

APEROL CC-16403

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 2/19/2024 Revision date: 8/16/2024 Version: 1.0



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

1.1. Product identifier

Product form : Mixture
Trade name : APEROL CC-16403
UFI : 56WC-M3GV-T00P-0DRS
Product code : CC-16403
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

Candle Craft
Weiherwiese 10
65510 Idstein - Germany
T 49-6126-9363 -0
info@candlecraft.de - www.candlecraft.de

1.4. Emergency telephone number

Emergency number : 1-800-255-3924; +01-813-248-0585; China: +400-120-0751; Mexico: +01-800-099-0731;
Brazil: +0-800-591-6042; India: +000-800-100-4086

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (inhalation: dust, mist) Category 4 H332
Skin sensitisation, Category 1 H317
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

Harmful if inhaled. 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

GHS09

Signal word (CLP) :

Warning

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Contains	: Hexyl salicylate; Aldehyde C-16; Hexyl cinnamic aldehyde; Methyl cinnamate; Allyl cyclohexylpropionate; Allyl heptanoate; Allyl amyl glycolate; Allyl caproate; trans-Anethole; Triplal (Vertocitral); Acetate PA; Citronellol Pure; citral; Aldehyde C-12; (R)-p-mentha-1,8-diene; d-limonene
Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H332 - Harmful if inhaled. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P271 - Use only outdoors or in a well-ventilated area. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water.
Extra phrases	: For professional users only.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ 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]
Bis(2-ethylhexyl) adipate substance with national workplace exposure limit(s) (PL)	CAS-No.: 103-23-1 EC-No.: 203-090-1 REACH-no: 01-2119439699-19	15.3 – 30.55	Not classified
Verdorex	CAS-No.: 88-41-5 EC-No.: 201-828-7 REACH-no: 01-2119970713-33	2.1 – 4.2	Aquatic Chronic 2, H411
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans)	CAS-No.: 63500-71-0 EC-No.: 405-040-6 EC Index-No.: 603-101-00-3 REACH-no: 01-000015458-64	1 – 4.021	Eye Irrit. 2, H319
Verdyl propionate	CAS-No.: 68912-13-0 EC-No.: 272-805-7 REACH-no: 01-2119969447-21	1.8 – 3.5	Aquatic Chronic 2, H411
Verdyl acetate	CAS-No.: 5413-60-5 EC-No.: 226-501-6	1.8 – 3.5	Aquatic Chronic 3, H412
Aldehyde C-16	CAS-No.: 77-83-8 EC-No.: 201-061-8 REACH-no: 01-2119967770-28	1.7 – 3.4	Skin Sens. 1B, H317 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexyl cinnamic aldehyde	CAS-No.: 101-86-0 EC-No.: 202-983-3 REACH-no: 01-2119533092-50	1.7 – 3.4	Skin Sens. 1, H317 Aquatic Chronic 2, H411
Methyl cinnamate	CAS-No.: 103-26-4 EC-No.: 203-093-8 REACH-no: 01-2119979458-16	1.4 – 2.8	Skin Sens. 1B, H317
Oenanthic ether (Ethyl heptanoate)	CAS-No.: 106-30-9 EC-No.: 203-382-9	1.2 – 2.3	Flam. Liq. 3, H226 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Allyl cyclohexylpropionate	CAS-No.: 2705-87-5 EC-No.: 220-292-5	1.2 – 2.3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Sens. 1, H317 Aquatic Chronic 1, H410
Allyl heptanoate	CAS-No.: 142-19-8 EC-No.: 205-527-1 REACH-no: 01-2119488961-23	1 – 2	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 3, H412
Ethyl caproate	CAS-No.: 123-66-0 EC-No.: 204-640-3	1 – 2	Flam. Liq. 3, H226 Skin Irrit. 2, H315
isopentyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, DE, DK, EE, ES, FI, FR, 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.: 123-92-2 EC-No.: 204-662-3 EC Index-No.: 607-130-00-2 REACH-no: 01-2119548408-32	0.9 – 1.8	Flam. Liq. 3, H226
Allyl amyl glycolate	CAS-No.: 67634-00-8 EC-No.: 266-803-5	0.8 – 1.6	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation), H330 Aquatic Chronic 1, H410
Allyl caproate	CAS-No.: 123-68-2 EC-No.: 204-642-4 REACH-no: 01-2119983573-26	0.8 – 1.5	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Ethyl maltol	CAS-No.: 4940-11-8 EC-No.: 225-582-5	0.8 – 1.5	Acute Tox. 4 (Oral), H302
trans-Anethole	CAS-No.: 4180-23-8 EC-No.: 224-052-0	0.7 – 1.4	Skin Sens. 1B, H317
Benzyl butyrate	CAS-No.: 103-37-7 EC-No.: 203-105-1	0.6 – 1.2	Acute Tox. 4 (Oral), H302
Cyclogalbanate (Allyl Cyclohexyl Glycolate)	CAS-No.: 68901-15-5 EC-No.: 272-657-3 REACH-no: 01-2120770514-54	0.5 – 1	Acute Tox. 4 (Oral), H302 Aquatic Chronic 1, H410
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.3 – 0.6945	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Acetate PA	CAS-No.: 7493-74-5 EC-No.: 231-335-2	0.3 – 0.55	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	0.3 – 0.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Hexyl salicylate	CAS-No.: 6259-76-3 EC-No.: 228-408-6	0.02 – 0.4	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
benzaldehyde substance with national workplace exposure limit(s) (BG, FI, HU, LT, LV, PL)	CAS-No.: 100-52-7 EC-No.: 202-860-4 EC Index-No.: 605-012-00-5 REACH-no: 01-2119455540-44	0.1 – 0.25	Acute Tox. 4 (Oral), H302
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	0.1 – 0.2	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	0.1 – 0.132	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Aldehyde C-12	CAS-No.: 112-54-9 EC-No.: 203-983-6	0.1 – 0.1	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
(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	0.1 – 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Alcohol C-10 substance with national workplace exposure limit(s) (BG, DE, LT, LV, RO, CH)	CAS-No.: 112-30-1 EC-No.: 203-956-9	0 – 0.0084	Aquatic Chronic 3, H412
Aldehyde C-6 substance with national workplace exposure limit(s) (FI, PL)	CAS-No.: 66-25-1 EC-No.: 200-624-5	0 – 0.0021	Flam. Liq. 3, H226
Caproic acid substance with national workplace exposure limit(s) (BG, LT, LV)	CAS-No.: 142-62-1 EC-No.: 205-550-7	0 – 0.0001	Eye Dam. 1, H318 Skin Corr. 1C, H314

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

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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 poison center or a doctor if you feel unwell.
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. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention. 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 eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

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

Fire hazard	: Extremely flammable liquid and vapour. Combustible liquid.
Explosion hazard	: May form flammable/explosive vapour-air 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

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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6.1.1. For non-emergency personnel

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

Additional hazards when processed	: Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Precautions for safe handling	: No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. 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. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures	: Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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	: Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep in fireproof place. Keep container tightly closed. 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 in a well-ventilated place. Keep cool.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Heat sources. 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.

Switzerland

Storage class (LK)	: LK 10/12 - Liquids
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7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Bis(2-ethylhexyl) adipate (103-23-1)	
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	400 mg/m ³
isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	270 mg/m ³
	50 ppm
IOEL STEL	540 mg/m ³
	100 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	270 mg/m ³ (Pentyl acetate (all isomers))
	50 ppm (Pentyl acetate (all isomers))
MAK (OEL STEL)	540 mg/m ³ (Pentylacetate)
	100 ppm (Pentylacetate)
Belgium - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	270 mg/m ³
	50 ppm
KGVI (OEL STEL)	540 mg/m ³
	100 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	271 mg/m ³ (Amyl acetate, all isomers)

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isopentyl acetate (123-92-2)	
	50 ppm (Amyl acetate, all isomers)
OEL STEL	540 mg/m ³
	100 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	270 mg/m ³ (Pentyl acetate)
	50 ppm (Pentyl acetate)
HTP (OEL STEL)	540 mg/m ³
	100 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	270 mg/m ³ (restrictive limit)
	50 ppm (restrictive limit)
VLE (OEL C/STEL)	540 mg/m ³ (restrictive limit)
	100 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	270 mg/m ³
	50 ppm
Gibraltar - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Greece - Occupational Exposure Limits	
OEL TWA	530 mg/m ³
	100 ppm
OEL STEL	800 mg/m ³
	150 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	270 mg/m ³
CK (OEL STEL)	540 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA	260 mg/m ³
	50 ppm
OEL STEL	520 mg/m ³
	100 ppm

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isopentyl acetate (123-92-2)	
Italy - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	270 mg/m ³
	50 ppm
TPRV (OEL STEL)	540 mg/m ³
	100 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Malta - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Netherlands - Occupational Exposure Limits	
TGG-15min (OEL STEL)	530 mg/m ³
	98.1 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	250 mg/m ³
NDSCh (OEL STEL)	500 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	270 mg/m ³ (indicative limit value)
	50 ppm (indicative limit value (Pentyl acetate, all isomers))
OEL STEL	540 mg/m ³ (indicative limit value)
	100 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm

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isopentyl acetate (123-92-2)	
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	270 mg/m ³
	50 ppm
NPHV (OEL C)	540 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	270 mg/m ³ (indicative limit value)
	50 ppm (indicative limit value)
VLA-EC (OEL STEL)	540 mg/m ³
	100 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	270 mg/m ³ (Pentyl acetates)
	50 ppm (Pentyl acetates)
KGV (OEL STEL)	540 mg/m ³ (Pentyl acetates)
	100 ppm (Pentyl acetates)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	260 mg/m ³
	50 ppm
Korttidsverdi (OEL STEL)	325 mg/m ³ (value calculated)
	75 ppm (value calculated)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	260 mg/m ³ (Pentyl acetate all isomers)
	50 ppm (Pentyl acetate all isomers)
KZGW (OEL STEL)	260 mg/m ³ (Pentyl acetate all isomers)
	50 ppm (Pentyl acetate all isomers)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm (Pentyl acetate, all isomers)
ACGIH OEL STEL	100 ppm (Pentyl acetate, all isomers)
benzaldehyde (100-52-7)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	4.4 mg/m ³
	1 ppm
HTP (OEL C)	17.4 mg/m ³

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benzaldehyde (100-52-7)	
	4 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m ³
CK (OEL STEL)	10 mg/m ³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m ³
NDSCh (OEL STEL)	40 mg/m ³
citral (5392-40-5)	
Belgium - Occupational Exposure Limits	
OEL TWA	32 mg/m ³ (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/m ³
NDSCh (OEL STEL)	54 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	5 ppm (inhalable fraction; vapor)
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
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	140 mg/m ³
	25 ppm
HTP (OEL STEL)	280 mg/m ³
	50 ppm

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(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	28 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	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/m ³
	5 ppm
OEL STEL	112 mg/m ³
	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	168 mg/m ³
	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m ³
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m ³ (value calculated)
	37.5 ppm (value calculated)
OEL chemical category	Allergenic substance
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	40 mg/m ³
	7 ppm
KZGW (OEL STEL)	80 mg/m ³
	14 ppm
OEL chemical category	Sensitizer
Alcohol C-10 (112-30-1)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	66 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	10 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Latvia - Occupational Exposure Limits	
OEL TWA	10 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	10 mg/m ³

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Alcohol C-10 (112-30-1)	
Romania - Occupational Exposure Limits	
OEL TWA	100 mg/m ³
	15 ppm
OEL STEL	200 mg/m ³
	30 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	66 mg/m ³ (aerosol, vapour)
	10 ppm (aerosol, vapour)
KZGW (OEL STEL)	66 mg/m ³ (aerosol, vapour)
	10 ppm (aerosol, vapour)
Aldehyde C-6 (66-25-1)	
Finland - Occupational Exposure Limits	
HTP (OEL STEL)	42 mg/m ³
	10 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	40 mg/m ³
NDSCh (OEL STEL)	80 mg/m ³
Caproic acid (142-62-1)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³

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.

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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	: Extremely flammable liquid and vapour,Not applicable,Combustible liquid
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 76 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: 0.005826022 mm Hg (calculated value)
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

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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

VOC content : 27.6349 % (calculated value)(CARB VOC) (%w/w)

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

Extremely flammable liquid and vapour. May form flammable/explosive vapour-air mixture. Combustible liquid.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Sparks. Heat. Direct sunlight. Overheating. Open flame. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

May release flammable gases. 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) : Inhalation:dust,mist: Harmful if inhaled.

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ATE CLP (dust,mist)	2.564 mg/l/4h
Bis(2-ethylhexyl) adipate (103-23-1)	
LD50 oral rat	5600 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	8410 mg/kg (Source: NLM_CIP)
LC50 Inhalation - Rat	> 5.7 mg/l/4h
Verdox (88-41-5)	
LD50 oral rat	4600 mg/kg (Source: NLM_CIP)
LD50 oral	4600 mg/kg
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) (63500-71-0)	
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
Hexyl salicylate (6259-76-3)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)

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Verdyl propionate (68912-13-0)	
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Verdyl acetate (5413-60-5)	
LD50 oral	3050 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Aldehyde C-16 (77-83-8)	
LD50 oral rat	5470 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
Hexyl cinnamic aldehyde (101-86-0)	
LD50 oral rat	3100 mg/kg (Source: NLM_CIP)
LD50 oral	3100 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg (Source: EPA_HPVP)
LC50 Inhalation - Rat	> 5 mg/l/4h
Methyl cinnamate (103-26-4)	
LD50 oral rat	2610 mg/kg (Source: NLM_CIP)
LD50 oral	2610 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Oenanthic ether (Ethyl heptanoate) (106-30-9)	
LD50 oral rat	> 34640 mg/kg (Source: NLM_CIP)
Allyl cyclohexylpropionate (2705-87-5)	
LD50 oral rat	585 mg/kg (Source: NLM_CIP)
LD50 oral	380 mg/kg bodyweight
LD50 dermal rabbit	1600 mg/kg (Source: ECHA_API)
LD50 dermal	1600 mg/kg bodyweight
Allyl heptanoate (142-19-8)	
LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	218 mg/kg
LD50 dermal rabbit	810 mg/kg (Source: ECHA_API)
LD50 dermal	810 mg/kg
Allyl amyl glycolate (67634-00-8)	
LD50 oral	500 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat	0.43 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	0.5 mg/l/4h
Allyl caproate (123-68-2)	
LD50 oral	218 mg/kg
LD50 dermal rabbit	820 mg/kg (Source: ECHA_API)
LD50 dermal	300 mg/kg

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Ethyl maltol (4940-11-8)	
LD50 oral rat	1150 mg/kg (Source: NLM_CIP)
LD50 oral	1200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
trans-Anethole (4180-23-8)	
LD50 oral rat	2090 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 4900 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat	> 5.1 mg/l/4h
Benzyl butyrate (103-37-7)	
LD50 oral rat	2330 mg/kg (Source: NLM_CIP)
LD50 oral	1850 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Cyclogalbanate (Allyl Cyclohexyl Glycolate) (68901-15-5)	
LD50 oral rat	620 ml/kg
LD50 oral	682 mg/kg bodyweight
LD50 dermal rat	> 2000 ml/kg
Triplal (Vertocitral) (68039-49-6)	
LD50 oral	2330 mg/kg
Acetate PA (7493-74-5)	
LD50 oral rat	475 µl/kg (Source: NLM_CIP)
LD50 oral	500 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
LD50 dermal	1100 mg/kg bodyweight
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_HP)
LD50 dermal	2650 mg/kg bodyweight
benzaldehyde (100-52-7)	
LD50 oral rat	1292 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 1250 mg/kg (Source: JAPAN_GHS)
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)

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Aldehyde C-12 (112-54-9)	
LD50 oral rat	23 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
(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)
Alcohol C-10 (112-30-1)	
LD50 oral rat	4720 mg/kg (Source: NZ_CCID)
LD50 dermal rabbit	3560 mg/kg (Source: NLM_CIP)
Aldehyde C-6 (66-25-1)	
LD50 oral rat	4890 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 8100 mg/kg (Source: ECHA_API)
Caproic acid (142-62-1)	
LD50 oral rat	3 g/kg (Source: NLM_HSDB)
LD50 oral	4000 mg/kg bodyweight
LD50 dermal rabbit	630 mg/kg (Source: NLM_HSDB)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Bis(2-ethylhexyl) adipate (103-23-1)	
IARC group	3 - Not classifiable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
benzyl benzoate (120-51-4)	
Viscosity, kinematic	7.456 mm ² /s
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Hydrocarbon	Yes

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

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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.

Bis(2-ethylhexyl) adipate (103-23-1)	
LC50 - Fish [1]	0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
LC50 - Fish [2]	0.48 – 0.85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)
EC50 - Crustacea [1]	> 1.6 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)
Verdyl propionate (68912-13-0)	
LC50 - Fish [1]	6.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: ECHA)
Aldehyde C-16 (77-83-8)	
LC50 - Fish [1]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
Methyl cinnamate (103-26-4)	
LC50 - Fish [1]	2.76 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)
Allyl cyclohexylpropionate (2705-87-5)	
LC50 - Fish [1]	0.13 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: ECHA)
Ethyl caproate (123-66-0)	
LC50 - Fish [1]	8.02 – 9.97 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
Allyl caproate (123-68-2)	
LC50 - Fish [1]	0.117 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
Ethyl maltol (4940-11-8)	
LC50 - Fish [1]	> 85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: ECHA)
benzaldehyde (100-52-7)	
LC50 - Fish [1]	10.6 – 11.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
LC50 - Fish [2]	12.69 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)
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)

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benzyl benzoate (120-51-4)	
NOEC (chronic)	0.168 mg/l
(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)
Alcohol C-10 (112-30-1)	
LC50 - Fish [1]	2.2 – 2.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	4.12 – 6.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
EC50 - Crustacea [1]	3 mg/l (Exposure time: 48 h - Species: Daphnia magna)
Aldehyde C-6 (66-25-1)	
LC50 - Fish [1]	12 – 16.5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
Caproic acid (142-62-1)	
LC50 - Fish [1]	306 – 334 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)

12.2. Persistence and degradability

APEROL CC-16403	
Persistence and degradability	Not established.
Bis(2-ethylhexyl) adipate (103-23-1)	
Persistence and degradability	Rapidly degradable
Verdox (88-41-5)	
Persistence and degradability	Rapidly degradable
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) (63500-71-0)	
Persistence and degradability	Rapidly degradable
Hexyl salicylate (6259-76-3)	
Persistence and degradability	Rapidly degradable
Verdyl propionate (68912-13-0)	
Persistence and degradability	Rapidly degradable
Verdyl acetate (5413-60-5)	
Persistence and degradability	Rapidly degradable
Aldehyde C-16 (77-83-8)	
Persistence and degradability	Rapidly degradable
Hexyl cinnamic aldehyde (101-86-0)	
Persistence and degradability	Rapidly degradable

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Methyl cinnamate (103-26-4)	
Persistence and degradability	Not established.
Oenanthic ether (Ethyl heptanoate) (106-30-9)	
Persistence and degradability	Rapidly degradable
Allyl cyclohexylpropionate (2705-87-5)	
Persistence and degradability	Rapidly degradable
Allyl heptanoate (142-19-8)	
Persistence and degradability	Rapidly degradable
Ethyl caproate (123-66-0)	
Persistence and degradability	Rapidly degradable
isopentyl acetate (123-92-2)	
Persistence and degradability	Rapidly degradable
Allyl amyl glycolate (67634-00-8)	
Persistence and degradability	Rapidly degradable
Allyl caproate (123-68-2)	
Persistence and degradability	Rapidly degradable
Ethyl maltol (4940-11-8)	
Persistence and degradability	Rapidly degradable
trans-Anethole (4180-23-8)	
Persistence and degradability	Rapidly degradable
Benzyl butyrate (103-37-7)	
Persistence and degradability	Rapidly degradable
Cyclogalbanate (Allyl Cyclohexyl Glycolate) (68901-15-5)	
Persistence and degradability	Rapidly degradable
Triplal (Vertocitral) (68039-49-6)	
Persistence and degradability	Rapidly degradable
Acetate PA (7493-74-5)	
Persistence and degradability	Rapidly degradable
Citronellol Pure (106-22-9)	
Persistence and degradability	Rapidly degradable
benzaldehyde (100-52-7)	
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.

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Aldehyde C-12 (112-54-9)	
Persistence and degradability	Rapidly degradable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Persistence and degradability	Rapidly degradable
Alcohol C-10 (112-30-1)	
Persistence and degradability	Rapidly degradable
Aldehyde C-6 (66-25-1)	
Persistence and degradability	Rapidly degradable
Caproic acid (142-62-1)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

APEROL CC-16403	
Bioaccumulative potential	Not established.
Bis(2-ethylhexyl) adipate (103-23-1)	
BCF - Fish [1]	(27 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	8.94 (at 25 °C)
tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) (63500-71-0)	
Partition coefficient n-octanol/water (Log Pow)	1.65 (at 23 °C (at pH >6.09-<6.74))
Hexyl salicylate (6259-76-3)	
Partition coefficient n-octanol/water (Log Pow)	5.5 (at 30 °C (at pH 7))
Verdyl propionate (68912-13-0)	
Partition coefficient n-octanol/water (Log Pow)	4.4 (at 30 °C)
Verdyl acetate (5413-60-5)	
Partition coefficient n-octanol/water (Log Pow)	4.2 (at 30 °C (at pH 5.92))
Aldehyde C-16 (77-83-8)	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C (cis isomer))
Methyl cinnamate (103-26-4)	
Partition coefficient n-octanol/water (Log Pow)	2.68 (at 25 °C (at pH >4.73-<7.06))
Bioaccumulative potential	Not established.
Oenanthic ether (Ethyl heptanoate) (106-30-9)	
Partition coefficient n-octanol/water (Log Pow)	3.98 (at 35 °C (at pH 7))
Allyl cyclohexylpropionate (2705-87-5)	
Partition coefficient n-octanol/water (Log Pow)	4.28 (at 20 °C (at pH 5.3))
Allyl heptanoate (142-19-8)	
Partition coefficient n-octanol/water (Log Pow)	3.97 (at 20 °C (at pH 5.3))

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Ethyl caproate (123-66-0)	
Partition coefficient n-octanol/water (Log Pow)	2.96 (at 22.4 °C)
isopentyl acetate (123-92-2)	
Partition coefficient n-octanol/water (Log Pow)	2.7 (at 35 °C)
Allyl amyl glycolate (67634-00-8)	
Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 2.3))
Allyl caproate (123-68-2)	
Partition coefficient n-octanol/water (Log Pow)	3.191 (at 20 °C (at pH 5))
Ethyl maltol (4940-11-8)	
Partition coefficient n-octanol/water (Log Pow)	2.9 (at 25 °C)
Benzyl butyrate (103-37-7)	
Partition coefficient n-octanol/water (Log Pow)	3.127 (at 25 °C (at pH 7.58))
Cyclogalbanate (Allyl Cyclohexyl Glycolate) (68901-15-5)	
Partition coefficient n-octanol/water (Log Pow)	2.8 (at 24.7 °C)
Acetate PA (7493-74-5)	
Partition coefficient n-octanol/water (Log Pow)	2.33 (at 24.7 °C)
Citronellol Pure (106-22-9)	
Partition coefficient n-octanol/water (Log Pow)	3.41 (at 25 °C)
benzaldehyde (100-52-7)	
BCF - Fish [1]	(no significant bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	1.4 (at 25 °C)
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.
Aldehyde C-12 (112-54-9)	
Partition coefficient n-octanol/water (Log Pow)	4.9 (at 35 °C)
(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))
Alcohol C-10 (112-30-1)	
Partition coefficient n-octanol/water (Log Pow)	4.5 (at 25 °C (at pH 6))
Aldehyde C-6 (66-25-1)	
Partition coefficient n-octanol/water (Log Pow)	2.3 (at 25 °C (at pH 5))
Caproic acid (142-62-1)	
Partition coefficient n-octanol/water (Log Pow)	1.88

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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 of contents/container in accordance with local/national laws and regulations.
Dispose in a safe manner in accordance with local/national regulations.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecological information : Avoid release to the environment.
HP Code : HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
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. (Allyl cyclohexylpropionate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate)	Environmentally hazardous substance, liquid, n.o.s. (Allyl cyclohexylpropionate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Allyl cyclohexylpropionate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl cyclohexylpropionate), 9, III
14.3. Transport hazard class(es)				
9	9	9	9	9

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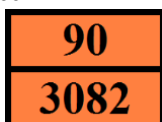
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
				
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

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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)	Oenanthic ether (Ethyl heptanoate) ; Ethyl caproate ; isopentyl acetate ; (R)-p-mentha-1,8-diene; d-limonene ; Aldehyde C-6	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

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	APEROL CC-16403 ; tetrahydro-2-isobutyl-4-methylpyran-4-ol, mixed isomers (cis and trans) ; Hexyl salicylate ; Hexyl cinnamic aldehyde ; Aldehyde C-16 ; Allyl cyclohexylpropionate ; Benzyl butyrate ; Ethyl caproate ; Allyl caproate ; Allyl heptanoate ; trans-Anethole ; Allyl amyl glycolate ; Triplal (Vertocitral) ; Cyclogalbanate (Allyl Cyclohexyl Glycolate) ; benzaldehyde ; Caproic acid ; citral ; (R)-p-mentha-1,8-diene; d-limonene ; Citronellol Pure ; Aldehyde C-12 ; Acetate PA ; benzyl benzoate	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)	APEROL CC-16403 ; Verdox ; Verdyl acetate ; Hexyl salicylate ; Hexyl cinnamic aldehyde ; Oenanthic ether (Ethyl heptanoate) ; Aldehyde C-16 ; Allyl cyclohexylpropionate ; Allyl caproate ; Allyl heptanoate ; Allyl amyl glycolate ; Triplal (Vertocitral) ; Cyclogalbanate (Allyl Cyclohexyl Glycolate) ; Alcohol C-10 ; (R)-p-mentha-1,8-diene; d-limonene ; Acetate PA ; benzyl benzoate	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.	Oenanthic ether (Ethyl heptanoate) ; Ethyl caproate ; isopentyl acetate ; (R)-p-mentha-1,8-diene; d-limonene ; Aldehyde C-6	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)

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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.

VOC Directive (2004/42)

VOC content : 27.6349 % (calculated value)(CARB VOC) (%w/w)

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 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. 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

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
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(1) - highly toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : Verdyl propionate, Allyl amyl glycolate, Cyclogalbanate (Allyl Cyclohexyl Glycolate), Triplal (Vertocitral) are listed
SZW-lijst van mutagene stoffen : Verdyl propionate, Allyl amyl glycolate, Cyclogalbanate (Allyl Cyclohexyl Glycolate), Triplal (Vertocitral) 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

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SECTION 16: Other information

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
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. 3	Flammable liquids, Category 3
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.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
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 Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

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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.