GRACE TYPE #TCDL-CFRA-BOWL-NSGT

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 2/5/2024

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	GRACE TYPE #TCDL-CFRA-BOWL-NSGT
UFI	:	G56M-RCRU-000H-A9VT
Product code	:	#TCDL-CFRA-BOWL-NSGT
Type of product	:	Perfumes, fragrances
Product group	:	Trade product

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

1.2.1. Relevant identified uses

Main use category	:	Professional use,Industrial use
Industrial/Professional use spec	:	Industrial For professional use only
Use of the substance/mixture	:	Perfumes, fragrances
Function or use category	:	Odour agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

The Cosy Owl
20-28 Albert Road,
Braintree,
Essex CM7 3JQ
Tel: +44 1376 560 348
enquiries@cosyowl.com – www.cosyowl.com

1.4. Emergency telephone number

Emergency number	:	+44 (0) 1376 560348

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Reproductive toxicity, Category 2	H361
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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

Adverse physicochemical, human health and environmental effects

Suspected of damaging fertility or the unborn child. Causes skin irritation. Causes serious eye irritation. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS07 GHS08 GHS09

Signal word (CLP) : Danger

Contains : (R)-p-mentha-1,8-diene; d-limonene; Linalyl acetate; Citrus medica limonum (Lemon) peel oil ; Linalool; Patchouli oil; Bergamot oil; Floralozone; Cyclamal; COUMARIN; Citronellol Pure; Vertofix; citral; Triplal (Vertocitral); Ginger oil; delta-Damascone; Geraniol; Nerol; Adoxal; beta-Caryophyllene; Cuminic aldehyde

Hazard statements (CLP) :
H304 - May be fatal if swallowed and enters airways.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H361 - Suspected of damaging fertility or the unborn child.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.

Extra phrases : For professional users only.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

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 substance(s) are not 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 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dipropylene glycol monomethyl ether substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 34590-94-8 EC-No.: 252-104-2	12.3 – 24.66	Not classified
(R)-p-mentha-1,8-diene; d-limonene substance with national workplace exposure limit(s) (DE, ES, FI, SI, NO, CH)	CAS-No.: 5989-27-5 EC-No.: 205-341-0 EC Index-No.: 601-096-00-2 REACH-no: 01-2119493353-35	5.161052 – 10.372104	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	3.9647384 – 7.9794768	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Citrus medica limonum (Lemon) peel oil	CAS-No.: 8008-56-8 EC-No.: 284-515-8	2.825 – 5.7	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	2.2721322 – 4.5442644	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Patchouli oil	CAS-No.: 8014-09-3 EC Index-No.: 616-944-7	2 – 4.05	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Floralozone	CAS-No.: 67634-15-5 EC-No.: 266-819-2 REACH-no: 01-2120758796-34	1.3 – 2.54	Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Cyclamal	CAS-No.: 103-95-7 EC-No.: 203-161-7 REACH-no: 01-2119970582-32	0.7 – 1.4	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756-26	0.7 – 1.35	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	0.606 – 1.2225	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Vertofix	CAS-No.: 32388-55-9 EC-No.: 251-020-3 REACH-no: 01-2119969651-28	0.5 – 1	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
citral substance with national workplace exposure limit(s) (BE, ES, IE, PL, PT)	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	0.502 – 0.9135	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	0.4 – 0.81	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.4 – 0.75	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Bergamot oil	CAS-No.: 8007-75-8 EC-No.: 289-612-9	0.36 – 0.72	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
Ginger oil	CAS-No.: 8007-08-7 EC-No.: 283-634-2	0.4 – 0.7	Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
delta-Damascone	CAS-No.: 57378-68-4 EC-No.: 260-709-8	0.3 – 0.6	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 1, H410
Adoxal	CAS-No.: 141-13-9 EC-No.: 205-460-8 REACH-no: 01-2120139915-49	0.2 – 0.4	Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Skin Sens. 1B, H317
Geraniol	CAS-No.: 106-24-1 EC-No.: 203-377-1 EC Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49	0.1 – 0.315	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
beta-Caryophyllene	CAS-No.: 87-44-5 EC-No.: 201-746-1 REACH-no: 01-2120745237-53	0.2 – 0.3	Skin Sens. 1B, H317 Asp. Tox. 1, H304
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7	0.06 – 0.225	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Cuminic aldehyde	CAS-No.: 122-03-2 EC-No.: 204-516-9	0.1 – 0.15	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
.beta.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 127-91-3 EC-No.: 204-872-5	0.068859 – 0.137718	Flam. Liq. 3, H226
isobutyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH)	CAS-No.: 110-19-0 EC-No.: 203-745-1 EC Index-No.: 607-026-00-7	0 – 0.0015	Flam. Liq. 2, H225 STOT SE 3, H336

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 : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see Get medical advice/attention. on this label). If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. 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 : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

Symptoms/effects after ingestion : Risk of lung oedema.

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 : Sand. Water spray. Dry powder. Foam. Carbon dioxide.

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 : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage temperature : 25 °C

Storage area : Store in a well-ventilated place. Store away from heat.

Special rules on packaging : Store in a closed container.

Packaging materials : Do not store in corrodable metal.

Germany

Storage class (LGK, TRGS 510) : LGK 10 - Combustible liquids

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 2A, LGK 5.1A, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.1B, LGK 5.1C, LGK 5.2

Joint storage permitted for : LGK 2B, LGK 3, LGK 4.1B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

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

Dipropylene glycol monomethyl ether (34590-94-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	308 mg/m³
	50 ppm
Remark	Possibility of significant uptake through the skin
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	307 mg/m³ (mixed isomers)
	50 ppm (mixed isomers)
MAK (OEL STEL)	614 mg/m³ (isomers mixtures)
	100 ppm (isomers mixtures)
OEL chemical category	Skin notation
Belgium - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin, Skin notation
Bulgaria - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Cyprus - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	270 mg/m³
OEL chemical category	Potential for cutaneous absorption
Denmark - Occupational Exposure Limits	
OEL TWA	309 mg/m³
	50 ppm
OEL STEL	618 mg/m³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Estonia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation

Dipropylene glycol monomethyl ether (34590-94-8)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	310 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
France - Occupational Exposure Limits	
VME (OEL TWA)	308 mg/m³ (restrictive limit)
	50 ppm (restrictive limit)
OEL chemical category	Risk of cutaneous absorption
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	310 mg/m³ (isomer mixture)
	50 ppm (isomer mixture)
Gibraltar - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Greece - Occupational Exposure Limits	
OEL TWA	600 mg/m³
	100 ppm
OEL STEL	900 mg/m³
	150 ppm
OEL chemical category	skin - potential for cutaneous absorption
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	308 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	308 mg/m³ ((2-Methoxymethylethoxy)propanol)
	50 ppm ((2-Methoxymethylethoxy)propanol)
OEL STEL	924 mg/m³ (calculated (2-(2-Methoxypropoxy)-1-propanol)
	150 ppm (calculated (2-(2-Methoxypropoxy)-1-propanol)
OEL chemical category	Potential for cutaneous absorption
Italy - Occupational Exposure Limits	
OEL TWA	308 mg/m³ (1-(3-Methoxypropoxy)propan-1-ol)
	50 ppm (1-(3-Methoxypropoxy)propan-1-ol)
OEL chemical category	skin - potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	skin - potential for cutaneous exposure
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	300 mg/m³ (2-(2-Methoxypropoxy)-propanol)

Dipropylene glycol monomethyl ether (34590-94-8)	
	50 ppm (2-(2-Methoxypropoxy)-propanol)
TPRV (OEL STEL)	450 mg/m³ (2-(2-Methoxypropoxy)-propanol)
	75 ppm (2-(2-Methoxypropoxy)-propanol)
OEL chemical category	Skin notation
Luxembourg - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Malta - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	300 mg/m³
	48.7 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m³ (mixture of isomers: 1-(2-Methoxy-1-methylethoxy)propan-2-ol, 1-(2-Methoxy-2-methylethoxy)propan-2-ol and 2-(2-Methoxy-1-methylethoxy)propan-1-ol)
NDSCh (OEL STEL)	480 mg/m³ (mixture of isomers: 1-(2-Methoxy-1-methylethoxy)propan-2-ol, 1-(2-Methoxy-2-methylethoxy)propan-2-ol, 2-(2-Methoxy-1-methylethoxy)propan-1-ol)
Portugal - Occupational Exposure Limits	
OEL TWA	308 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL STEL	150 ppm
OEL chemical category	skin - potential for cutaneous exposure indicative limit value
Romania - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	308 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
Slovenia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL STEL	308 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption

Dipropylene glycol monomethyl ether (34590-94-8)	
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	308 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL chemical category	skin - potential for cutaneous absorption
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	300 mg/m³
	50 ppm
KGV (OEL STEL)	450 mg/m³
	75 ppm
OEL chemical category	Skin notation
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	308 mg/m³
	50 ppm
WEL STEL (OEL STEL)	924 mg/m³ (calculated)
	150 ppm (calculated)
WEL chemical category	Potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	300 mg/m³
	50 ppm
Korttidsverdi (OEL STEL)	375 mg/m³ (value calculated)
	75 ppm (value calculated)
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	300 mg/m³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
KZGW (OEL STEL)	300 mg/m³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm (Dipropylene glycol methyl ether)

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	140 mg/m³
	25 ppm
HTP (OEL STEL)	280 mg/m³
	50 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	28 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation, Skin sensitization
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m³
	5 ppm
OEL STEL	112 mg/m³
	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	168 mg/m³
	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m³
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
	37.5 ppm (value calculated)
OEL chemical category	Allergenic substance
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	40 mg/m³
	7 ppm
KZGW (OEL STEL)	80 mg/m³
	14 ppm
OEL chemical category	Sensitizer

citral (5392-40-5)	
Belgium - Occupational Exposure Limits	
OEL TWA	32 mg/m³ (vapor and aerosol)
	5 ppm (vapor and aerosol)
OEL chemical category	Skin
Ireland - Occupational Exposure Limits	
OEL TWA	5 ppm
OEL STEL	15 ppm (calculated)
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	27 mg/m³
NDSCh (OEL STEL)	54 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	5 ppm (inhalable fraction; vapor)

citral (5392-40-5)	
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	5 ppm (inhalable fraction and vapor)
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	5 ppm (inhalable fraction and vapor)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route, dermal sensitizer

isobutyl acetate (110-19-0)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	241 mg/m³ (Butyl acetates)
	50 ppm (Butyl acetates)
MAK (OEL STEL)	480 mg/m³ (Butyl acetate)
	100 ppm (Butyl acetate)
Belgium - Occupational Exposure Limits	
OEL TWA	238 mg/m³
	50 ppm
OEL STEL	712 mg/m³
	150 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	241 mg/m³
	50 ppm
KGVI (OEL STEL)	723 mg/m³
	150 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	241 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA	241 mg/m³ (Butyl acetate, all isomers)

isobutyl acetate (110-19-0)	
	50 ppm (Butyl acetate, all isomers)
OEL STEL	723 mg/m³
	150 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	240 mg/m³ (Butyl acetate)
	50 ppm (Butyl acetate)
HTP (OEL STEL)	725 mg/m³ (Butyl acetate)
	150 ppm (Butyl acetate)
France - Occupational Exposure Limits	
VME (OEL TWA)	241 mg/m³ (restrictive limit)
	50 ppm (restrictive limit)
VLE (OEL C/STEL)	723 mg/m³ (restrictive limit)
	150 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	300 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	62 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	241 mg/m³
CK (OEL STEL)	723 mg/m³
OEL chemical category	Sensitizer
Ireland - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³ (calculated)
	150 ppm (calculated)
Italy - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm

isobutyl acetate (110-19-0)	
OEL STEL	723 mg/m³
	150 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	241 mg/m³
	50 ppm
TPRV (OEL STEL)	723 mg/m³
	150 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Malta - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	241 mg/m³
	50 ppm
TGG-15min (OEL STEL)	723 mg/m³
	150 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m³
NDSCh (OEL STEL)	720 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	241 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL STEL	723 mg/m³ (indicative limit value)
	150 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm

isobutyl acetate (110-19-0)	
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	480 mg/m³
	100 ppm
NPHV (OEL C)	700 mg/m³
Slovenia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	241 mg/m³
	50 ppm
VLA-EC (OEL STEL)	723 mg/m³
	150 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	241 mg/m³ (Butyl acetates)
	50 ppm (Butyl acetates)
KGV (OEL STEL)	723 mg/m³ (Butyl acetates)
	150 ppm (Butyl acetates)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	724 mg/m³
	150 ppm
WEL STEL (OEL STEL)	903 mg/m³
	187 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	241 mg/m³
	50 ppm
Korttidsverdi (OEL STEL)	723 mg/m³ (value from the regulation)
	150 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	240 mg/m³
	50 ppm
KZGW (OEL STEL)	720 mg/m³
	150 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm (Butyl acetates, all isomers)
ACGIH OEL STEL	150 ppm (Butyl acetates, all isomers)

.beta.-Pinene (127-91-3)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m³
	25 ppm
TPRV (OEL STEL)	300 mg/m³
	50 ppm
Portugal - Occupational Exposure Limits	
OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	113 mg/m³
	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m³
	25 ppm
KGV (OEL STEL)	300 mg/m³
	50 ppm
OEL chemical category	Sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m³
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
	37.5 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

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:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Wear protective gloves.

8.2.2.3. Respiratory protection

Respiratory protection:
Wear appropriate mask. [In case of inadequate ventilation] wear respiratory protection.

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:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	light yellow. amber. Conforms to standard.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not applicable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	70 °C

Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	20.5 mm²/s
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 available
Particle characteristics	:	Not applicable

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

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	:	Not classified
Acute toxicity (dermal)	:	Not classified
Acute toxicity (inhalation)	:	Not classified

Dipropylene glycol monomethyl ether (34590-94-8)	
LD50 oral rat	5.35 g/kg (Source: NLM_HSDB)
LD50 dermal rabbit	9500 mg/kg (Source: NLM_CIP)

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 5 g/kg (Source: CHEMVIEW)

Linalyl acetate (115-95-7)	
LD50 oral rat	14550 mg/kg (Source: EPA_HPV)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA)
LC50 Inhalation - Rat	> 18.94 mg/l (Exposure time: 8 h Source: ECHA)

Citrus medica limonum (Lemon) peel oil (8008-56-8)	
LD50 oral rat	2840 mg/kg (Source: NLM_CIP)

Linalool (78-70-6)	
LD50 oral	2790 mg/kg bodyweight

Patchouli oil (8014-09-3)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)

Bergamot oil (8007-75-8)	
LD50 oral rat	11520 mg/kg (Source: NLM_CIP)

Cyclamal (103-95-7)	
LD50 oral rat	3810 mg/kg (Source: NLM_CIP)
LD50 oral	3810 mg/kg bodyweight
LD50 dermal rat	> 5000 mg/kg (Source: ECHA_API)

COUMARIN (91-64-5)	
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)
LD50 oral	290 mg/kg bodyweight
LD50 dermal rat	293 mg/kg (Source: ECHA_API)

Citronellol Pure (106-22-9)	
LD50 oral rat	3450 mg/kg (Source: NLM_CIP)
LD50 oral	3450 mg/kg bodyweight
LD50 dermal rabbit	2650 mg/kg (Source: EPA_HPV)
LD50 dermal	2650 mg/kg bodyweight

Vertofix (32388-55-9)	
LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)

citral (5392-40-5)	
LD50 oral rat	4960 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	2250 mg/kg (Source: NLM_CIP)

benzyl benzoate (120-51-4)	
LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	1160 mg/kg bodyweight
LD50 dermal rabbit	4000 mg/kg (Source: NLM_CIP)

Triplal (Vertocitral) (68039-49-6)	
LD50 oral	3900 mg/kg bodyweight

Ginger oil (8007-08-7)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)

delta-Damascone (57378-68-4)	
LD50 oral	1400 mg/kg bodyweight

Geraniol (106-24-1)	
LD50 oral rat	3600 mg/kg (Source: NLM_CIP)
LD50 oral	3600 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)

Nerol (106-25-2)	
LD50 oral rat	4500 mg/kg (Source: NLM_CIP)
LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)

Cuminic aldehyde (122-03-2)	
LD50 oral rat	1390 mg/kg (Source: NLM_CIP)
LD50 oral	1390 mg/kg bodyweight
LD50 dermal	2800 mg/kg bodyweight

isobutyl acetate (110-19-0)	
LD50 oral rat	15400 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 17400 mg/kg (Source: NLM_CIP)

.beta.-Pinene (127-91-3)	
LD50 oral rat	> 5000 mg/kg (Source: EPA_HPV)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
IARC group	3 - Not classifiable

COUMARIN (91-64-5)	
IARC group	3 - Not classifiable

Reproductive toxicity : Suspected of damaging fertility or the unborn child.
STOT-single exposure : Not classified

isobutyl acetate (110-19-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified
Aspiration hazard : May be fatal if swallowed and enters airways.

SWEET GRACE #EU54493F	
Viscosity, kinematic	20.5 mm²/s

benzyl benzoate (120-51-4)	
Viscosity, kinematic	7.456 mm²/s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Toxic to aquatic life with long lasting effects.

Dipropylene glycol monomethyl ether (34590-94-8)	
LC50 - Fish [1]	> 10000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	1919 mg/l (Exposure time: 48 h - Species: Daphnia magna)

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LC50 - Fish [1]	0.619 – 0.796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: EPA)

Linalyl acetate (115-95-7)	
LC50 - Fish [1]	11 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through] Source: ECHA)

Linalool (78-70-6)	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)

citral (5392-40-5)	
EC50 - Crustacea [1]	7 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	16 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	19 mg/l (Species: Desmodesmus subspicatus)

benzyl benzoate (120-51-4)	
LC50 - Fish [1]	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
NOEC (chronic)	0.168 mg/l

Geraniol (106-24-1)	
LC50 - Fish [1]	22 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)

Nerol (106-25-2)	
LC50 - Fish [1]	20.3 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)

Cuminic aldehyde (122-03-2)	
LC50 - Fish [1]	6.62 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])

isobutyl acetate (110-19-0)	
LC50 - Fish [1]	17 mg/l (Exposure time: 96 h - Species: Oryzias latipes Source: ECHA)

12.2. Persistence and degradability

GRACE TYPE #TCDL-CFRA-BOWL-NSGT	
Persistence and degradability	Not established.
Dipropylene glycol monomethyl ether (34590-94-8)	
Persistence and degradability	Rapidly degradable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Persistence and degradability	Rapidly degradable
Linalyl acetate (115-95-7)	
Persistence and degradability	Rapidly degradable
Citrus medica limonum (Lemon) peel oil (8008-56-8)	
Persistence and degradability	Rapidly degradable
Linalool (78-70-6)	
Persistence and degradability	Rapidly degradable
Patchouli oil (8014-09-3)	
Persistence and degradability	Rapidly degradable
Bergamot oil (8007-75-8)	
Persistence and degradability	Rapidly degradable
Floralozone (67634-15-5)	
Persistence and degradability	Rapidly degradable
Cyclamal (103-95-7)	
Persistence and degradability	Rapidly degradable
COUMARIN (91-64-5)	
Persistence and degradability	Rapidly degradable
Citronellol Pure (106-22-9)	
Persistence and degradability	Rapidly degradable
Vertofix (32388-55-9)	
Persistence and degradability	Rapidly degradable
citral (5392-40-5)	
Persistence and degradability	Rapidly degradable
benzyl benzoate (120-51-4)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Triplal (Vertocitral) (68039-49-6)	
Persistence and degradability	Rapidly degradable
Ginger oil (8007-08-7)	
Persistence and degradability	Rapidly degradable
delta-Damascone (57378-68-4)	
Persistence and degradability	Rapidly degradable

Geraniol (106-24-1)	
Persistence and degradability	Rapidly degradable

Nerol (106-25-2)	
Persistence and degradability	Rapidly degradable

Adoxal (141-13-9)	
Persistence and degradability	Rapidly degradable

beta-Caryophyllene (87-44-5)	
Persistence and degradability	Rapidly degradable

Cuminic aldehyde (122-03-2)	
Persistence and degradability	Rapidly degradable

isobutyl acetate (110-19-0)	
Persistence and degradability	Rapidly degradable

.beta.-Pinene (127-91-3)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

GRACE TYPE #TCDL-CFRA-BOWL-NSGT	
Bioaccumulative potential	Not established.

Dipropylene glycol monomethyl ether (34590-94-8)	
Partition coefficient n-octanol/water (Log Pow)	0.35 (at 25 °C (at pH 7)

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4.38 (at 37 °C (at pH 7.2)

Linalyl acetate (115-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 (at 25 °C)

Cyclamal (103-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.4 (at 35 °C)

Citronellol Pure (106-22-9)	
Partition coefficient n-octanol/water (Log Pow)	3.41 (at 25 °C)

Vertofix (32388-55-9)	
BCF - Fish [1]	(3920 dimensionless (organ w.w.)
Partition coefficient n-octanol/water (Log Pow)	5.6 – 5.9

citral (5392-40-5)	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 25 °C)

benzyl benzoate (120-51-4)	
Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
Bioaccumulative potential	Not established.

Geraniol (106-24-1)	
Partition coefficient n-octanol/water (Log Pow)	2.6 (at 25 °C)

Nerol (106-25-2)	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 30 °C (at pH 6.5)

Adoxal (141-13-9)	
Partition coefficient n-octanol/water (Log Pow)	6.2 (at 35 °C (at pH 7)

beta-Caryophyllene (87-44-5)	
Partition coefficient n-octanol/water (Log Pow)	6.23 (at 25 °C (at pH 7)

Cuminic aldehyde (122-03-2)	
Partition coefficient n-octanol/water (Log Pow)	2.8 (at 35 °C (at pH 7)

isobutyl acetate (110-19-0)	
BCF - Fish [1]	(no significant bioconcentration)
Partition coefficient n-octanol/water (Log Pow)	2.3 (at 25 °C (at pH 7)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

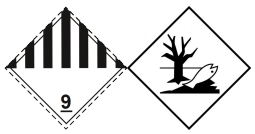
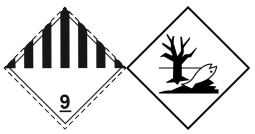
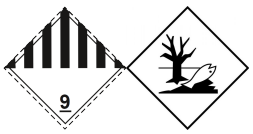
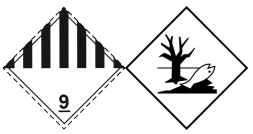
SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecological information : Avoid release to the environment.
HP Code : HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
HP10 - "Toxic for reproduction:" waste which has adverse effects on sexual function and fertility in adult males and females, as well as developmental toxicity in the offspring.
HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix)	Environmentally hazardous substance, liquid, n.o.s. (Vertofix)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Vertofix), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Vertofix), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	:	M6
Special provisions (ADR)	:	274, 335, 375, 601
Limited quantities (ADR)	:	5l
Excepted quantities (ADR)	:	E1
Packing instructions (ADR)	:	P001, IBC03, LP01, R001
Special packing provisions (ADR)	:	PP1
Mixed packing provisions (ADR)	:	MP19
Portable tank and bulk container instructions (ADR)	:	T4
Portable tank and bulk container special provisions (ADR)	:	TP1, TP29
Tank code (ADR)	:	LGBV
Vehicle for tank carriage	:	AT
Transport category (ADR)	:	3
Special provisions for carriage - Packages (ADR)	:	V12
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13
Hazard identification number (Kemler No.)	:	90
Orange plates	:	

Tunnel restriction code (ADR)	:	-
EAC code	:	•3Z

Transport by sea

Special provisions (IMDG)	:	274, 335, 969
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	LP01, P001
Special packing provisions (IMDG)	:	PP1
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1, TP29
EmS-No. (Fire)	:	F-A
EmS-No. (Spillage)	:	S-F
Stowage category (IMDG)	:	A

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	450L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	450L
Special provisions (IATA)	:	A97, A158, A197, A215
ERG code (IATA)	:	9L

Inland waterway transport

Classification code (ADN)	:	M6
Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

Rail transport

Classification code (RID)	:	M6
Special provisions (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	PP1
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW31
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(a)	(R)-p-mentha-1,8-diene; d-limonene ; Citrus medica limonum (Lemon) peel oil ; Bergamot oil ; isobutyl acetate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	GRACE TYPE ; (R)-p-mentha-1,8-diene; d-limonene ; Linalyl acetate ; Citrus medica limonum (Lemon) peel oil ; Linalool ; Patchouli oil ; Bergamot oil ; Floralozone ; Cyclamal ; Citronellol Pure ; Vertofix ; citral ; benzyl benzoate ; Triplal (Vertocitral) ; Ginger oil ; delta-Damascone ; Geraniol ; Nerol ; Adoxal ; Cuminic aldehyde ; isobutyl acetate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	GRACE TYPE ; (R)-p-mentha-1,8-diene; d-limonene ; Citrus medica limonum (Lemon) peel oil ; Patchouli oil ; Bergamot oil ; Floralozone ; Cyclamal ; Vertofix ; benzyl benzoate ; Triplal (Vertocitral) ; Ginger oil ; delta-Damascone ; Adoxal	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	(R)-p-mentha-1,8-diene; d-limonene ; Citrus medica limonum (Lemon) peel oil ; Bergamot oil ; isobutyl acetate	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

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.

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)

Drug Precursors Regulation (273/2004)

Contains 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. National regulations

France

Occupational diseases	
Code	Description
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : Lemon oil ,Bergamot oil,Floralozone,Triplal (Vertocitral),Ginger oil are listed
SZW-lijst van mutagene stoffen : Lemon oil ,Bergamot oil,Floralozone,Triplal (Vertocitral),Ginger oil are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Class for fire hazard : Class III-1
Store unit : 50 liter
Classification remarks : Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3

Full text of H- and EUH-statements:	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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.