Good practice Carefully pour from containers.

Technical measures Do not discharge into drains or watercourses or onto the ground.

Conditions and measures related to external treatment of waste for disposal

Waste treatment This substance is consumed during use and no waste of the substance is generated.

2. Conditions of use affecting exposure (Non-industrial - Health 1)

Product characteristics

Physical state Liquid

Concentration details Covers concentrations up to 100 %.

Amounts used

Amount per use: 1 litre

Frequency and duration of use

Covers frequency up to 1 day/week, , .

Application duration: <5 minutes

Human factors not influenced by risk management

Potentially exposed body parts Palm of one hand. Covers skin contact area up to 210 cm².

Other given operational conditions affecting Non-industrial exposure

Setting Indoor/outdoor use.

Temperature Covers use at ambient temperatures.

Other given operational conditions affecting Non-industrial exposure

Consumer information Avoid splashing. If risk of splashing, wear safety goggles or face shield.

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method ECETOC TRA v2.0 Environment

Environmental exposure STP: Exposure 0.340 mg/l, PNEC 580 mg/l, RCR 0.000690
Fresh water: Exposure 0.0447 mg/l, PNEC 0.96 mg/l, RCR 0.0466
Soil: Exposure 0.0003 mg/kg, PNEC 0.63 mg/kg, RCR 0.000476
Marine water: Exposure 0.0044 mg/l, PNEC 0.79 mg/l, RCR 0.00557

3. Exposure estimation (Health 1)

Assessment method ConsExpo v4.1

Exposure Consumer - dermal: Exposure 70.00 mg/kg/day, DNEL 206 mg/kg/day, RCR 0.340
Consumer - inhalation: Exposure 0.81 mg/m³, DNEL 144 mg/m³, RCR 0.000563
Worst case assumption