

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

1.1. Product identifier

Product form : Mixture
Product name : HG dishwasher cleaner and odour freshener
Product code : 636 ART
Type of product : Detergent
Product group : Trade product

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Consumer use
Use of the substance/mixture : Dishwashing machine care agents

1.2.2. Uses advised against

Restrictions on use : All other uses not recommended above

1.3. Details of the supplier of the safety data sheet

Manufacturer

HG International B.V.
P.J. Oudweg 41
NL- 1314 CJ Almere
The Netherlands
T +31 (0)36 54 94 700
safety@hg.eu - www.hg.eu

Distributor

HG UKI LTD
Weston Business Centre
Parsonage Road
UK- CM22 6PU Takeley – Essex
United Kingdom
T +44 (0) 1206 822 744
www.hg.eu

1.4. Emergency telephone number

Emergency number : +31 (0)36 54 94 777
Only for medical personnel
Mon-Fri 09:00 AM - 05:00 PM (CEST)

Country/Area	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GB CLP (SI 2019:720 as amended)

Serious eye damage/eye irritation, Category 2 H319
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

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2.2. Label elements

Labelling according to GB CLP (SI 2019:720 as amended)

Hazard pictograms (GB CLP)



GHS07

Signal word (GB CLP)

: Warning

Hazard statements (GB CLP)

: H319 - Causes serious eye irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (GB CLP)

: P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
P264 - Wash hands thoroughly after handling.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 - If eye irritation persists: Get medical advice, attention.
P501 - Dispose of contents and container to an approved waste disposal plant.

EUH-statements (GB CLP)

: EUH208 - Contains GERANYL ACETATE, EUCALYPTOL, LIMONENE, LINALOOL, PINENE, TERPINOLENE. May produce an allergic reaction.

Child-resistant fastening

: Not applicable

Tactile warning

: Not applicable

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with UK REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
Sodium chloride	CAS-No.: 7647-14-5 EC-No.: 231-598-3	$\geq 50 - < 75$	Not classified
sodium carbonate	CAS-No.: 497-19-8 EC-No.: 207-838-8 REACH-no: 01-2119485498-19	$\geq 15 - < 25$	Eye Irrit. 2, H319
Sodium sulphate	CAS-No.: 7757-82-6 EC-No.: 231-820-9 REACH-no: 01-2119519226-43	$\geq 15 - < 25$	Not classified
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 UK Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	$\geq 0.1 - < 1$	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317

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Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
p-Mentha-1,4(8)-diene	CAS-No.: 586-62-9 EC-No.: 209-578-0 REACH-no: 01-2119982325-32	≥ 0.1 – < 1	Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Terpineol	CAS-No.: 8000-41-7 EC-No.: 232-268-1 REACH-no: 01-2119553062-49	≥ 0.1 – < 1	Not classified
2,6-dimethyl-7-octen-2-ol	CAS-No.: 18479-58-8 EC-No.: 242-362-4 REACH-no: 01-2119457274-37	≥ 0.1 – < 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
(R)-p-mentha-1,8-diene; d-limonene	CAS-No.: 5989-27-5 EC-No.: 227-813-5 UK Index-No.: 601-096-00-2 REACH-no: 01-2119529223-47	≥ 0.1 – < 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Pin-2(3)-ene	CAS-No.: 80-56-8 EC-No.: 201-291-9 REACH-no: 01-2119519223-49	≥ 0.1 – < 1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol	CAS-No.: 464-45-9 EC-No.: 207-353-1 REACH-no: 01-2120759187-44	≥ 0.1 – < 1	Flam. Sol. 1, H228 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411
3,7,7-trimethylbicyclo[4.1.0]hept-3-ene	CAS-No.: 13466-78-9 EC-No.: 236-719-3 REACH-no: 01-2119520252-55	≥ 0.01 – < 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
3,7-dimethyl-2,6-octadien-1-yl-acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5 REACH-no: 01-2119973480-35	≥ 0.01 – < 1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Citronellol	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	≥ 0.01 – < 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol	CAS-No.: 106-24-1 EC-No.: 203-377-1 UK Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49	≥ 0.01 – < 0.1	Skin Sens. 1, H317
linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	≥ 0.01 – < 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317

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Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
Citronellyl acetate	CAS-No.: 150-84-5 EC-No.: 205-775-0 REACH-no: 01-2119959860-27	≥ 0.01 – < 0.1	Skin Irrit. 2, H315 Aquatic Chronic 2, H411
cineole	CAS-No.: 470-82-6 EC-No.: 207-431-5 REACH-no: 01-2119967772-24	≥ 0.01 – < 1	Flam. Liq. 3, H226 Skin Sens. 1B, H317
citral	CAS-No.: 5392-40-5 EC-No.: 226-394-6 UK Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	≥ 0.01 – < 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 2, H373
2-methylundecanal	CAS-No.: 110-41-8 EC-No.: 203-765-0 REACH-no: 01-2119969443-29	≥ 0.001 – < 0.1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Octanal	CAS-No.: 124-13-0 EC-No.: 204-683-8 REACH-no: 01-2119638274-38	≥ 0.001 – < 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
Camphene	CAS-No.: 79-92-5 EC-No.: 201-234-8 REACH-no: 01-2119446293-40	≥ 0.001 – < 0.1	Flam. Sol. 1, H228 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
7-methyl-3-methyleneocta-1,6-diene	CAS-No.: 123-35-3 EC-No.: 204-622-5 REACH-no: 01-2119514321-56	≥ 0.001 – < 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
(E)-3,7-dimethylocta-1,3,6-triene	CAS-No.: 3779-61-1 REACH-no: 01-2120739475-47	≥ 0.001 – < 0.1	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
[3R-(3α,3αβ,7β,8α)]-2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulene	CAS-No.: 469-61-4 EC-No.: 207-418-4	≥ 0.001 – < 0.1	Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
α,α,4-trimethylcyclohexanemethanol	CAS-No.: 498-81-7 EC-No.: 207-871-8 REACH-no: 01-2119983276-26	≥ 0.001 – < 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
1-isopropyl-4-methylbenzene; p-cymene	CAS-No.: 99-87-6 EC-No.: 202-796-7 REACH-no: 01-2119881770-31	≥ 0.001 – < 0.1	Flam. Liq. 3, H226 Acute Tox. 3 (Inhalation), H331 (ATE=0.5 mg/l/4h) Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran	CAS-No.: 16409-43-1 EC-No.: 240-457-5 REACH-no: 01-2119976300-42	≥ 0.001 – < 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361

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Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
L-beta-pinene	CAS-No.: 18172-67-3 EC-No.: 242-060-2 REACH-no: 01-2119519230-54	≥ 0.001 – < 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
p-Mentha-1,4-diene	CAS-No.: 99-85-4 EC-No.: 202-794-6 REACH-no: 01-2120780478-40	≥ 0.001 – < 0.1	Flam. Liq. 3, H226 Repr. 2, H361 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: Dust of the product, if present, may cause respiratory irritation after excessive inhalation exposure.
Symptoms/effects after skin contact	: Dust may cause irritation in skin folds or by contact in combination with tight clothing.
Symptoms/effects after eye contact	: Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. Metallic oxides. Sulphur oxides. Halogenated compounds.
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5.3. Advice for firefighters

Precautionary measures fire	: Runoff from fire control or dilution water may cause pollution.
Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection. Control run-off water by containing and keeping it out of sewers and watercourses.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage. Do not handle until all safety precautions have been read and understood.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Do not touch or walk on the spilled product. Do not breathe mist, spray, vapours. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Using a clean shovel, put the material in a dry container and cover without compressing it. Large spills: scoop solid spill into closing containers. Dilute small spillage well and wash away with large quantities of water.
Methods for cleaning up : Mechanically recover the product. Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of contaminated materials refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
Precautions for safe handling : Ensure good ventilation of the work station. Do not breathe mist, vapours. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Store in dry, cool, well-ventilated area. Protect from sunlight. Store in a closed container.
Storage temperature : > 0 – < 30 °C
Special rules on packaging : Keep only in original container. Opened containers must be carefully closed and kept upright to avoid leakage.
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

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8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment - Report preview:

Safety glasses. Gloves. Protective clothing. Wear foot protection.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection - Report preview:

Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses with side shields			EN 166

8.2.2.2. Skin protection

Skin and body protection - Report preview:

In case of contact with the skin : Wear protective clothing

Skin and body protection	
Type	Standard
Long sleeved protective clothing	
Chemical resistant safety shoes	EN ISO 20345

Hand protection - Report preview:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Butyl rubber	6 (> 480 minutes)	0.5		EN ISO 374
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0.35		EN ISO 374

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8.2.2.3. Respiratory protection

Respiratory protection - Report preview:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Handle in accordance with good industrial hygiene and safety procedures. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Odour	: Lemon-like odour.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 11
pH solution concentration	: 10 %
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

sodium carbonate (497-19-8)

Boiling point	1600 °C
Vapour pressure	0 Pa 25°C

Sodium sulphate (7757-82-6)

Boiling point	1413 °C
Vapour pressure	0 Pa 25°C

3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)

Boiling point	167 – 170 °C Source: AKRON
Vapour pressure	3.72 mm Hg at 25 °C Source: NLM;ChemIDplus

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2-methylundecanal (110-41-8)	
Boiling point	230.85 °C Atm. press.: 101,325 kPa Decomposition: 'no' Remarks on result: 'other:'
Flash point	68.5 °C Atm. press.: 101325 Pa Remarks on result: 'other:'

Octanal (124-13-0)	
Boiling point	175 °C
Flash point	54 °C
Auto-ignition temperature	190 °C
Vapour pressure	1.18 mm Hg

Camphene (79-92-5)	
Boiling point	156 – 160 °C Atm. press.: 1013 mBar Remarks on result: 'other:'
Flash point	29.5 °C Atm. press.: 1013 hPa
Auto-ignition temperature	265 °C Source: ICSC
Vapour pressure	25 mm Hg at 25 °C Source: HSDB

3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3)	
Boiling point	243.97 °C Atm. press.: 1013,25 hPa
Flash point	109.5 °C Atm. press.: 1013,25 hPa
Vapour pressure	0.013 hPa Temp.: 20 °C Remarks on result: 'other:'

Citronellol (106-22-9)	
Boiling point	223.8 °C Atm. press.: 1013 hPa
Flash point	107 °C Atm. press.: 1013 hPa
Auto-ignition temperature	240 °C Source: ECHA
Vapour pressure	9 Pa 25°C

geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
Boiling point	229 °C
Flash point	108 °C Atm. press.: 1013 hPa
Vapour pressure	4.6 Pa 25°C

linalyl acetate (115-95-7)	
Boiling point	220 °C Atm. press.: 1013,25 hPa
Flash point	85 °C Atm. press.: 1013,25 hPa
Vapour pressure	< 1 hPa Temp.: 20 °C

7-methyl-3-methylocta-1,6-diene (123-35-3)	
Boiling point	167 °C
Flash point	≈ 45 °C Atm. press.: 1 atm
Vapour pressure	267.98 Pa Temp.: 25 °C Remarks on result: 'other:'

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Citronellyl acetate (150-84-5)	
Boiling point	239.8 °C Atm. press.: 1013,2 hPa
Flash point	93.5 °C Atm. press.: 1013,25 hPa

2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Boiling point	193 °C Atm. press.: 100,9 kPa
Flash point	76 °C Atm. press.: 101,325 kPa
Vapour pressure	20 Pa Temp.: 25 °C

cineole (470-82-6)	
Boiling point	177 °C Atm. press.: 101,325 kPa Decomposition: 'no'
Flash point	52 °C Remarks on result: 'other:'
Vapour pressure	122 Pa Temp.: 20 °C

$\alpha,\alpha,4$-trimethylcyclohexanemethanol (498-81-7)	
Boiling point	205 °C Source: MSDS
Flash point	87.78 °C Source: MSDS
Vapour pressure	0.0457 mm Hg Source: EPISUITE

citral (5392-40-5)	
Boiling point	\approx 230 °C Atm. press.: 1013 hPa Decomposition: 'yes' Decomp. temp.: 180 °C
Flash point	82 °C Source: ICSC
Vapour pressure	29.3 Pa 25°C

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Boiling point	175 °C
Flash point	51 °C Atm. press.: 1 atm
Auto-ignition temperature	245 °C Source: ECHA Registered substances
Vapour pressure	200 Pa Temp.: 298 K Remarks on result: 'other:'

linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
Boiling point	196.3 °C Atm. press.: 99,2 kPa Decomposition: 'no' Decomp. temp.: 196,3 °C Remarks on result: 'other:'
Flash point	\approx 77.2 °C Atm. press.: 101,3 kPa
Auto-ignition temperature	235 °C Source: International Chemical Safety Cards
Vapour pressure	27 Pa Temp.: 298 K

Pin-2(3)-ene (80-56-8)	
Boiling point	155 °C
Flash point	31 °C Atm. press.: 1 atm
Auto-ignition temperature	255 °C
Vapour pressure	690 Pa 25°C

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1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
Boiling point	176 °C Atm. press.: 1013 hPa Decomposition: 'no'
Flash point	48 °C Source: International Uniform Chemical Information Database
Auto-ignition temperature	435 °C
Vapour pressure	1.47 mm Hg Source: National Institute of Technology and Evaluation

Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
Boiling point	230 °C Atm. press.: 1013,25 hPa
Flash point	64 °C Atm. press.: 1013 hPa
Vapour pressure	0.657 mm Hg at 25°C Source: EPISUITE

L-beta-pinene (18172-67-3)	
Boiling point	162 – 167 °C
Flash point	39 °C Atm. press.: 1 atm
Vapour pressure	2 mm Hg

p-Mentha-1,4(8)-diene (586-62-9)	
Boiling point	193.85 °C Atm. press.: 985 hPa Decomposition: 'no'
Flash point	62.5 °C Atm. press.: 101,3 kPa
Vapour pressure	0.74 mm Hg at 25°C Source: National Library of Medicine/Hazardous Substances Data Bank

Terpineol (8000-41-7)	
Boiling point	214 °C
Flash point	91 – 92 °C
Vapour pressure	2.6 Pa 25°C

p-Mentha-1,4-diene (99-85-4)	
Boiling point	181.8 °C Atm. press.: 100,7 kPa
Auto-ignition temperature	359 °C Source: ECHA
Vapour pressure	1.09 mm Hg at 25 °C Source: National Library of Medicine

Sodium chloride (7647-14-5)	
Boiling point	≈ 1465 °C

(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)	
Boiling point	201 °C Source: ChemIDplus
Flash point	655556 °C Remarks on result: 'other:'
Vapour pressure	0.0572 Pa Temp.: 25 °C Remarks on result: 'other:'

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9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Conclusive but not sufficient for classification)
Acute toxicity (dermal) : Not classified (Conclusive but not sufficient for classification)
Acute toxicity (inhalation) : Not classified (Conclusive but not sufficient for classification)

sodium carbonate (497-19-8)	
LD50 oral rat	2800 mg/kg bodyweight Animal: rat
LD50 oral	4090 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: other:
LC50 Inhalation - Rat (Dust/Mist)	2300 mg/l
Sodium sulphate (7757-82-6)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 oral	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat	> 2.4 mg/l air Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)
3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)	
LD50 oral rat	4800 mg/kg
ATE GB CLP (oral)	4800 mg/kg bodyweight

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3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)	
ATE GB CLP (gases)	4500 ppmv/4h
ATE GB CLP (vapours)	11 mg/l/4h
ATE GB CLP (dust, mist)	1.5 mg/l/4h
2-methylundecanal (110-41-8)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat
LD50 dermal rabbit	> 10000 mg/kg Source: ChemIDPlus
Octanal (124-13-0)	
LD50 oral rat	4617 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:
LD50 dermal rabbit	5207 mg/kg bodyweight Animal: rabbit, Animal sex: male
LC50 Inhalation - Rat	> 0.83 mg/l air Animal: rat, Animal sex: male, Remarks on results: other:
ATE GB CLP (oral)	4617 mg/kg bodyweight
ATE GB CLP (dermal)	5207 mg/kg bodyweight
Camphene (79-92-5)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3)	
LD50 oral rat	6330 mg/kg bodyweight Animal: rat, 95% CL: 5450 - 7340
ATE GB CLP (oral)	6330 mg/kg bodyweight
Citronellol (106-22-9)	
LD50 oral rat	3450 mg/kg Source: National Library of Medicine
LD50 oral	3450 mg/kg bodyweight
LD50 dermal rabbit	2650 mg/kg Source: National Library of Medicine
LD50 dermal	2650 mg/kg bodyweight
ATE GB CLP (oral)	3450 mg/kg bodyweight
ATE GB CLP (dermal)	2650 mg/kg bodyweight
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
LD50 oral rat	3600 mg/kg bodyweight Animal: rat, 95% CL: 2840 - 4570
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
ATE GB CLP (oral)	3600 mg/kg bodyweight
linalyl acetate (115-95-7)	
LD50 oral rat	> 9000 mg/kg bodyweight Animal: rat, Remarks on results: other:
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	
LD50 oral rat	> 11390 mg/kg bodyweight Animal: rat
LD50 oral	> 3380 mg/kg bodyweight Animal: mouse
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

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Citronellyl acetate (150-84-5)	
LD50 oral rat	6800 mg/kg bodyweight Animal: rat, Remarks on results: other:
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
ATE GB CLP (oral)	6800 mg/kg bodyweight
$\alpha,\alpha,4$-trimethylcyclohexanemethanol (498-81-7)	
LD50 oral rat	> 5000 mg/kg Source: NLM;chemIDplus, TOMES;LOLI;
LD50 dermal rabbit	> 5000 mg/kg Source: NLM;chemIDplus, TOMES;LOLI;
citral (5392-40-5)	
LD50 oral rat	\approx 6800 mg/kg bodyweight Animal: rat
LD50 oral	4960 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Remarks on results: other:
LD50 dermal rabbit	2250 mg/kg
LD50 dermal	2250 mg/kg bodyweight
ATE GB CLP (oral)	4960 mg/kg bodyweight
ATE GB CLP (dermal)	2250 mg/kg bodyweight
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 oral	4400 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg Source: National Library of Medicine
LD50 dermal	> 2000 mg/kg bodyweight
ATE GB CLP (oral)	4400 mg/kg bodyweight
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
LD50 oral rat	2790 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other., 95% CL: 2440 - 3180
LD50 oral	2790 mg/kg bodyweight
LD50 dermal rabbit	5610 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374
LD50 dermal	5610 mg/kg bodyweight
ATE GB CLP (oral)	2790 mg/kg bodyweight
ATE GB CLP (dermal)	5610 mg/kg bodyweight
Pin-2(3)-ene (80-56-8)	
LD50 oral rat	2100 mg/kg Source: International Uniform Chemical Information Database
LD50 oral	3700 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LD50 dermal	> 5000 mg/kg bodyweight
ATE GB CLP (oral)	500 mg/kg bodyweight
1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
LD50 oral rat	3669 mg/kg Source: Corporate Solution From Thomson Micromedex

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1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: other:
ATE GB CLP (oral)	3669 mg/kg bodyweight
ATE GB CLP (gases)	700 ppmv/4h
ATE GB CLP (vapours)	3 mg/l/4h
ATE GB CLP (dust, mist)	0.5 mg/l/4h
Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
p-Mentha-1,4(8)-diene (586-62-9)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 4300 mg/kg Source: ECHA
Terpineol (8000-41-7)	
LD50 oral	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg
LD50 dermal	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	> 4760 mg/l
p-Mentha-1,4-diene (99-85-4)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
Sodium chloride (7647-14-5)	
LD50 dermal rabbit	> 10000 mg/kg bodyweight Animal: rabbit
(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)	
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
Skin corrosion/irritation	: Not classified (Conclusive but not sufficient for classification) pH: 11
sodium carbonate (497-19-8)	
pH	≈ 11.6 Concentration: (≈)0,1 other:
Sodium sulphate (7757-82-6)	
pH	4.9
Sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
Serious eye damage/irritation	: Causes serious eye irritation. pH: 11

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sodium carbonate (497-19-8)	
pH	≈ 11.6 Concentration: (≈)0,1 other:
Sodium sulphate (7757-82-6)	
pH	4.9
Sodium chloride (7647-14-5)	
pH	7.5 (18 °C)
Respiratory or skin sensitisation	: Not classified (Conclusive but not sufficient for classification)
Germ cell mutagenicity	: Not classified (Conclusive but not sufficient for classification)
Carcinogenicity	: Not classified (Conclusive but not sufficient for classification)
7-methyl-3-methylocta-1,6-diene (123-35-3)	
IARC group	2B - Possibly carcinogenic to humans
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:
citral (5392-40-5)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:
Reproductive toxicity	: Not classified (Conclusive but not sufficient for classification)
Octanal (124-13-0)	
NOAEL (animal/female, F1)	300 mg/kg bodyweight Animal: rat, Animal sex: female
p-Mentha-1,4-diene (99-85-4)	
NOAEL (animal/male, F1)	250 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F1)	100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
STOT-single exposure	: Not classified (Conclusive but not sufficient for classification)
STOT-repeated exposure	: Not classified (Conclusive but not sufficient for classification)
3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:
Citronellol (106-22-9)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	0.063 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other:, Guideline: other:
linalyl acetate (115-95-7)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
7-methyl-3-methylocta-1,6-diene (123-35-3)	
LOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

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7-methyl-3-methylenoocta-1,6-diene (123-35-3)	
NOAEL (subchronic, oral, animal/male, 90 days)	500 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	250 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)
cineole (470-82-6)	
NOAEL (oral, rat, 90 days)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other., Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Non-rodents)
citral (5392-40-5)	
LOAEC (inhalation, rat, gas, 90 days)	68 ppm Animal: rat, Animal sex: female
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEC (inhalation, rat, gas, 90 days)	34 ppm Animal: rat, Animal sex: female
NOAEL (subchronic, oral, animal/male, 90 days)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Aspiration hazard : Not classified (Conclusive but not sufficient for classification)

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Viscosity, kinematic	Not applicable
Citronellol (106-22-9)	
Viscosity, kinematic	12.984 mm ² /s
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
Viscosity, kinematic	5191.86 mm ² /s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified (Conclusive but not sufficient for classification)
Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

sodium carbonate (497-19-8)	
LC50 - Fish [1]	300 mg/l Test organisms (species): <i>Lepomis macrochirus</i>
EC50 - Crustacea [1]	200 – 227 mg/l Test organisms (species): <i>Ceriodaphnia</i> sp.
EC50 96h - Algae [1]	242 mg/l Source: ECOTOX
Sodium sulphate (7757-82-6)	
LC50 - Fish [1]	7960 mg/l Test organisms (species): <i>Pimephales promelas</i>
LC50 - Fish [2]	≈ 7960 mg/l Test organisms (species): <i>Pimephales promelas</i>
EC50 - Crustacea [1]	≈ 3150.21 mg/l Test organisms (species): <i>Ceriodaphnia dubia</i>
EC50 - Other aquatic organisms [1]	4580 mg/l waterflea
EC50 - Other aquatic organisms [2]	1900 mg/l
3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)	
LC50 - Fish [1]	0.53 mg/l Source: ECOSAR
EC50 96h - Algae [1]	0.648 mg/l Source: ECOSAR
2-methylundecanal (110-41-8)	
LC50 - Fish [1]	0.35 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
EC50 - Crustacea [1]	0.21 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	0.11 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
EC50 72h - Algae [2]	0.18 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
EC50 96h - Algae [1]	0.778 mg/l Source: EPISUITE
Octanal (124-13-0)	
EC50 - Crustacea [1]	1.54 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 96h - Algae [1]	12.991 mg/l Source: ECOSAR
Camphene (79-92-5)	
LC50 - Fish [1]	0.72 mg/l Test organisms (species): <i>Danio rerio</i> (previous name: <i>Brachydanio rerio</i>)
EC50 - Crustacea [1]	0.72 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	1.75 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
EC50 96h - Algae [1]	214 mg/l Source: ECOTOX
3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3)	
LC50 - Fish [1]	68.12 mg/l Test organisms (species): <i>Leuciscus idus</i>
EC50 - Crustacea [1]	14.1 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 72h - Algae [1]	3.72 mg/l Test organisms (species): <i>Desmodesmus subspicatus</i> (previous name: <i>Scenedesmus subspicatus</i>)
EC50 96h - Algae [1]	0.122 mg/l Source: ECOSAR
Citronellol (106-22-9)	
LC50 - Fish [1]	14.66 mg/l Test organisms (species): <i>Leuciscus idus</i>
EC50 - Crustacea [1]	17.48 mg/l Test organisms (species): <i>Daphnia magna</i>

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Citronellol (106-22-9)	
EC50 - Other aquatic organisms [1]	17.48 mg/l waterflea
EC50 - Other aquatic organisms [2]	2.38 mg/l
EC50 72h - Algae [1]	2.4 mg/l Test organisms (species):
EC50 96h - Algae [1]	3.231 mg/l Source: Ecological Structure Activity Relationships
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
LC50 - Fish [1]	≈ 22 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	10.8 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	10.8 mg/l waterflea
EC50 72h - Algae [1]	13.1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	
EC50 - Crustacea [1]	1.47 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.342 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.31 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Citronellyl acetate (150-84-5)	
LC50 - Fish [1]	6.1 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	3.48 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	4.97 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 7.2 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
2,6-dimethyl-7-octen-2-ol (18479-58-8)	
LC50 - Fish [1]	27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	38 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	80 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	65 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	9.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
cineole (470-82-6)	
LC50 - Fish [1]	57 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	> 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
α,α,4-trimethylcyclohexanemethanol (498-81-7)	
LC50 - Fish [1]	6.821 mg/l Source: EPISUITE

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

$\alpha,\alpha,4$-trimethylcyclohexanemethanol (498-81-7)	
EC50 - Crustacea [1]	4.743 mg/l Source: EPISUITE
EC50 96h - Algae [1]	4.166 mg/l Source: EPISUITE
citral (5392-40-5)	
LC50 - Fish [1]	6.78 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	6.8 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	7 mg/l waterflea
EC50 - Other aquatic organisms [2]	5 mg/l
EC50 72h - Algae [1]	103.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LC50 - Fish [1]	720 μ g/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	0.307 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	0.51 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.32 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.214 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
LC50 - Fish [1]	27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	59 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	20 mg/l waterflea
EC50 - Other aquatic organisms [2]	88.3 mg/l
EC50 96h - Algae [1]	88.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [2]	156.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
Pin-2(3)-ene (80-56-8)	
LC50 - Fish [1]	0.303 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.475 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	1.44 mg/l waterflea
1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
LC50 - Fish [1]	48 mg/l Test organisms (species): Cyprinodon variegatus
EC50 - Crustacea [1]	3.7 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	4.03 mg/l Test organisms (species): Scenedesmus capricornutum
EC50 72h - Algae [2]	2.01 mg/l Test organisms (species): Scenedesmus capricornutum
EC50 96h - Algae [1]	22 mg/l Source: The ECOTOXicology database
Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
LC50 - Fish [1]	77.6 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	33.2 mg/l Test organisms (species): Daphnia magna

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Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
EC50 72h - Algae [1]	36 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	79.7 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
L-beta-pinene (18172-67-3)	
LC50 - Fish [1]	0.557 mg/l Test organisms (species): Cyprinus carpio
LC50 - Fish [2]	502 µg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	1248 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	0.563 mg/l Source: ECOSAR
p-Mentha-1,4(8)-diene (586-62-9)	
LC50 - Fish [1]	0.805 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	0.634 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	11.69 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Terpineol (8000-41-7)	
LC50 - Fish [1]	62 mg/l
EC50 - Other aquatic organisms [1]	73 mg/l waterflea
EC50 - Other aquatic organisms [2]	68 mg/l
EC50 96h - Algae [1]	5.069 mg/l Source: ECOSAR
p-Mentha-1,4-diene (99-85-4)	
LC50 - Fish [1]	0.263 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	10189 mg/l Test organisms (species): Daphnia magna
Sodium chloride (7647-14-5)	
LC50 - Fish [1]	5840 mg/l Test organisms (species): Lepomis macrochirus
LOEC (chronic)	441 mg/l Test organisms (species): Daphnia pulex Duration: '21 d'
NOEC (chronic)	314 mg/l Test organisms (species): Daphnia pulex Duration: '21 d'
(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)	
LC50 - Fish [1]	67.8 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	59 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	14.85 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	11.69 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	13.795 mg/l Source: EPISUITE
12.2. Persistence and degradability	
HG dishwasher cleaner and odour freshener	
Persistence and degradability	Biodegradable.
sodium carbonate (497-19-8)	
Persistence and degradability	Rapidly degradable

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Sodium sulphate (7757-82-6)	
Persistence and degradability	Rapidly degradable
3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)	
Persistence and degradability	Rapidly degradable
2-methylundecanal (110-41-8)	
Persistence and degradability	Rapidly degradable
Octanal (124-13-0)	
Persistence and degradability	Rapidly degradable
Camphene (79-92-5)	
Persistence and degradability	Rapidly degradable
3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3)	
Persistence and degradability	Rapidly degradable
Citronellol (106-22-9)	
Persistence and degradability	Rapidly degradable
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
Persistence and degradability	Rapidly degradable
linalyl acetate (115-95-7)	
Persistence and degradability	Rapidly degradable
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	
Persistence and degradability	Rapidly degradable
Citronellyl acetate (150-84-5)	
Persistence and degradability	Rapidly degradable
2,6-dimethyl-7-octen-2-ol (18479-58-8)	
Persistence and degradability	Rapidly degradable
(E)-3,7-dimethylocta-1,3,6-triene (3779-61-1)	
Persistence and degradability	Rapidly degradable
[3R-(3α,3β,7β,8α)]-2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulene (469-61-4)	
Persistence and degradability	Rapidly degradable
cineole (470-82-6)	
Persistence and degradability	Rapidly degradable
α,α-4-trimethylcyclohexanemethanol (498-81-7)	
Persistence and degradability	Rapidly degradable
citral (5392-40-5)	
Persistence and degradability	Rapidly degradable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Persistence and degradability	Rapidly degradable

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linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
Persistence and degradability	Rapidly degradable
Pin-2(3)-ene (80-56-8)	
Persistence and degradability	Rapidly degradable
1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
Persistence and degradability	Rapidly degradable
Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
Persistence and degradability	Rapidly degradable
L-beta-pinene (18172-67-3)	
Persistence and degradability	Rapidly degradable
p-Mentha-1,4(8)-diene (586-62-9)	
Persistence and degradability	Rapidly degradable
Terpineol (8000-41-7)	
Persistence and degradability	Rapidly degradable
p-Mentha-1,4-diene (99-85-4)	
Persistence and degradability	Rapidly degradable
Sodium chloride (7647-14-5)	
Persistence and degradability	Rapidly degradable
(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)	
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
HG dishwasher cleaner and odour freshener	
Bioaccumulative potential	No bioaccumulation expected.
sodium carbonate (497-19-8)	
Partition coefficient n-octanol/water (Log Pow)	-6.19
Sodium sulphate (7757-82-6)	
Partition coefficient n-octanol/water (Log Pow)	-3
3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)	
Partition coefficient n-octanol/water (Log Pow)	4.38 Source: NLM;ChemIDplus
2-methylundecanal (110-41-8)	
Partition coefficient n-octanol/water (Log Pow)	4.67 Source: NLM;ChemIDPlus
Octanal (124-13-0)	
Partition coefficient n-octanol/water (Log Pow)	2.78
Camphene (79-92-5)	
Partition coefficient n-octanol/water (Log Pow)	4.1 Source: ICSC

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Citronellol (106-22-9)	
Partition coefficient n-octanol/water (Log Pow)	3.1
geraniol; (2E)-3,7-dimethylocta-2,6-dien-1-ol (106-24-1)	
Partition coefficient n-octanol/water (Log Pow)	3.5
linalyl acetate (115-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.93 Source: NLM;ChemIDPlus
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	
Partition coefficient n-octanol/water (Log Pow)	4.17
Citronellyl acetate (150-84-5)	
Partition coefficient n-octanol/water (Log Pow)	4.56 Source: Epi Suite
cineole (470-82-6)	
Partition coefficient n-octanol/water (Log Pow)	2.74
α,α-4-trimethylcyclohexanemethanol (498-81-7)	
Partition coefficient n-octanol/water (Log Pow)	3.42 Source: EPISUITE
citral (5392-40-5)	
Partition coefficient n-octanol/water (Log Pow)	2.8
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4.38
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.84
Pin-2(3)-ene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4.32
1-isopropyl-4-methylbenzene; p-cymene (99-87-6)	
Partition coefficient n-octanol/water (Log Pow)	4.1 Source: International Chemical Safety Cards
Tetrahydro-4-methyl-2-(2-methylprop-1-enyl)pyran (16409-43-1)	
Partition coefficient n-octanol/water (Log Pow)	3.58 Source: EPISUITE
L-beta-pinene (18172-67-3)	
Partition coefficient n-octanol/water (Log Pow)	4.35
p-Mentha-1,4(8)-diene (586-62-9)	
Partition coefficient n-octanol/water (Log Pow)	4.47 Source: National Library of Medicine/Hazardous Substances Data Bank
Terpineol (8000-41-7)	
Partition coefficient n-octanol/water (Log Pow)	3
p-Mentha-1,4-diene (99-85-4)	
Partition coefficient n-octanol/water (Log Pow)	4.5 Source: NLM
(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)	
Partition coefficient n-octanol/water (Log Pow)	3.01 Source: CHEMIDPLUS

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12.4. Mobility in soil

HG dishwasher cleaner and odour freshener

Ecology - soil	Expected to be highly mobile in soil.
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3,7,7-trimethylbicyclo[4.1.0]hept-3-ene (13466-78-9)

Mobility in soil	6324 Source: EPISUITE
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2-methylundecanal (110-41-8)

Mobility in soil	192.1 Source: EPISUITE
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Citronellol (106-22-9)

Mobility in soil	70.79 Source: Quantitative Structure Activity Relation
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linalyl acetate (115-95-7)

Mobility in soil	432.4 Source: EPISUITE
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Citronellyl acetate (150-84-5)

Mobility in soil	2409 Source: EPI SUITE
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cineole (470-82-6)

Mobility in soil	223.9 Source: EPISUITE
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α,α -4-trimethylcyclohexanemethanol (498-81-7)

Mobility in soil	254.3 Source: EPISUITE
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linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (78-70-6)

Mobility in soil	76 Source: HSDB
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Pin-2(3)-ene (80-56-8)

Mobility in soil	2600 Source: HSDB
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(1S-endo)-1,7,7-trimethylbicyclo[2.2.1]heptan-2-ol (464-45-9)

Mobility in soil	100.4 Source: EPISUITE
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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substances identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Dispose of in accordance with relevant local regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

- Product/Packaging disposal recommendations : Empty containers retain product residue and can be hazardous. Do not dispose of the packaging without first carrying out the necessary cleaning. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Disposal must be done according to official regulations. Do not burn empty packaging. Do not cut using a blowtorch.
- Additional information : Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
Transport document description				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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

Not applicable

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Detergent Regulation (648/2004)

Allergenic fragrances > 0.01 %:

GERANYL ACETATE

CITRONELLOL

GERANIOL

LINALYL ACETATE

CITRAL

LIMONENE

LINALOOL

PINENE

L-BETA-PINENE

TERPINOLENE

TERPINEOL

Labelling of contents	
Component	%
perfumes	
GERANYL ACETATE	
CITRONELLOL	
GERANIOL	
LINALYL ACETATE	
CITRAL	
LIMONENE	
LINALOOL	
PINENE	
L-BETA-PINENE	
TERPINOLENE	
TERPINEOL	

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. United Kingdom

UK REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

UK REACH Candidate List (SVHC)

Contains no substance(s) listed on the UK REACH Candidate List

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet

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Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

Abbreviations and acronyms:

STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Training advice	: Ensure personnel is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Other information	: Normal use of this product shall imply use in accordance with the instructions on the packaging. DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
EUH208	Contains 3,7-dimethyl-2,6-octadien-1-yl-acetate (105-87-3) (00022), cineole (470-82-6) (00214), (R)-p-mentha-1,8-diene; d-limonene (5989-27-5) (00252), Linalool (78-70-6) (00600), Pin-2(3)-ene (80-56-8) (00371), p-Mentha-1,4(8)-diene (586-62-9) (00249). May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 1	Flammable solids, Category 1
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.

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According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law, and based on EU 2020/878.

Full text of H- and EUH-statements:	
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.