



SAFETY DATA SHEET LAVENDER OIL BULGARIAN

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

1.1. Product identifier

Product name	LAVENDER OIL BULGARIAN
Product number	55609
Synonyms; trade names	LAVENDER OIL ORGANIC BG, LAVENDER OIL BG
REACH registration number	01-2120746582-51-XXXX
CAS number	90063-37-9
EC number	289-995-2
FEMA	2622

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.	55609

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Eye Irrit. 2 - H319 Skin Sens. 1 - H317 Asp. Tox. 1 - H304
Environmental hazards	Aquatic Chronic 3 - H412

2.2. Label elements

EC number	289-995-2
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Hazard pictograms



LAVENDER OIL BULGARIAN

Signal word	Danger
Hazard statements	H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. H304 May be fatal if swallowed and enters airways. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	P264 Wash contaminated skin thoroughly after handling. P273 Avoid release to the environment. P302+P352 IF ON SKIN: Wash with plenty of water. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 Dispose of contents/ container in accordance with national regulations.
Contains	LINALYL ACETATE, LINALOOL, (Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE, (E)-7,11-DIMETHYL-3-METHYLENEDODECA-1,6,10-TRIENE, CARYOPHYLLENE, EUCALYPTOL, 1-OCTEN-3-YL ACETATE, GERANYL ACETATE, (R)-P-MENTHA-1,8-DIENE, GERANIOL, NERYL ACETATE, 2-PINENE, 3,7,7-TRIMETHYLBICYCLO[4.1.0]HEPT-3-ENE, NEROL, 5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE, p-MENTHA-1,4(8)-DIENE

2.3. Other hazards

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

SECTION 3: Composition/information on ingredients

3.1. Substances

LINALYL ACETATE 30-60%		
CAS number: 115-95-7	EC number: 204-116-4	REACH registration number: 01-2119454789-19-XXXX
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317		
LINALOOL 10-30%		
CAS number: 78-70-6	EC number: 201-134-4	REACH registration number: 01-2119474016-42-XXXX
Acute Toxicity Estimate (oral): LD ₅₀ 2790 mg/kg, Oral, Rat Acute Toxicity Estimate (dermal): LD ₅₀ 5610 mg/kg, Dermal, Rabbit		
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1B - H317		

LAVENDER OIL BULGARIAN

(Z)-3,7-DIMETHYLOCTA-1,3,6,-TRIENE**5-10%**

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

(E)-7,11-DIMETHYL-3-METHYLENEDODECA-1,6,10-TRIENE**1-5%**

CAS number: 18794-84-8

EC number: 242-582-0

Classification

Asp. Tox. 1 - H304

CARYOPHYLLENE**1-5%**

CAS number: 87-44-5

EC number: 201-746-1

REACH registration number: 01-2120745237-53-XXXX

Classification

Skin Sens. 1 - H317

Asp. Tox. 1 - H304

Aquatic Chronic 4 - H413

P-MENTH-1-EN-4-OL**1-5%**

CAS number: 562-74-3

EC number: 209-235-5

Classification

Acute Tox. 4 - H302

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

OCTAN-3-ONE**1-5%**

CAS number: 106-68-3

EC number: 203-423-0

Classification

Flam. Liq. 3 - H226

Skin Irrit. 2 - H315

LAVENDER OIL BULGARIAN

EUCALYPTOL

<1%

CAS number: 470-82-6

EC number: 207-431-5

REACH registration number: 01-
2119967772-24-XXXX

Acute Toxicity Estimate (oral):

LD₅₀ 2480 mg/kg, Oral, Rat**Classification**

Flam. Liq. 3 - H226

Skin Sens. 1B - H317

1-OCTEN-3-YL ACETATE

<1%

CAS number: 2442-10-6

EC number: 219-474-7

Classification

Acute Tox. 4 - H302

Skin Sens. 1B - H317

GERANYL ACETATE

<1%

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

OCT-1-ENE-3-OL

<1%

CAS number: 3391-86-4

EC number: 222-226-0

M factor (Acute) = 1

Classification

Acute Tox. 4 - H302

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Aquatic Acute 1 - H400

LAVENDER OIL BULGARIAN

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

<1%

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

GERANIOL

<1%

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

NERYL ACETATE

<1%

CAS number: 141-12-8

EC number: 205-459-2

Classification

Skin Irrit. 2 - H315

Skin Sens. 1B - H317

Aquatic Chronic 3 - H412

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

LAVENDER OIL BULGARIAN

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

CAMPBOR

<1%

CAS number: 76-22-2

EC number: 200-945-0

REACH registration number: 01-
2119966156-31-XXXX**Classification**

Flam. Sol. 2 - H228

Acute Tox. 4 - H302

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Eye Dam. 1 - H318

STOT SE 2 - H371

CAMPHENE

<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

NEROL

<1%

CAS number: 106-25-2

EC number: 203-378-7

Classification

Skin Irrit. 2 - H315

Eye Dam. 1 - H318

Skin Sens. 1B - H317

LAVENDER OIL BULGARIAN

P-MENTHA-1,4-DIENE

<1%

CAS number: 99-85-4

EC number: 202-794-6

Classification

Flam. Liq. 3 - H226

Repr. 2 - H361d

Asp. Tox. 1 - H304

p-CYMENE

<1%

CAS number: 99-87-6

EC number: 202-796-7

REACH registration number: 01-2120807345-59-XXXX

Classification

Flam. Liq. 3 - H226

Acute Tox. 3 - H331

Repr. 2 - H361

Asp. Tox. 1 - H304

Aquatic Chronic 2 - H411

5-ISOPROPYL-2-METHYLBICYCLO[3.1.0]HEX-2-ENE

<1%

CAS number: 2867-05-2

EC number: 220-686-7

Classification

Flam. Liq. 3 - H226

Skin Sens. 1 - H317

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

<1%

CAS number: 586-62-9

EC number: 209-578-0

REACH registration number: 01-2119982324-34-XXXX

M factor (Acute) = 1

M factor (Chronic) = 1

Classification

Flam. Liq. 3 - H226

Skin Sens. 1B - H317

Asp. Tox. 1 - H304

Aquatic Acute 1 - H400

Aquatic Chronic 1 - H410

LAVENDER OIL BULGARIAN

BUTYL ACETATE -norm

<0.1%

CAS number: 123-86-4

EC number: 204-658-1

REACH registration number: 01-2119485493-29-XXXX

Acute Toxicity Estimate (oral):

LD₅₀ 10760 mg/kg, Oral, Rat

Acute Toxicity Estimate (dermal):

LD₅₀ > 14112 mg/kg, Dermal, Rabbit

Acute Toxicity Estimate (inhalation):

LC₅₀ > 4.9 mg/l, 4 hours, Vapour Rat

Classification

Flam. Liq. 3 - H226

STOT SE 3 - H336

TOLUENE

<0.1%

CAS number: 108-88-3

EC number: 203-625-9

REACH registration number: 01-2119471310-51-XXXX

Acute Toxicity Estimate (oral):

LD₅₀ 5580 mg/kg, Oral, Rat

Acute Toxicity Estimate (dermal):

LD₅₀ > 5000 mg/kg, Dermal, Rabbit

Acute Toxicity Estimate (inhalation):

LC₅₀ 28.1 mg/l, Inhalation, Rat

Classification

Flam. Liq. 2 - H225

Skin Irrit. 2 - H315

Repr. 2 - H361d

STOT SE 3 - H336

STOT RE 2 - H373

Asp. Tox. 1 - H304

Aquatic Chronic 3 - H412

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

Product name LAVENDER OIL BULGARIAN

REACH registration number 01-2120746582-51-XXXX

CAS number 90063-37-9

EC number 289-995-2

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.

LAVENDER OIL BULGARIAN

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	May cause an allergic skin reaction. Symptoms following overexposure may include the following: Irritation. Redness.
Eye contact	Causes serious eye irritation. Symptoms following overexposure may include the following: Pain or irritation. Profuse watering of the eyes. Redness.

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

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.
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LAVENDER OIL BULGARIAN

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.
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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

CAMPHOR

Long-term exposure limit (8-hour TWA): WEL 2 ppm 13 mg/m³

Short-term exposure limit (15-minute): WEL 3 ppm 19 mg/m³

BUTYL ACETATE -norm

Long-term exposure limit (8-hour TWA): WEL 150 ppm 724 mg/m³

Short-term exposure limit (15-minute): WEL 200 ppm 966 mg/m³

TOLUENE

Sk

Long-term exposure limit (8-hour TWA): WEL 50 ppm 191 mg/m³

Short-term exposure limit (15-minute): WEL 100 ppm 384 mg/m³

Sk = Can be absorbed through the skin.

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/m³
 Consumer - Inhalation; Long term systemic effects: 0.68 mg/m³
 Workers - Dermal; Short term local effects: 8 mg/cm²
 Workers - Dermal; Long term local effects: 8 mg/cm²
 Consumer - Dermal; Short term local effects: 8 mg/cm²
 Consumer - Dermal; Long term local effects: 8 mg/cm²

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

LINALOOL (CAS: 78-70-6)

Ingredient comments

No exposure limits known for ingredient(s).

LAVENDER OIL BULGARIAN

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

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

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

(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

LAVENDER OIL BULGARIAN

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

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

CAMPHOR (CAS: 76-22-2)

DNEL

Workers - Inhalation; Long term systemic effects: 17.632 mg/m³
Workers - Dermal; Long term systemic effects: 10 mg/kg/day
General population, Consumer - Inhalation; Long term systemic effects: 4.348 mg/m³
General population, Consumer - Dermal; Long term systemic effects: 5 mg/kg/day
General population, Consumer - Oral; Long term systemic effects: 5 mg/kg/day
General population - Inhalation; Long term systemic effects: 4.3478 mg/m³
General population - Oral; Long term systemic effects: 5 mg/kg/day
General population - Dermal; Long term systemic effects: 5 mg/kg/day
Workers - Dermal; Long term systemic effects: 10 mg/kg/day
Workers - Inhalation; Long term systemic effects: 17.6316 mg/m³

PNEC

Fresh water; 1.71 µg/l
marine water; 0.171 µg/l
STP; 1 mg/l
Sediment (Freshwater); 0.139 mg/kg
Sediment (Marinewater); 0.17 mg/kg
Soil; 0.013 µg/kg

p-CYMENE (CAS: 99-87-6)

PNEC

Fresh water; 0.004 mg/l
marine water; 0 mg/l
STP; 10 mg/l
Sediment (Freshwater); 1.52 mg/kg
Sediment (Marinewater); 0.152 mg/kg
Soil; 0.302 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

LAVENDER OIL BULGARIAN

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

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

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

BUTYL ACETATE -norm (CAS: 123-86-4)

Ingredient comments

WEL = Workplace Exposure Limits

DNEL

Workers - Inhalation; Long term systemic effects: 300 mg/m³
Workers - Inhalation; Short term systemic effects: 600 mg/m³
Workers - Inhalation; Long term local effects: 300 mg/m³
Workers - Inhalation; Short term local effects: 600 mg/m³
Workers - Dermal; Long term systemic effects: 11 mg/kg/day
Workers - Dermal; Short term systemic effects: 11 mg/kg/day
General population - Inhalation; Long term systemic effects: 35.7 mg/m³
General population - Inhalation; Short term systemic effects: 300 mg/m³
General population - Inhalation; Long term local effects: 35.7 mg/m³
General population - Inhalation; Short term local effects: 300 mg/m³
General population - Dermal; Long term systemic effects: 6 mg/kg/day
General population - Dermal; Short term systemic effects: 6 mg/kg/day
General population - Oral; Long term systemic effects: 2 mg/kg/day
General population - Oral; Short term systemic effects: 2 mg/kg/day

PNEC

- Fresh water; 0.18 mg/l
- marine water; 0.018 mg/l
- Intermittent release; 0.36 mg/l
- STP; 35.6 mg/l
- Sediment (Freshwater); 0.981 mg/kg
- Sediment (Marinewater); 0.0981 mg/kg
- Soil; 0.0903 mg/kg

TOLUENE (CAS: 108-88-3)

LAVENDER OIL BULGARIAN

DNEL

Industry - Inhalation; Short term systemic effects: 384 mg/m³
 Industry - Inhalation; Long term systemic effects: 192 mg/m³
 Industry - Dermal; Long term systemic effects: 384 mg/kg/day
 Industry - Inhalation; Short term local effects: 384 mg/m³
 Industry - Inhalation; Long term local effects: 192 mg/m³
 Consumer - Inhalation; Short term systemic effects: 226 mg/m³
 Consumer - Inhalation; Long term systemic effects: 56.5 mg/m³
 Consumer - Oral; Long term systemic effects: 8.13 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 226 mg/kg/day
 Consumer - Inhalation; Short term local effects: 226 mg/m³
 Consumer - Inhalation; Long term local effects: 56.5 mg/m³

PNEC

- Fresh water; 0.68 mg/l
 - marine water; 0.68 mg/l
 - Intermittent release; 0.68 mg/l
 - STP; 13.61 mg/l
 - Sediment (Freshwater); 16.39 mg/l
 - Sediment (Marinewater); 16.39 mg/kg
 - Soil; 2.89 mg/l

8.2. Exposure controls

Protective equipment



Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacture, 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	Light (or pale). Yellow. to Yellow.
Odour	Characteristic.
Odour threshold	No information available.
pH	No information available.

LAVENDER OIL BULGARIAN

Melting point	No information available.
Initial boiling point and range	No information available.
Flash point	69°C Tag closed cup.
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	0.879 - 0.888 @ 20°C
Bulk density	No information available.
Solubility(ies)	Insoluble in water.
Partition coefficient	No information available.
Auto-ignition temperature	No information available.
Decomposition Temperature	No information available.
Viscosity	No information available.
Explosive properties	Not considered to be explosive.
Explosive under the influence of a flame	No information available.
Oxidising properties	Does not meet the criteria for classification as oxidising.

9.2. Other information

Refractive index	1.459 - 1.463
Particle size	No information available.
Molecular weight	No information available.
Volatility	No information available.
Saturation concentration	No information available.
Critical temperature	No information available.
Volatile organic compound	No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

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

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

LAVENDER OIL BULGARIAN

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

10.4. Conditions to avoid

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

10.5. Incompatible materials

Materials to avoid No specific recommendations.

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

Acute toxicity - oral

ATE oral (mg/kg) 14,880.95

Skin corrosion/irritation

Skin corrosion/irritation No information available.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro No information available.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility No information available.

Reproductive toxicity - development No information available.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard May be fatal if swallowed and enters airways.

Inhalation

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

Ingestion

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

Skin contact

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

LAVENDER OIL BULGARIAN

Eye contact

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

Toxicological information on ingredients.

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

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.

LAVENDER OIL BULGARIAN

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.

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.

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.

P-MENTH-1-EN-4-OL

Acute toxicity - oral

ATE oral (mg/kg) 500.0

LAVENDER OIL BULGARIAN

EUCALYPTOL

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.

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.

LAVENDER OIL BULGARIAN

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.

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

Acute toxicity - oral

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

Species Rat

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

ATE oral (mg/kg) 4,300.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 3000 mg/kg, Dermal, Rabbit

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Irritating to eyes. Rabbit

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

Specific target organ toxicity - repeated exposure

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

1-OCTEN-3-YL ACETATE

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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

DL-BORNEOL

Acute toxicity - inhalation

ATE inhalation (dusts/mists mg/l) 1.5

LAVENDER OIL BULGARIAN

HEXYL ACETATE

Acute toxicity - oral

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

Species Rat

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

ATE oral (mg/kg) 5,001.0

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

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative.

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.

OCT-1-ENE-3-OL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 340.0

Species Rat

LAVENDER OIL BULGARIAN

ATE oral (mg/kg) 340.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 3,300.0

Species Rabbit

ATE dermal (mg/kg) 3,300.0

Acute toxicity - inhalation

ATE inhalation (gases ppm) 4,500.0

ATE inhalation (vapours mg/l) 11.0

ATE inhalation (dusts/mists mg/l) 1.5

(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.

LAVENDER OIL BULGARIAN

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.

Skin contact Irritating to skin. May cause sensitisation by skin contact.

Eye contact May cause temporary eye irritation.

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

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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

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.

NERYL ACETATE

Acute toxicity - oral

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

Acute toxicity - dermal

LAVENDER OIL BULGARIAN

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.

2-PINENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 500.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 3700 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

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

Species Rat

Notes (dermal 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.

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

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 4,800.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 4800 mg/kg, Oral, Rat

ATE oral (mg/kg) 4,800.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ 1.5 mg/kg, Inhalation, Dust/Mist, Rat

CAMPHOR

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,310.0

Species Rat

LAVENDER OIL BULGARIAN

ATE oral (mg/kg) 1,310.0

Acute toxicity - dermal

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

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Harmful if inhaled.

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation 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.

Specific target organ toxicity - single exposure

STOT - single exposure May cause damage to organs (Lungs) if inhaled.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard No information available.

Inhalation Harmful if inhaled. Dust in high concentrations may irritate the respiratory system.

Ingestion Harmful if swallowed.

Skin contact Causes skin irritation.

Eye contact Causes serious eye damage. Particles in the eyes may cause irritation and smarting.

Acute and chronic health hazards May cause damage to organs (Lungs) if inhaled.

Route of exposure Inhalation

Target organs Lungs

LAVENDER OIL BULGARIAN

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.

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

p-CYMENE

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 4750 mg/kg, Oral, Rat

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 3.0

Germ cell mutagenicity

Genotoxicity - in vitro Chromosome aberration: Negative. OECD 473

Reproductive toxicity

Reproductive toxicity - fertility Suspected of damaging fertility.

Reproductive toxicity - development Suspected of damaging the unborn child.

Aspiration hazard

LAVENDER OIL BULGARIAN

Aspiration hazard Aspiration hazard if swallowed. May be fatal if swallowed and enters airways.

1-METHOXYHEXANE

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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.

4-ISOPROPYLBENZALDEHYDE

Acute toxicity - oral

ATE oral (mg/kg) 500.0

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

Serious eye damage/irritation

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

LAVENDER OIL BULGARIAN

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.

(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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

Respiratory sensitisation

Respiratory sensitisation No information available.

LAVENDER OIL BULGARIAN

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.

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.

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

LAVENDER OIL BULGARIAN

Species	Rabbit
Notes (dermal LD₅₀)	LD ₅₀ 5000 mg/kg, Dermal, Rabbit
ATE dermal (mg/kg)	5,000.0
<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.
Inhalation	Irritating to respiratory system.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Irritating to skin.
Eye contact	Irritating to eyes.

ALPHA-TERPINENE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	680.0
Species	Rat
ATE oral (mg/kg)	680.0
<u>Aspiration hazard</u>	
Aspiration hazard	May be fatal if swallowed and enters airways.

4-ISOPROPYLBENZYL ALCOHOL

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

COUMARIN

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	500.0
Species	Rat
Notes (oral LD₅₀)	LD ₅₀ 500 mg/kg, Oral, Rat
ATE oral (mg/kg)	500.0

CIS-HEX-3-EN-1-OL

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	4,700.0
Species	Rat
Notes (oral LD₅₀)	LD ₅₀ 4700 mg/kg, Oral, Rat
ATE oral (mg/kg)	4,700.0

LAVENDER OIL BULGARIAN

Acute toxicity - dermal

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

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC₅₀ MAC: > 4.99 mg/l, 4 hour, Aerosol Rat OECD 436

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 Local Lymph Node Assay (LLNA) - Mouse: Not sensitising. OECD 429

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation, Mouse: Negative. OECD 476

Genotoxicity - in vivo 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 NOAEL (90d) 1250 ppm, Oral, Rat OECD 408

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.

BUTYL ACETATE -norm

Acute toxicity - oral

LAVENDER OIL BULGARIAN

Acute toxicity oral (LD₅₀ mg/kg) 10,760.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 10760 mg/kg, Oral, Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 14,112.0

Species Rabbit

Notes (dermal LD₅₀) LD₅₀ >14112 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LD₅₀ > 4.9 mg/l, 4 hours, Vapour Rat
LC₅₀ 23.4 mg/l, Inhalation, Vapour, Rat

Skin corrosion/irritation

Animal data Not irritating. Rabbit OECD 404

Serious eye damage/irritation

Serious eye damage/irritation Not irritating. Rabbit OECD 405

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

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

Germ cell mutagenicity

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

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 May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure NOAEC 2.4 mg/l, Inhalation, 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.

LAVENDER OIL BULGARIAN

Inhalation	Vapours irritate the respiratory system. May cause coughing and difficulties in breathing. Vapours have a narcotic effect. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting. Vapours may cause drowsiness and dizziness.
Ingestion	Gastrointestinal symptoms, including upset stomach. Nausea, vomiting.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	May cause temporary eye irritation.

TOLUENE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,580.0

Species Rat

ATE oral (mg/kg) 5,580.0

Acute toxicity - dermal

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

Species Rabbit

ATE dermal (mg/kg) 5,000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 28.1

Species Rat

ATE inhalation (vapours mg/l) 28.1

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin. Rabbit

Serious eye damage/irritation

Serious eye damage/irritation Slightly irritating. Rabbit

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro Gene mutation: Negative. Bacterial reverse mutation test: Negative.

Genotoxicity - in vivo Chromosome aberration: Negative.

Carcinogenicity

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

LAVENDER OIL BULGARIAN

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	- , Inhalation, Vapour, Rat Negative.
Reproductive toxicity - development	Suspected of damaging the unborn child. Teratogenicity: - : , Inhalation, Vapour, Rat Positive.

Specific target organ toxicity - single exposure

STOT - single exposure	May cause drowsiness or dizziness.
Target organs	Liver Kidneys Central nervous system Eyes

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	May cause damage to organs through prolonged or repeated exposure if inhaled. LOAEL (26 wk) 1.875 mg/l, Vapour, Inhalation, Rat
Target organs	Eyes Liver Kidneys Central nervous system

Aspiration hazard

Aspiration hazard	May be fatal if swallowed and enters airways.
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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.
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Inhalation	May cause damage to organs through prolonged or repeated exposure if inhaled. Vapours may cause drowsiness and dizziness.
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Ingestion	May be fatal if swallowed and enters airways.
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Skin contact	Irritating to skin.
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Eye contact	Irritating to eyes.
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Target organs	Liver Kidneys Central nervous system
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SECTION 12: Ecological information

Ecotoxicity	Harmful to aquatic life with long lasting effects.
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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.
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CARYOPHYLLENE

Ecotoxicity	May cause long lasting harmful effects to aquatic life.
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EUCALYPTOL

LAVENDER OIL BULGARIAN

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.

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

Ecotoxicity Very toxic to aquatic life with long lasting effects.

2-PINENE

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

CAMPHOR

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.

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.

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

Ecotoxicity Very toxic to aquatic life with long lasting effects.

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.

PIN-2-(10) ENE

Ecotoxicity Very toxic to aquatic life with long lasting effects.

CIS-HEX-3-EN-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.

BUTYL ACETATE -norm

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.

TOLUENE

LAVENDER OIL BULGARIAN

Ecotoxicity

Harmful to aquatic life with long lasting effects.

12.1. Toxicity

Toxicity

Harmful 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

(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.

EUCALYPTOL

Toxicity

Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: 102 mg/l, Fish

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

Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hour: 70 mg/l, Fish
OECD 203

LAVENDER OIL BULGARIAN

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

DL-BORNEOL

Acute aquatic toxicity

Acute toxicity - fish Chronic, NOEC, 21 day: 0.011 mg/l, Fish

Acute toxicity - aquatic plants Chronic, NOEC, 72 hour: 0.011 mg/l, Algae

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates Chronic, NOEC, 21 day: 0.011 mg/l, Daphnia magna

HEXYL ACETATE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 4.4 mg/l, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 9.7 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants EC₅₀, 72 hour: 12 mg/l, Algae
OECD 201
EC₅₀, 72 hour: 2.7 mg/l, Algae
OECD 201

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

OCT-1-ENE-3-OL

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 1.8 mg/l, Fish

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

Acute aquatic toxicity

LAVENDER OIL BULGARIAN

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)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 69.6 mg/l, Daphnia magna
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1

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

2-PINENE

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: 6.74 mg/l, Daphnia magna

Chronic aquatic toxicity

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

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

Acute aquatic toxicity

LE(C) ₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hour: 10 - 100 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic)	1
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CAMPHOR

Toxicity	Not considered toxic to fish.
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Acute aquatic toxicity

LAVENDER OIL BULGARIAN

Acute toxicity - fish LC₅₀, 96 hours: ~ 17 mg/l, Pimephales promelas (Fat-head Minnow)
LC₅₀, 96 hour: 33.25 mg/l, Fish

CAMPHENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

Acute toxicity - fish LC₅₀, 96 hours: 0.1-1 mg/l, Fish

Chronic aquatic toxicity

M factor (Chronic) 1

p-CYMENE

Toxicity Toxic to aquatic life with long lasting effects.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 48 mg/kg, Fish

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: 3.7 mg/l, Daphnia magna

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

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 EC₀, 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

LAVENDER OIL BULGARIAN

(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

PIN-2-(10) ENE

Acute aquatic toxicity

LE(C)₅₀ 0.1 < L(E)C₅₀ ≤ 1

M factor (Acute) 1

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

Chronic aquatic toxicity

M factor (Chronic) 1

ALPHA-TERPINENE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 1.48 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 1.85 mg/l, Daphnia magna

COUMARIN

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: 56 mg/l, Fish

CIS-HEX-3-EN-1-OL

Toxicity Not considered toxic to fish.

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hour: > 100 mg/l, Oncorhynchus mykiss (Rainbow trout)
OECD 203

Acute toxicity - aquatic invertebrates EC₅₀, 48 hour: > 100 mg/l, Daphnia magna
OECD 202

Acute toxicity - aquatic plants NOEC, 72 hour: 76 mg/l, Pseudokirchneriella subcapitata
OECD 201

BUTYL ACETATE -norm

Acute aquatic toxicity

LAVENDER OIL BULGARIAN

Acute toxicity - fish	LC ₅₀ , 96 hours: 18 mg/l, Pimephales promelas (Fat-head Minnow) OECD 203
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 44 mg/l, Daphnia magna
Acute toxicity - aquatic plants	NOEC, 72 hours: 200 mg/l, Desmodesmus subspicatus
Acute toxicity - microorganisms	IC ₅₀ , 40 hour: 356 mg/l,

TOLUENE

Toxicity	Harmful to aquatic life.
<u>Acute aquatic toxicity</u>	
Acute toxicity - fish	LC ₅₀ , 96 hours: 5.5 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 3.78 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 10 mg/l,
Acute toxicity - microorganisms	EC ₅₀ , 24 hour: 84 mg/l, (Nitrosomonas sp.)
<u>Chronic aquatic toxicity</u>	
Chronic toxicity - fish early life stage	NOEC, 40 days: 1.39 mg/l, Oncorhynchus mykiss (Rainbow trout) LOEC, 40 days: 2.77 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	NOEC, 21 day: 1 mg/l, Daphnia magna NOEC, 7 day: 0.74 mg/l, (Ceriodaphnia dubia)

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

EUCALYPTOL

LAVENDER OIL BULGARIAN

Persistence and degradability

The substance is readily biodegradable.

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

Persistence and degradability

The product is readily biodegradable.

Biodegradation

- Degradation 80%: 28 day

DL-BORNEOL

Persistence and degradability

The product is readily biodegradable.

HEXYL ACETATE

Persistence and degradability

Inherently biodegradable.

Biodegradation

- Degradation 66%: 28 days
OECD 301D
- Degradation 56%: 10 days
OECD 301F

GERANYL ACETATE

Persistence and degradability

The substance is readily biodegradable.

Biodegradation

- Degradation > 70%: 28 days
OECD 301F

OCT-1-ENE-3-OL

Persistence and degradability

The substance is readily biodegradable.

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

Persistence and degradability

Not readily biodegradable.

GERANIOL

Persistence and degradability

The product is readily biodegradable.

Biodegradation

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

NERYL ACETATE

Persistence and degradability

The product is readily biodegradable.

LAVENDER OIL BULGARIAN

2-PINENE

Persistence and
degradability

The product is readily biodegradable.

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

Persistence and
degradability

The product is readily biodegradable.

CAMPHOR

Persistence and
degradability

Expected to be readily biodegradable.

p-CYMENE

Persistence and
degradability

The product is readily biodegradable.

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

Persistence and
degradability

The product is readily biodegradable.

Biodegradation

- Degradation 72%: 28 day
OECD 301D

HEXAN-1-OL

Persistence and
degradability

The product is readily biodegradable.

Biodegradation

- Degradation >60: 30 days
OECD 301D

(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

PIN-2-(10) ENE

Persistence and
degradability

The product is readily biodegradable.

COUMARIN

Persistence and
degradability

The product is readily biodegradable.

CIS-HEX-3-EN-1-OL

LAVENDER OIL BULGARIAN

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

BUTYL ACETATE -norm

Persistence and degradability The product is readily biodegradable.

Biodegradation Water - Degradation (%) 83%: 28 days

TOLUENE

Persistence and degradability The product is readily biodegradable.

Biodegradation - Degradation 86%: 20 day

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

Bioaccumulative potential The product is not bioaccumulating.

Partition coefficient log Kow: 2.7

CARYOPHYLLENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 6.23

EUCALYPTOL

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 2.97

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

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 2.67

HEXYL ACETATE

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.3

LAVENDER OIL BULGARIAN**GERANYL ACETATE**

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.5

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

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.38

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

CAMPHOR

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.04

CAMPHENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.5

p-CYMENE

Bioaccumulative potential Potentially bioaccumulating.

Partition coefficient log Pow: 4.8

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

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 3.7

HEXAN-1-OL

Bioaccumulative potential Bioaccumulation is unlikely.

Partition coefficient log Pow: 1.8

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

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 4.71

LAVENDER OIL BULGARIAN

CIS-HEX-3-EN-1-OL

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient log Pow: 1.697

BUTYL ACETATE -norm

Bioaccumulative potential Bioaccumulation is unlikely. BCF: 3.1,

Partition coefficient : 2.3

TOLUENE

Bioaccumulative potential The product is not bioaccumulating. BCF: 90, Leuciscus idus (Golden orfe)

Partition coefficient log Pow: 2.65

12.4. Mobility in soil

Mobility No information available.

Ecological information on ingredients.

LINALOOL

Mobility The product is insoluble in water.

EUCALYPTOL

Mobility The product is insoluble in water.

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

Mobility The product is insoluble in water.

2-PINENE

Mobility The product is insoluble in water.

CAMPHOR

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

CAMPHENE

Mobility The product is insoluble in water.

HEXAN-1-OL

Mobility No information available.

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

Mobility No information available.

p-MENTHA-1,5-DIENE

Mobility The product is insoluble in water.

LAVENDER OIL BULGARIAN

PIN-2-(10) ENE

Mobility The product is insoluble in water.

CIS-HEX-3-EN-1-OL

Mobility No information available.

BUTYL ACETATE -norm

Mobility No data available.

Surface tension 61.3 mN/m @ 20°C OECD 115

TOLUENE

Mobility The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

Surface tension 0.0242 mN/m @ 20°C

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.

EUCALYPTOL

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

(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.

CAMPHOR

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

p-CYMENE

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.

LAVENDER OIL BULGARIAN

(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.

CIS-HEX-3-EN-1-OL

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

BUTYL ACETATE -norm

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

TOLUENE

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

12.6. Other adverse effects

Other adverse effects None known.

Ecological information on ingredients.

LINALOOL

Other adverse effects 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.

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.

EUCALYPTOL

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.

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

Other adverse effects Not determined.

CAMPHOR

Other adverse effects No information available.

HEXAN-1-OL

LAVENDER OIL BULGARIAN

Other adverse effects Not determined.

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

Other adverse effects No information available.

CIS-HEX-3-EN-1-OL

Other adverse effects None known.

BUTYL ACETATE -norm

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.

TOLUENE

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.

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

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

LAVENDER OIL BULGARIAN

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

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

SECTION 15: Regulatory information

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

EU legislation	Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended). Commission Regulation (EU) No 2015/830 of 28 May 2015.
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 Entry number: 48

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/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

All the ingredients are listed or exempt.

Korea - KECI

Not listed.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

SECTION 16: Other information

LAVENDER OIL BULGARIAN

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 IATA: International Air Transport Association.
 IMDG: International Maritime Dangerous Goods.
 Kow: Octanol-water partition coefficient.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 vPvB: Very Persistent and Very Bioaccumulative.
 IARC: International Agency for Research on Cancer.
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.
 cATpE: Converted Acute Toxicity Point Estimate.
 BCF: Bioconcentration Factor.
 BOD: Biochemical Oxygen Demand.
 EC₅₀: 50% of maximal Effective Concentration.
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 LOEC: Lowest Observed Effect Concentration.
 DMEL: Derived Minimal Effect Level.
 EL50: Exposure Limit 50
 hPa: Hectopascal
 LL50: Lethal Loading fifty
 OECD: Organisation for Economic Co-operation and Development
 POW: Octanol-water partition coefficient
 SCBA: self-contained breathing apparatus
 STP: Sewage Treatment Plant
 VOC: Volatile Organic Compounds

Classification abbreviations and acronyms

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

Key literature references and sources for data

Supplier's information.

Revision comments

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

Revision date

16/02/2023

Version number

3.001

Supersedes date

12/08/2021

SDS number

55609

LAVENDER OIL BULGARIAN

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. H315 Causes skin irritation. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H332 Harmful if inhaled. H336 May cause drowsiness or dizziness. H361 Suspected of damaging fertility or the unborn child. H361d Suspected of damaging the unborn child. H371 May cause damage to organs if inhaled. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H411 Toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. H413 May cause long lasting harmful effects to aquatic life.
Signature	Jitendra Panchal
Material Group	313664, 313666

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 Use as a fuel - Consumer

Identification

Product name	Toluene
REACH registration number	01-2119471310-51-XXXX
CAS number	108-88-3
EC number	203-625-9
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	Use as a fuel - Consumer
Process scope	Covers consumer uses in liquid fuels.
Product category	PC13 Fuels.
Main sector	SU21 Consumer uses
<u>Environment</u>	
Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.12c.v1

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

Product characteristics

Physical state	Liquid, vapour pressure 0.5 - 10 kPa at STP Readily biodegradable.
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Amounts used

Annual site tonnage: 3895 tonnes

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air	Release fraction to air from wide dispersive use (regional only): 0.001
Emission factor - water	Release fraction to wastewater from wide dispersive use: 0.00001

Use as a fuel - Consumer

Emission factor - soil Release fraction to soil from wide dispersive use (regional only): 0.00001

Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 3895 kg/day

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Treat air emission to provide a typical removal efficiency of >0%. Provide onsite wastewater removal efficiency of 93.3%.

STP type Municipal STP.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 93.3%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP

Concentration details Concentration of substance in product: 100% Unless otherwise stated.

Amounts used

Amount per use: 37500 g
Unless otherwise stated.
PC13_2 Liquid: scooter refuelling
Amount per use: 3750 g
PC13_3 Liquid: garden equipment - use
PC13_4 Liquid: Garden equipment - Refuelling
Amount per use: 750 g
PC13_5 Liquid: lamp oil
Amount per use: 100 g

Frequency and duration of use

Use as a fuel - Consumer

Covers exposure up to 2 hours per event.

Unless otherwise stated.

PC13_1 Liquid: automotive refuelling

Covers exposure up to 0.05 hours per event.

PC13_2 Liquid: scooter refuelling

PC13_4 Liquid: Garden equipment - Refuelling

Covers exposure up to 0.03 hours per event.

PC13_5 Liquid: lamp oil

Covers exposure up to 0.01 hours per event.

Covers frequency up to 52 days/year, , .

Unless otherwise stated.

PC13_3 Liquid: garden equipment - use

PC13_4 Liquid: Garden equipment - Refuelling

Covers frequency up to 26 days/year, , .

Covers use up to 1 times/day of use . Unless otherwise stated.

Human factors not influenced by risk management

Potentially exposed body parts Covers skin contact area up to 420 cm². Unless otherwise stated. PC13_1 Liquid: automotive refuelling PC13_2 Liquid: scooter refuelling PC13_5 Liquid: lamp oil Covers skin contact area up to 210 cm².

Other given operational conditions affecting Non-industrial exposure

Setting Indoor/outdoor use.

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

Room size Covers use in room size of 20 m³. Unless otherwise stated. PC13_1 Liquid: automotive refuelling PC13_2 Liquid: scooter refuelling PC13_3 Liquid: garden equipment - use Covers use in room size of 100 m³. PC13_4 Liquid: Garden equipment - Refuelling Covers use in room size of 34 m³.

Ventilation rate Covers use under typical household ventilation. Unless otherwise stated. PC13_4 Liquid: Garden equipment - Refuelling Covers use in a one car garage (34 m³) under typical ventilation.

Other given operational conditions affecting Non-industrial exposure

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

3. Exposure estimation (Environment 1)

Environmental exposure Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

Use as a fuel - Consumer

Exposure

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as a fuel - Industrial

Identification

Product name	Toluene
REACH registration number	01-2119471310-51-XXXX
CAS number	108-88-3
EC number	203-625-9
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	Use as a fuel - Industrial
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
Sector of use	SU10 Formulation [mixing] of preparations and/or re-packaging
<u>Environment</u>	
Environmental release category	ERC7 Use of functional fluid at industrial site
SPERC	ESVOC SPERC 7.12a.v1
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC16 Use of fuels

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

Use as a fuel - Industrial

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP
Readily biodegradable.

Amounts used

Annual amount per site: 15000 tonnes

Frequency and duration of use

Emission days: 300 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.0025
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.00001
Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 93.3%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Treat air emission to provide a typical removal efficiency of >95%.
Water If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 93.3%.
Soil Soil emission controls are not applicable as there is no direct release to soil.
Maximum allowable site tonnage (M_{safe}), based on release following total wastewater treatment removal: 11100000 kg/day

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Do not apply industrial sludge to natural soils.
Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP
Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Use as a fuel - Industrial

Ventilation rate

Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Assumes a good basic standard of occupational hygiene is implemented. Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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

Technical protective measures Drain or remove substance from equipment prior to break-in or maintenance.

Risk management measures

Wear suitable coveralls to prevent exposure to the skin.

3. Exposure estimation (Environment 1)**Environmental exposure**

Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)**Exposure**

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use as a fuel - Professional

Identification

Product name	Toluene
REACH registration number	01-2119471310-51-XXXX
CAS number	108-88-3
EC number	203-625-9
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	Use as a fuel - Professional
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

Environment

Environmental release category	ERC9a Widespread use of functional fluid (indoor) ERC9b Widespread use of functional fluid (outdoor)
SPERC	ESVOC SPERC 9.12b.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC16 Use of fuels
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Product characteristics

Use as a fuel - Professional

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP
Readily biodegradable.

Amounts used

Annual amount per site: 30 tonnes

Frequency and duration of use

Emission days: 365 days/year

Other given operational conditions affecting environmental exposure

Emission factor - air Release fraction to air from process (initial release prior to RMM): 0.001
Emission factor - water Release fraction to wastewater from process (initial release prior to RMM): 0.00001
Emission factor - soil Release fraction to soil from process (initial release prior to RMM): 0.00001

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 93.3%
Assumed domestic sewage treatment plant flow: 2000 m³/day

Technical onsite conditions and measures to reduce or limit discharges to air, water and soil

Air Treat air emission to provide a typical removal efficiency of >0%.
Water If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of 93.3%.
Maximum allowable site tonnage (M_{safe}), based on release following total wastewater treatment removal: 3895 kg/day

Conditions and measures related to external treatment of waste for disposal

Sludge treatment Do not apply industrial sludge to natural soils.
Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP
Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.
Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Use as a fuel - Professional

Assumes a good basic standard of occupational hygiene is implemented. Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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

Technical protective measures Drain or remove substance from equipment prior to break-in or maintenance. Store substance within a closed system.

Risk management measures

Wear suitable coveralls to prevent exposure to the skin.

3. Exposure estimation (Environment 1)

Environmental exposure Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

Exposure Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



Exposure scenario

Use in Oil and Gas field drilling and production operations - Industrial

Identification

Product name	Toluene
REACH registration number	01-2119471310-51-XXXX
CAS number	108-88-3
EC number	203-625-9
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	Use in Oil and Gas field drilling and production operations - Industrial
Process scope	Oil field well drilling and production operations (including drilling muds and well cleaning), including material transfers, onsite formulation, well head operations, shaker room activities and related maintenance.
Main sector	SU3 Industrial uses
<u>Environment</u>	
Environmental release category	ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
<u>Worker</u>	
Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

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

Control of environmental exposure

No exposure assessment presented for the environment. Quantitative exposure and risk assessment not possible due to lack of emissions to aquatic environment.

Use in Oil and Gas field drilling and production operations - Industrial

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP
Readily biodegradable.

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

Product characteristics

Physical state Liquid, vapour pressure 0.5 - 10 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Amounts used

Not applicable.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Temperature Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Ventilation rate Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour). , or:
Ensure operation is undertaken outdoors.

Assumes a good basic standard of occupational hygiene is implemented. Users are advised to consider national Occupational Exposure Limits or other equivalent values.

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

Technical protective measures Drain or remove substance from equipment prior to break-in or maintenance. Operate activity away from sources of substance emission or release. Store substance within a closed system.

Risk management measures

Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off any skin contamination immediately. Provide basic employee training to prevent/minimise exposures and to report any skin problems that may develop. If above technical/organisational control measures are not feasible, then adopt following PPE: Wear a respirator conforming to EN140 with Type A filter or better.

3. Exposure estimation (Environment 1)

Environmental exposure Predicted exposures are not expected to exceed the applicable exposure limits (given in Section 8 of the SDS) when the operational conditions/risk management measures given in Section 2 are implemented.

4. Guidance to check compliance with the exposure scenario (Environment 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

Exposure Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

4. Guidance to check compliance with the exposure scenario (Health 1)

Use in Oil and Gas field drilling and production operations - Industrial

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.