

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

1.1. Product identifier

Product form	: Mixture
Trade name	: PINECC-16459
UFI	: R51Q-JC7Q-X00S-C75X
Product code	: CC-16459
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]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

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

Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye irritation. Very 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	: 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone; Vertofix; Patchouli oil; Cistus oil (Labdanum oil); (E)-3-methyl-5-cyclopentadecen-1-one; Vetiver oil; COUMARIN; Eugenol; Linalyl acetate; Linalool; Mandarin Oil Green; Cinnamic aldehyde; Benzyl salicylate; Black pepper oil; Coriander oil; Ylang ylang oil III
Hazard statements (CLP)	: H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: 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. 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]
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone	CAS-No.: 54464-57-2 EC-No.: 259-174-3 REACH-no: 01-2119489989-04	10.2 – 20.3721	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 1, H410
Ethylene brassylate	CAS-No.: 105-95-3 EC-No.: 203-347-8 REACH-no: 01-2119976314-33	9.4 – 18.805	Aquatic Chronic 2, H411
Bacdanol	CAS-No.: 28219-61-6 EC-No.: 248-908-8 REACH-no: 01-2119529224-45	5.3 – 10.6562	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 1, H410
Vertofix	CAS-No.: 32388-55-9 EC-No.: 251-020-3 REACH-no: 01-2119969651-28	2.9 – 5.8505	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Patchouli oil	CAS-No.: 8014-09-3 EC-No.: 616-944-7 EC Index-No.: 616-944-7	2.1 – 4.1789	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	1.3 – 2.5073	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Ebanol	CAS-No.: 67801-20-1 EC-No.: 267-140-4	1 – 1.985	Aquatic Chronic 2, H411
(E)-3-methyl-5-cyclopentadecen-1-one	CAS-No.: 82356-51-2 EC-No.: 429-900-5 EC Index-No.: 606-119-00-X	0.8 – 1.6716	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
2-(1-(3',3'-dimethyl-1'-cyclohexyl)ethoxy)-2-methyl propyl propanoate	CAS-No.: 141773-73-1 EC-No.: 415-490-5 EC Index-No.: 607-492-00-1	0.8 – 1.6193	Aquatic Chronic 2, H411
Vanillin	CAS-No.: 121-33-5 EC-No.: 204-465-2 REACH-no: 01-2119516040-60	0.7 – 1.46260313	Eye Irrit. 2, H319
Methyl ionone (mixture of isomers)	CAS-No.: 1335-46-2 EC-No.: 215-635-0	0.6 – 1.2537	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
Cistus oil (Labdanum oil)	CAS-No.: 8016-26-0 EC-No.: 639-656-3	0.6 – 1.149409	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1 REACH-no: 01-2119971802-33	0.3 – 0.5391	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	0.2 – 0.486009	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756-26	0.2 – 0.4179	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	0.1 – 0.230009	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Vetiver oil	CAS-No.: 8016-96-4 EC-No.: 616-993-4 REACH-no: 01-2120119716-55	0.1 – 0.2089	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Mandarin Oil Green	CAS-No.: 8008-31-9 EC-No.: 616-920-6	0.1 – 0.1254	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Indole crystals	CAS-No.: 120-72-9 EC-No.: 204-420-7	0.1 – 0.1254	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Eye Dam. 1, H318
Coriander oil	CAS-No.: 8008-52-4 EC-No.: 288-922-1	0.1 – 0.1254	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Benzyl salicylate	CAS-No.: 118-58-1 EC-No.: 204-262-9 EC Index-No.: 607-754-00-5 REACH-no: 01-2119969442-31	0.1 – 0.1045	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
Black pepper oil	CAS-No.: 8006-82-4 EC-No.: 616-894-6	0.1 – 0.1045	Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317
Ylang ylang oil III	CAS-No.: 8006-81-3 EC-No.: 616-893-0	0.1 – 0.1045	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
.alpha.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 80-56-8 EC-No.: 201-291-9	0 – 0.042009	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 EC Index-No.: 606-155-00-6 REACH-no: 01-2119935242-45	0 – 0.0261	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
ethyl acetate 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); substance with a Community workplace exposure limit	CAS-No.: 141-78-6 EC-No.: 205-500-4 EC Index-No.: 607-022-00-5 REACH-no: 01-2119475103-46	0 – 0.0209	Flam. Liq. 1, H224 Eye Irrit. 2, H319 STOT SE 3, H336

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
(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 – 0.000209	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
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	0 – 0.000079502	Not classified
Toluene 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.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3	≤ 0.000000939	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

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).
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. 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 skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

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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.
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. Avoid contact with skin and eyes. Wear personal protective equipment. 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 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.

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Germany

Storage class (LGK, TRGS 510)

: LGK 12 - Non-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 6.2, LGK 7

Joint storage with restrictions permitted for

: LGK 4.1A, LGK 4.3, LGK 5.1C

Joint storage permitted for

: LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 5.1A, LGK 5.1B, LGK 5.2, 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 10/12 - Liquids

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

ethyl acetate (141-78-6)

EU - Indicative Occupational Exposure Limit (IOEL)

IOEL TWA	734 mg/m ³
	200 ppm

IOEL STEL	1468 mg/m ³
	400 ppm

Austria - Occupational Exposure Limits

MAK (OEL TWA)	734 mg/m ³
	200 ppm

MAK (OEL STEL)	1468 mg/m ³
	400 ppm

Belgium - Occupational Exposure Limits

OEL TWA	734 mg/m ³
	200 ppm

OEL STEL	1468 mg/m ³
	400 ppm

Bulgaria - Occupational Exposure Limits

OEL TWA	734 mg/m ³
	200 ppm

OEL STEL	1468 mg/m ³
	400 ppm

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ethyl acetate (141-78-6)	
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	734 mg/m ³
	200 ppm
KGVI (OEL STEL)	1468 mg/m ³
	400 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	700 mg/m ³
Denmark - Occupational Exposure Limits	
OEL TWA	540 mg/m ³
	150 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	500 mg/m ³
	150 ppm
OEL STEL	1100 mg/m ³
	300 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	730 mg/m ³
	200 ppm
HTP (OEL STEL)	1470 mg/m ³
	400 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	734 mg/m ³ (restrictive limit)
	200 ppm (restrictive limit)
VLE (OEL C/STEL)	1468 mg/m ³ (restrictive limit)
	400 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	730 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	200 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Gibraltar - Occupational Exposure Limits	
OEL TWA	200 mg/m ³
	734 ppm

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ethyl acetate (141-78-6)	
OEL STEL	400 mg/m ³
	1468 ppm
Greece - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	734 mg/m ³
CK (OEL STEL)	1468 mg/m ³
OEL chemical category	Sensitizer
Ireland - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Italy - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	200 mg/m ³
	54 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	500 mg/m ³
	150 ppm
NRV (OEL C)	1100 mg/m ³
	300 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Malta - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm

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ethyl acetate (141-78-6)	
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	734 mg/m ³
	200 ppm
TGG-15min (OEL STEL)	1468 mg/m ³
	400 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	734 mg/m ³
NDSch (OEL STEL)	1468 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	734 mg/m ³ (indicative limit value)
	200 ppm (indicative limit value)
OEL STEL	1468 mg/m ³ (indicative limit value)
	400 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	734 mg/m ³
	200 ppm
NPHV (OEL C)	1468 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	734 mg/m ³
	200 ppm
OEL STEL	1468 mg/m ³
	400 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	734 mg/m ³
	200 ppm
VLA-EC (OEL STEL)	1468 mg/m ³
	400 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	550 mg/m ³
	150 ppm
KGV (OEL STEL)	1100 mg/m ³
	300 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	734 mg/m ³

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ethyl acetate (141-78-6)	
	200 ppm
WEL STEL (OEL STEL)	1468 mg/m ³
	400 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	734 mg/m ³
	200 ppm
Korttidsverdi (OEL STEL)	1468 mg/m ³ (value from the regulation)
	400 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	730 mg/m ³
	200 ppm
KZGW (OEL STEL)	1460 mg/m ³
	400 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	400 ppm
.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³ (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/m ³ (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/m ³
	25 ppm
TPRV (OEL STEL)	300 mg/m ³
	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/m ³
	20 ppm
OEL chemical category	Sensitizer

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.alpha.-Pinene (80-56-8)	
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m ³
	25 ppm
KGV (OEL STEL)	300 mg/m ³
	50 ppm
OEL chemical category	Sensitizer
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	Skin notation
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
(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
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

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(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
	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
Toluene (108-88-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	192 mg/m ³
	50 ppm
IOEL STEL	384 mg/m ³
	100 ppm
Remark	Possibility of significant uptake through the skin
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	190 mg/m ³
	50 ppm
MAK (OEL STEL)	380 mg/m ³
	100 ppm
OEL chemical category	Skin notation
Belgium - Occupational Exposure Limits	
OEL TWA	77 mg/m ³
	20 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Skin, Skin notation
Bulgaria - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
Bulgaria - Biological limit values	
BLV	1.6 mmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of exposure or end of work shift
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	192 mg/m ³

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Toluene (108-88-3)	
	50 ppm
KGVI (OEL STEL)	384 mg/m ³
	100 ppm
OEL chemical category	Skin notation
Croatia - Biological limit values	
BLV	1 mg/l Parameter: Toluene - Medium: blood - Sampling time: at the end of the work shift 20 ppm Parameter: Toluene - Medium: final exhaled air - Sampling time: during exposure 2.5 g/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine) 1 mg/g creatinine Parameter: o-Cresol - Medium: urine - Sampling time: at the end of the work shift (calculated on the average Creatinine value of 1.2 g/L urine)
Cyprus - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	200 mg/m ³
OEL chemical category	Potential for cutaneous absorption
Czech Republic - Biological limit values	
BLV	1.6 µmol/mmol Creatinine Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis) 1000 µmol/mmol Creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.) 1.5 mg/g creatinine Parameter: o-Cresol - Medium: urine - Sampling time: end of shift (after hydrolysis) 1600 mg/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (exposure testing using the o-Cresol parameter to precisely measure Toluene exposure is needed if the value of Hippuric acid is between 1600 and 2500 mg/g of Creatinine, no additional testing is needed if the Hippuric acid value is >2500 mg/g of Creatinine as work exposure to Toluene will have highly exceeded the PEL value.)
Denmark - Occupational Exposure Limits	
OEL TWA	94 mg/m ³
	25 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Estonia - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³

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Toluene (108-88-3)	
	100 ppm
OEL chemical category	Skin notation
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	81 mg/m ³
	25 ppm
HTP (OEL STEL)	380 mg/m ³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Finland - Biological limit values	
BLV	500 nmol/L Parameter: Toluene - Medium: blood - Sampling time: in the morning after a working day
France - Occupational Exposure Limits	
VME (OEL TWA)	76.8 mg/m ³ (restrictive limit)
	20 ppm (restrictive limit)
VLE (OEL C/STEL)	384 mg/m ³ (restrictive limit)
	100 ppm (restrictive limit)
OEL chemical category	Reproductive Toxin category 2, Risk of cutaneous absorption
France - Biological limit values	
BLV	20 µg/l Parameter: Toluene - Medium: blood - Sampling time: end of workweek (Semi-quantitative (ambiguous interpretation)) Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	190 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	50 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation
Germany - Biological limit values (TRGS 903)	
Biological limit value	600 µg/l Parameter: Toluene - Medium: whole blood - Sampling time: immediately after exposure 75 µg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 1.5 mg/l Parameter: o-Cresol (after hydrolysis) - Medium: urine - Sampling time: for long-term exposures: at the end of the shift after several shifts 1.5 mg/l Parameter: o-Cresol (after hydrolysis) - Medium: urine - Sampling time: end of shift
Gibraltar - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Skin notation

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Toluene (108-88-3)	
Greece - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	skin - potential for cutaneous absorption
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	190 mg/m ³
CK (OEL STEL)	384 mg/m ³
OEL chemical category	Potential for cutaneous absorption
Ireland - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Italy - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL chemical category	skin - potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	50 mg/m ³
	14 ppm
OEL chemical category	skin - potential for cutaneous exposure
Latvia - Biological Exposure Indices	
BEI	1.6 g/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift 0.05 mg/l Parameter: Toluene - Medium: blood - Sampling time: end of shift
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	192 mg/m ³
	50 ppm
TPRV (OEL STEL)	384 mg/m ³
	100 ppm
OEL chemical category	Reproductive toxin, Skin notation
Luxembourg - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Possibility of significant uptake through the skin

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Toluene (108-88-3)	
Malta - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Possibility of significant uptake through the skin
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	150 mg/m ³
	39 ppm
TGG-15min (OEL STEL)	384 mg/m ³
	100 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	100 mg/m ³
NDSch (OEL STEL)	200 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	192 mg/m ³ (indicative limit value)
	50 ppm (indicative limit value)
OEL STEL	384 mg/m ³ (indicative limit value)
	100 ppm (indicative limit value)
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure indicative limit value
Romania - Occupational Exposure Limits	
OEL TWA	192 mg/m ³
	50 ppm
OEL STEL	384 mg/m ³
	100 ppm
OEL chemical category	Skin notation
Romania - Biological limit values	
BLV	2 g/l Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift 3 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	192 mg/m ³
	50 ppm
NPHV (OEL C)	384 mg/m ³ (also biological monitoring considered)
OEL chemical category	Potential for cutaneous absorption

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Toluene (108-88-3)	
Slovakia - Biological limit values	
BLV	600 µg/l Parameter: Toluene - Medium: blood - Sampling time: end of exposure or work shift 1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: after all work shifts (for long-term exposure) 1.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of exposure or work shift 2401 mg/g creatinine Parameter: Hippuric acid - Sampling time: end of exposure or work shift
Slovenia - Occupational Exposure Limits	
OEL TWA	192 mg/m ³ 50 ppm
OEL STEL	384 mg/m ³ 100 ppm
OEL chemical category	Category 2, Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	192 mg/m ³ (indicative limit value) 50 ppm (indicative limit value)
VLA-EC (OEL STEL)	384 mg/m ³ 100 ppm
OEL chemical category	skin - potential for cutaneous absorption
Spain - Biological limit values	
BLV	0.6 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift 0.05 mg/l Parameter: Toluene - Medium: blood - Sampling time: start of last shift of workweek 0.08 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	192 mg/m ³ 50 ppm
KGV (OEL STEL)	384 mg/m ³ 100 ppm
OEL chemical category	Skin notation
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	191 mg/m ³ 50 ppm
WEL STEL (OEL STEL)	384 mg/m ³ 100 ppm
WEL chemical category	Potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	94 mg/m ³ 25 ppm
Korttidsverdi (OEL STEL)	141 mg/m ³ (value calculated)

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Toluene (108-88-3)	
	37.5 ppm (value calculated)
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	190 mg/m ³
	50 ppm
KZGW (OEL STEL)	760 mg/m ³
	200 ppm
OEL chemical category	Skin notation, Category 2 reproductive toxin
Switzerland - BAT	
BAT	600 µg/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift 6.48 µmol/l Parameter: Toluene - Medium: whole blood - Sampling time: end of shift 2 g/g creatinine Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) Parameter: Hippuric acid - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 0.5 mg/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 4.62 µmol/l Parameter: o-Cresol - Medium: urine - Sampling time: end of shift, and after several shifts (for long-term exposures) 75 µg/l Parameter: Toluol - Medium: urine - Sampling time: end of shift
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
USA - ACGIH - Biological Exposure Indices	
BEI	1.2 mg/l Parameter: Toluene - Medium: blood - Sampling time: prior to last shift of workweek 1.3 mg/l Parameter: Toluene - Medium: urine - Sampling time: end of shift 0.3 mg/g creatinine Parameter: o-Cresol with hydrolysis - Medium: urine - Sampling time: end of shift (background)
Dipropylene glycol monomethyl ether(34590-94-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	308 mg/m ³
	50 ppm
Remark	Possibility of significant uptake through the skin
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	307 mg/m ³ (mixed isomers)
	50 ppm (mixed isomers)
MAK (OEL STEL)	614 mg/m ³ (isomers mixtures)
	100 ppm (isomers mixtures)
OEL chemical category	Skin notation
Belgium - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Skin, Skin notation

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Dipropylene glycol monomethyl ether (34590-94-8)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	308 mg/m ³
	50 ppm
OEL chemical category	Skin notation
Cyprus - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	270 mg/m ³
OEL chemical category	Potential for cutaneous absorption
Denmark - Occupational Exposure Limits	
OEL TWA	309 mg/m ³
	50 ppm
OEL STEL	618 mg/m ³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Estonia - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Skin notation
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	310 mg/m ³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
France - Occupational Exposure Limits	
VME (OEL TWA)	308 mg/m ³ (restrictive limit)
	50 ppm (restrictive limit)
OEL chemical category	Risk of cutaneous absorption
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	310 mg/m ³ (isomer mixture)
	50 ppm (isomer mixture)
Gibraltar - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Skin notation

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Dipropylene glycol monomethyl ether(34590-94-8)	
Greece - Occupational Exposure Limits	
OEL TWA	600 mg/m ³
	100 ppm
OEL STEL	900 mg/m ³
	150 ppm
OEL chemical category	skin - potential for cutaneous absorption
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	308 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA	308 mg/m ³ ((2-Methoxymethylethoxy)propanol)
	50 ppm ((2-Methoxymethylethoxy)propanol)
OEL STEL	924 mg/m ³ (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/m ³ (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/m ³
	50 ppm
OEL chemical category	skin - potential for cutaneous exposure
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	300 mg/m ³ (2-(2-Methoxypropoxy)-propanol)
	50 ppm (2-(2-Methoxypropoxy)-propanol)
TPRV (OEL STEL)	450 mg/m ³ (2-(2-Methoxypropoxy)-propanol)
	75 ppm (2-(2-Methoxypropoxy)-propanol)
OEL chemical category	Skin notation
Luxembourg - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Malta - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	300 mg/m ³
	48.7 ppm

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Dipropylene glycol monomethyl ether(34590-94-8)	
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m ³ (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/m ³ (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/m ³ (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/m ³
	50 ppm
OEL chemical category	Skin notation
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	308 mg/m ³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
Slovenia - Occupational Exposure Limits	
OEL TWA	308 mg/m ³
	50 ppm
OEL STEL	308 mg/m ³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	308 mg/m ³ (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/m ³
	50 ppm
KGV (OEL STEL)	450 mg/m ³
	75 ppm
OEL chemical category	Skin notation
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	308 mg/m ³
	50 ppm
WEL STEL (OEL STEL)	924 mg/m ³ (calculated)
	150 ppm (calculated)
WEL chemical category	Potential for cutaneous absorption

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Dipropylene glycol monomethyl ether (34590-94-8)	
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	300 mg/m ³
	50 ppm
Korttidsverdi (OEL STEL)	375 mg/m ³ (value calculated)
	75 ppm (value calculated)
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	300 mg/m ³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
KZGW (OEL STEL)	300 mg/m ³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm (Dipropylene glycol methyl ether)

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.

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8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask

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	: 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	: > 93.3 °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	: 0.000414384 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

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 : 1.55145533 % (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

Not established.

10.3. Possibility of hazardous reactions

Not established.

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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

Ethylene brassylate (105-95-3)

LD50 oral rat	> 5000 mg/kg (Source: ECHA)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA)

Vertofix (32388-55-9)

LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)

Patchouli oil (8014-09-3)

LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
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Vanillin (121-33-5)

LD50 dermal rabbit	> 5010 mg/kg (Source: OECD_SIDS)
LD50 dermal	2600 mg/kg bodyweight

Methyl ionone (mixture of isomers) (1335-46-2)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
LD50 dermal	2900 mg/kg bodyweight

Cistus oil (Labdanum oil) (8016-26-0)

LD50 oral rat	8980 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 89.8 mg/kg (Source: ECHA_API)

2-(1-(3',3'-dimethyl-1'-cyclohexyl)ethoxy)-2-methyl propyl propanoate (141773-73-1)

LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
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(E)-3-methyl-5-cyclopentadecen-1-one (82356-51-2)

LD50 oral rat	> 2000 mg/kg (Source: ECHA_API)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)

Ebanol (67801-20-1)

LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
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benzyl benzoate (120-51-4)	
LD50 oral rat	> 2000 mg/kg (Source: ECHA_API)
LD50 oral	1160 mg/kg bodyweight
LD50 dermal rabbit	4000 mg/kg (Source: NLM_CIP)
Vetiver oil (8016-96-4)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
COUMARIN (91-64-5)	
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)
LD50 dermal rat	293 mg/kg (Source: ECHA_API)
Eugenol (97-53-0)	
LD50 oral rat	1930 mg/kg (Source: NZ_CCID)
LD50 oral	2500 mg/kg bodyweight
LC50 Inhalation - Rat	> 2.58 mg/l/4h
Linalyl acetate (115-95-7)	
LD50 oral rat	14550 mg/kg (Source: EPA_HP)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA)
LC50 Inhalation - Rat	> 18.94 mg/l (Exposure time: 8 h Source: ECHA)
Linalool (78-70-6)	
LD50 oral	2790 mg/kg
Mandarin Oil Green (8008-31-9)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rat	> 5000 mg/kg bodyweight
Cinnamic aldehyde (104-55-2)	
LD50 oral rat	2220 mg/kg (Source: NLM_CIP)
LD50 oral	2220 mg/kg
LD50 dermal rabbit	1260 mg/kg (Source: EPA_HP)
Benzyl salicylate (118-58-1)	
LD50 oral rat	2227 mg/kg (Source: NLM_CIP)
LD50 oral	2200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
Indole crystals (120-72-9)	
LD50 oral rat	1 g/kg (Source: NLM_CIP)
LD50 oral	1000 mg/kg bodyweight
LD50 dermal rabbit	790 mg/kg (Source: NZ_CCID)
LD50 dermal	790 mg/kg bodyweight
ethyl acetate (141-78-6)	
LD50 oral rat	5620 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 18000 mg/kg (Source: JAPAN_GHS)

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ethyl acetate (141-78-6)	
LC50 Inhalation - Rat [ppm]	4000 ppm/4h
Coriander oil (8008-52-4)	
LD50 oral rat	4130 mg/kg (Source: NLM_CIP)
Ylang ylang oil III (8006-81-3)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
.alpha.-Pinene (80-56-8)	
LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)
(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)
Toluene (108-88-3)	
LD50 oral rat	2600 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	12000 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	12.5 mg/l/4h
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)
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
COUMARIN (91-64-5)	
IARC group	3 - Not classifiable
Eugenol (97-53-0)	
IARC group	3 - Not classifiable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
IARC group	3 - Not classifiable
Toluene (108-88-3)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
ethyl acetate (141-78-6)	
STOT-single exposure	May cause drowsiness or dizziness.
Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified

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Toluene (108-88-3)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
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Aspiration hazard : Not classified

benzyl benzoate (120-51-4)

Viscosity, kinematic	7.456 mm ² /s
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.alpha.-Pinene (80-56-8)

Hydrocarbon	Yes
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(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)

Hydrocarbon	Yes
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Toluene (108-88-3)

Hydrocarbon	Yes
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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 : Very 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) : Very toxic to aquatic life with long lasting effects.

Vanillin (121-33-5)

LC50 - Fish [1]	53 – 61.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
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LC50 - Fish [2]	88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
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NOEC (acute)	10000 mg/kg (Exposure time: 42 Days - Species: Eisenia foetida [soil dry weight])
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Methyl ionone (mixture of isomers) (1335-46-2)

LC50 - Fish [1]	2.3 mg/l (Exposure time: 96 h - Species: Danio rerio [static] Source: ECHA)
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Ebanol (67801-20-1)

LC50 - Fish [1]	2.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [semi-static] Source: ECHA)
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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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NOEC (chronic)	0.168 mg/l
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Eugenol (97-53-0)

LC50 - Fish [1]	13 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
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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)
Benzyl salicylate (118-58-1)	
LC50 - Fish [1]	1.03 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
ethyl acetate (141-78-6)	
LC50 - Fish [1]	220 – 250 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	484 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: IUCLID)
EC50 - Crustacea [1]	560 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
.alpha.-Pinene (80-56-8)	
LC50 - Fish [1]	0.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: IUCLID)
EC50 - Crustacea [1]	41 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)
Toluene (108-88-3)	
LC50 - Fish [1]	15.22 – 19.05 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	12.6 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
EC50 - Crustacea [1]	5.46 – 9.83 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 - Crustacea [2]	11.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	12.5 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h - Algae [1]	> 433 mg/l (Species: Pseudokirchneriella subcapitata)
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)

12.2. Persistence and degradability

PINE CC-16459	
Persistence and degradability	Not established.
1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone (54464-57-2)	
Persistence and degradability	Rapidly degradable
Ethylene brassylate (105-95-3)	
Persistence and degradability	Rapidly degradable
Vertofix (32388-55-9)	
Persistence and degradability	Rapidly degradable

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Patchouli oil (8014-09-3)	
Persistence and degradability	Rapidly degradable
Bacdanol (28219-61-6)	
Persistence and degradability	Rapidly degradable
Vanillin (121-33-5)	
Persistence and degradability	Rapidly degradable
Methyl ionone (mixture of isomers) (1335-46-2)	
Persistence and degradability	Rapidly degradable
Cistus oil (Labdanum oil) (8016-26-0)	
Persistence and degradability	Rapidly degradable
2-(1-(3',3'-dimethyl-1'-cyclohexyl)ethoxy)-2-methyl propyl propanoate (141773-73-1)	
Persistence and degradability	Rapidly degradable
(E)-3-methyl-5-cyclopentadecen-1-one (82356-51-2)	
Persistence and degradability	Rapidly degradable
Ebanol (67801-20-1)	
Persistence and degradability	Rapidly degradable
benzyl benzoate (120-51-4)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Vetiver oil (8016-96-4)	
Persistence and degradability	Rapidly degradable
COUMARIN (91-64-5)	
Persistence and degradability	Rapidly degradable
Eugenol (97-53-0)	
Persistence and degradability	Rapidly degradable
Linalyl acetate (115-95-7)	
Persistence and degradability	Rapidly degradable
Linalool (78-70-6)	
Persistence and degradability	Rapidly degradable
Mandarin Oil Green (8008-31-9)	
Persistence and degradability	Rapidly degradable
Cinnamic aldehyde (104-55-2)	
Persistence and degradability	Rapidly degradable
Benzyl salicylate (118-58-1)	
Persistence and degradability	Rapidly degradable
Indole crystals (120-72-9)	
Persistence and degradability	Rapidly degradable

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ethyl acetate (141-78-6)	
Persistence and degradability	Rapidly degradable
Black pepper oil (8006-82-4)	
Persistence and degradability	Rapidly degradable
Coriander oil (8008-52-4)	
Persistence and degradability	Rapidly degradable
Ylang ylang oil III (8006-81-3)	
Persistence and degradability	Rapidly degradable
.alpha.-Pinene (80-56-8)	
Persistence and degradability	Rapidly degradable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Persistence and degradability	Rapidly degradable
Toluene (108-88-3)	
Persistence and degradability	Rapidly degradable
Dipropylene glycol monomethyl ether (34590-94-8)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

PINE CC-16459	
Bioaccumulative potential	Not established.
Ethylene brassylate (105-95-3)	
Partition coefficient n-octanol/water (Log Pow)	4.3 (at 25 °C (at pH 6.4-7))
Vertofix (32388-55-9)	
BCF - Fish [1]	(3920 dimensionless (organ w.w.))
Partition coefficient n-octanol/water (Log Pow)	5.6 – 5.9
Vanillin (121-33-5)	
Partition coefficient n-octanol/water (Log Pow)	1.23 (at 22 °C)
Methyl ionone (mixture of isomers) (1335-46-2)	
Partition coefficient n-octanol/water (Log Pow)	(>4.5 - <5 - at 23 °C (at pH 6.2))
2-(1-(3',3'-dimethyl-1'-cyclohexyl)ethoxy)-2-methyl propyl propanoate (141773-73-1)	
Partition coefficient n-octanol/water (Log Pow)	4.68 (at 22.5 °C (at pH >=6.5-<=7.3))
Ebanol (67801-20-1)	
Partition coefficient n-octanol/water (Log Pow)	4.2 (at 35 °C (at pH 7))
benzyl benzoate (120-51-4)	
Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
Bioaccumulative potential	Not established.

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Eugenol (97-53-0)	
Partition coefficient n-octanol/water (Log Pow)	1.83 (at 30 °C (at pH 5.5))
Linalyl acetate (115-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.9 (at 25 °C)
Cinnamic aldehyde (104-55-2)	
Partition coefficient n-octanol/water (Log Pow)	2.1065 (at 25 °C)
Benzyl salicylate (118-58-1)	
Partition coefficient n-octanol/water (Log Pow)	4
ethyl acetate (141-78-6)	
BCF - Fish [1]	(30 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	0.73 (at 20 °C (at pH 7))
.alpha.-Pinene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4.1
(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))
Toluene (108-88-3)	
Partition coefficient n-octanol/water (Log Pow)	2.73 (at 20 °C (at pH 7))
Dipropylene glycol monomethyl ether (34590-94-8)	
Partition coefficient n-octanol/water (Log Pow)	0.35 (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	: HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye. 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

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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. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone)	Environmentally hazardous substance, liquid, n.o.s. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone), 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, 650
Limited quantities (ADR)	: 5I
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

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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, 375, 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, 650
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, 650
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

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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)	Cistus oil (Labdanum oil) ; Mandarin Oil Green ; ethyl acetate ; Black pepper oil ; .alpha.-Pinene ; (R)-p-mentha-1,8-diene; d-limonene ; Toluene	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)	PINE CC-16459 ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone ; Vertofix ; Patchouli oil ; Bacdanol ; Methyl ionone (mixture of isomers) ; Cistus oil (Labdanum oil) ; (E)-3-methyl-5-cyclopentadecen-1-one ; benzyl benzoate ; Vetiver oil ; Eugenol ; Linalyl acetate ; Linalool ; Mandarin Oil Green ; Cinnamic aldehyde ; Benzyl salicylate ; Indole crystals ; ethyl acetate ; Black pepper oil ; Coriander oil ; Ylang ylang oil III ; .alpha.-Pinene ; (R)-p-mentha-1,8-diene; d-limonene ; Toluene	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

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	PINE CC-16459 ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone ; Ethylene brassylate ; Vertofix ; Patchouli oil ; Bacdanol ; Methyl ionone (mixture of isomers) ; Cistus oil (Labdanum oil) ; 2-(1-(3',3'-dimethyl-1'-cyclohexyl)ethoxy)-2-methyl propyl propanoate ; (E)-3-methyl-5-cyclopentadecen-1-one ; Ebanol ; benzyl benzoate ; Vetiver oil ; Mandarin Oil Green ; Cinnamic aldehyde ; Benzyl salicylate ; Black pepper oil ; Coriander oil ; Ylang ylang oil III ; .alpha.-Pinene ; (R)-p-mentha-1,8-diene; d-limonene	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.	Cistus oil (Labdanum oil) ; Mandarin Oil Green ; ethyl acetate ; Black pepper oil ; .alpha.-Pinene ; (R)-p-mentha-1,8-diene; d-limonene ; Toluene	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.
48.	Toluene	Toluene

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)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 1.55145533 % (calculated value)(CARB VOC)(%/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 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)

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Name	CN designation	CAS-No.	CN code	Category, Subcategory	Threshold	Annex
Toluene		108-88-3	2902 30 00	Category 3		Annex I

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 4 BIS	Gastrointestinal disorders caused by benzene, toluene, xylenes and all products containing them
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).
List of sensitizing substances (TRGS 907) : Contains sensitizing substances according TRGS 907.
Major Accidents Ordinance (12. BImSchV) : Is not subject to the Major Accidents 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 : Ebanol is listed
SZW-lijst van mutagene stoffen : Ebanol is 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 : Toluene is listed

Denmark

Classification remarks : 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. 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

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Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
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.