Mulled Wine

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 10/25/2019 Revision date: 9/15/2023 Supersedes version of: 4/10/2023 Version: 2.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Mulled Wine
UFI	:	DEQ4-02PC-R007-EG47
Product code	:	parf_mulled_wine
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	:	For professional use only Industrial
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

BAKED GAMES SRL
ROMANIA, BUCHAREST, SECTOR 4
+40771326626
contact@kitlumanari.ro | www.kitlumanari.ro

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 3	H412

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

Adverse physicochemical, human health and environmental effects

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

Signal word (CLP) : Warning

Contains	:	Orange oil ; Eugenol; Cinnamic aldehyde; trans-Anethole; Linalool; Geranyl acetate; Citral; Linalyl acetate; beta-Caryophyllene; Iso E Super; COUMARIN; Calamus oil; 1,2-Cyclopentanedione, 3-methyl-; Anise oil (Spanish); Ginger oil; Heliotropine
Hazard statements (CLP)	:	H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H412 - Harmful 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/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is 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]
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8 REACH-no: 01-2119493353-35	3.8 – 7.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1 REACH-no: 01-2119971802-33	2.325 – 4.625	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 REACH-no: 01-2119935242-45	2.005 – 4.03125	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
trans-Anethole	CAS-No.: 4180-23-8 EC-No.: 224-052-0	1.8 – 3.5	Skin Sens. 1B, H317
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	1.6 – 3.25	Acute Tox. 4 (Oral), H302

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	1.5 – 3.0035	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Geranyl acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5 REACH-no: 01-2119973480-35	1.1 – 2.25	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Aldehyde C-10	CAS-No.: 112-31-2 EC-No.: 203-957-4	1 – 2	Eye Irrit. 2, H319 Aquatic Chronic 3, H412
Terpineol	CAS-No.: 8000-41-7 EC-No.: 232-268-1	0.8 – 1.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	0.5 – 1.0025	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
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	0.5 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Oenanthic ether (Ethyl heptanoate)	CAS-No.: 106-30-9 EC-No.: 203-382-9	0.5 – 1	Flam. Liq. 3, H226 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
beta-Caryophyllene	CAS-No.: 87-44-5 EC-No.: 201-746-1 REACH-no: 01-2120745237-53	0.355 – 0.6875	Skin Sens. 1B, H317 Asp. Tox. 1, H304
Camphene	CAS-No.: 79-92-5 EC-No.: 201-234-8	0.3 – 0.5	Flam. Sol. 2, H228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Iso E Super	CAS-No.: 54464-57-2 EC-No.: 259-174-3 REACH-no: 01-2119489989-04	0.1 – 0.2	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 1, H410
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756-26	0.10001 – 0.150025	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Ethyl benzoate substance with national workplace exposure limit(s) (RO)	CAS-No.: 93-89-0 EC-No.: 202-284-3	0.1 – 0.1	Not classified
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	0.1 – 0.1	Flam. Liq. 1, H224 Eye Irrit. 2, H319 STOT SE 3, H336

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calamus oil (Acorus calamus L.)	CAS-No.: 8015-79-0 EC-No.: 283-869-0	0.1 – 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
1,2-Cyclopentanedione, 3-methyl-	CAS-No.: 765-70-8 EC-No.: 212-154-8	0.1 – 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
Butyric acid substance with national workplace exposure limit(s) (BG, LT, LV, RO)	CAS-No.: 107-92-6 EC-No.: 203-532-3 EC Index-No.: 607-135-00-X	0.1 – 0.1	Skin Corr. 1B, H314
Anise oil (Spanish)	CAS-No.: 8007-70-3 EC-No.: 616-914-3	0.1 – 0.1	Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 3, H412
zingiber officinale (ginger) root oil	CAS-No.: 8007-08-7 EC-No.: 283-634-2	0.1 – 0.1	Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Heliotropine	CAS-No.: 120-57-0 EC-No.: 204-409-7 REACH-no: 01-2119983608-21	0.1 – 0.1	Skin Sens. 1B, H317
Carbitol substance with national workplace exposure limit(s) (AT, DE, EE, SE, SI, CH)	CAS-No.: 111-90-0 EC-No.: 203-919-7 REACH-no: 01-2119475105-42	0.07233 – 0.07233	Not classified
.beta.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 127-91-3 EC-No.: 204-872-5	0.01 – 0.0275	Flam. Liq. 3, H226
.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	0.01 – 0.0275	Flam. Liq. 3, H226
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	0.005 – 0.0125	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
p-Cymene substance with national workplace exposure limit(s) (DK, EE, LT, LV, SE)	CAS-No.: 99-87-6 EC-No.: 202-796-7 EC Index-No.: 601-094-00-1	0.001 – 0.005	Flam. Liq. 3, H226 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:dust,mist), H331 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : 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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after 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 : Water spray. Dry powder. Foam. Carbon dioxide.

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

Protection during firefighting : 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. 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. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

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

6.4. Reference to other sections

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. 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. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

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.

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

Benzaldehyde (100-52-7)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	4.4 mg/m³
HTP (OEL TWA) [2]	1 ppm
HTP (OEL C)	17.4 mg/m³
HTP (OEL C) [ppm]]	4 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m³
CK (OEL STEL)	10 mg/m³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m³
NDSCh (OEL STEL)	40 mg/m³

Citral (5392-40-5)	
Belgium - Occupational Exposure Limits	
OEL TWA	32 mg/m³ (vapor and aerosol)
OEL TWA [ppm]	5 ppm (vapor and aerosol)
OEL chemical category	Skin
Ireland - Occupational Exposure Limits	
OEL TWA [2]	5 ppm
OEL STEL [ppm]	15 ppm (calculated)
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	27 mg/m³
NDSCh (OEL STEL)	54 mg/m³

Citral (5392-40-5)	
Portugal - Occupational Exposure Limits	
OEL TWA [ppm]	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) [2]	5 ppm (inhalable fraction and vapor)
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	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

d-Limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	140 mg/m³
HTP (OEL TWA) [2]	25 ppm
HTP (OEL STEL)	280 mg/m³
HTP (OEL STEL) [ppm]	50 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	28 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Chemical category	Skin notation, Skin sensitization
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m³
OEL TWA [ppm]	5 ppm
OEL STEL	112 mg/m³
OEL STEL [ppm]	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	168 mg/m³
VLA-ED (OEL TWA) [2]	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)
OEL chemical category	Allergenic substance

d-Limonene (5989-27-5)	
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	40 mg/m³
MAK (OEL TWA) [2]	7 ppm
KZGW (OEL STEL)	80 mg/m³
KZGW (OEL STEL) [ppm]	14 ppm
OEL chemical category	Sensitizer

.beta.-Pinene (127-91-3)	
Belgium - Occupational Exposure Limits	
OEL TWA [ppm]	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL TWA [ppm]	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL [ppm]	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m³
IPRV (OEL TWA) [ppm]	25 ppm
TPRV (OEL STEL)	300 mg/m³
TPRV (OEL STEL) [ppm]	50 ppm
Portugal - Occupational Exposure Limits	
OEL TWA [ppm]	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) [1]	113 mg/m³
VLA-ED (OEL TWA) [2]	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m³
NGV (OEL TWA) [ppm]	25 ppm
KTV (OEL STEL)	300 mg/m³
KTV (OEL STEL) [ppm]	50 ppm
OEL chemical category	Sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)

.beta.-Pinene (127-91-3)	
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA [ppm]	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL TWA [ppm]	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL [ppm]	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m³
IPRV (OEL TWA) [ppm]	25 ppm
TPRV (OEL STEL)	300 mg/m³
TPRV (OEL STEL) [ppm]	50 ppm
Portugal - Occupational Exposure Limits	
OEL TWA [ppm]	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) [1]	113 mg/m³
VLA-ED (OEL TWA) [2]	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m³
NGV (OEL TWA) [ppm]	25 ppm
KTV (OEL STEL)	300 mg/m³
KTV (OEL STEL) [ppm]	50 ppm
OEL chemical category	Sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37.5 ppm (value calculated)
OEL chemical category	Skin notation

.alpha.-Pinene (80-56-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

Ethyl benzoate (93-89-0)	
Romania - Occupational Exposure Limits	
OEL TWA	200 mg/m³
OEL TWA [ppm]	33 ppm
OEL STEL	300 mg/m³
OEL STEL [ppm]	49 ppm

Ethyl acetate (141-78-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	734 mg/m³
IOEL TWA [ppm]	200 ppm
IOEL STEL	1468 mg/m³
IOEL STEL [ppm]	400 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	734 mg/m³
MAK (OEL TWA) [ppm]	200 ppm
MAK (OEL STEL)	1468 mg/m³
MAK (OEL STEL) [ppm]	400 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	734 mg/m³
GVI (OEL TWA) [2]	200 ppm
KGVI (OEL STEL)	1468 mg/m³
KGVI (OEL STEL) [ppm]	400 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm

Ethyl acetate (141-78-6)	
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	700 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA [1]	540 mg/m³
OEL TWA [2]	150 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	500 mg/m³
OEL TWA [ppm]	150 ppm
OEL STEL	1100 mg/m³
OEL STEL [ppm]	300 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	730 mg/m³
HTP (OEL TWA) [2]	200 ppm
HTP (OEL STEL)	1470 mg/m³
HTP (OEL STEL) [ppm]	400 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	734 mg/m³
VME (OEL TWA) [ppm]	200 ppm
VLE (OEL C/STEL)	1468 mg/m³ (restrictive limit)
VLE (OEL C/STEL) [ppm]	400 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	730 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	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/m³
OEL TWA [ppm]	734 ppm
OEL STEL	400 mg/m³
OEL STEL [ppm]	1468 ppm
Greece - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm

Ethyl acetate (141-78-6)	
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	734 mg/m³
CK (OEL STEL)	1468 mg/m³
OEL chemical category	Sensitizer
Ireland - Occupational Exposure Limits	
OEL TWA [1]	734 mg/m³
OEL TWA [2]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Italy - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	200 mg/m³
OEL TWA [ppm]	54 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	500 mg/m³
IPRV (OEL TWA) [ppm]	150 ppm
NRV (OEL C)	1100 mg/m³
NRV (OEL C) [ppm]	300 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Malta - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	734 mg/m³
TGG-8u (OEL TWA) [ppm]	200 ppm
TGG-15min (OEL STEL)	1468 mg/m³
TGG-15min (OEL STEL) [ppm]	400 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	734 mg/m³

Ethyl acetate (141-78-6)	
NDSCh (OEL STEL)	1468 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	734 mg/m³ (indicative limit value)
OEL TWA [ppm]	200 ppm (indicative limit value)
OEL STEL	1468 mg/m³ (indicative limit value)
OEL STEL [ppm]	400 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	734 mg/m³
NPHV (OEL TWA) [2]	200 ppm
NPHV (OEL C)	1100 mg/m³
Slovenia - Occupational Exposure Limits	
OEL TWA	734 mg/m³
OEL TWA [ppm]	200 ppm
OEL STEL	1468 mg/m³
OEL STEL [ppm]	400 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	734 mg/m³
VLA-ED (OEL TWA) [2]	200 ppm
VLA-EC (OEL STEL)	1468 mg/m³
VLA-EC (OEL STEL) [ppm]	400 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	550 mg/m³
NGV (OEL TWA) [ppm]	150 ppm
KTV (OEL STEL)	1100 mg/m³
KTV (OEL STEL) [ppm]	300 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	734 mg/m³
WEL TWA (OEL TWA) [2]	200 ppm
WEL STEL (OEL STEL)	1468 mg/m³
WEL STEL (OEL STEL) [ppm]	400 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	734 mg/m³
Grenseverdi (OEL TWA) [2]	200 ppm
Korttidsverdi (OEL STEL)	1468 mg/m³ (value from the regulation)

Ethyl acetate (141-78-6)	
Korttidsverdi (OEL STEL) [ppm]	400 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	730 mg/m³
MAK (OEL TWA) [2]	200 ppm
KZGW (OEL STEL)	1460 mg/m³
KZGW (OEL STEL) [ppm]	400 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	400 ppm

p-Cymene (99-87-6)	
Denmark - Occupational Exposure Limits	
OEL TWA [1]	135 mg/m³ (Methylisopropylbenzenes)
OEL TWA [2]	25 ppm (Methylisopropylbenzenes)
OEL STEL	270 mg/m³ (Methylisopropylbenzenes)
OEL STEL [ppm]	50 ppm (Methylisopropylbenzenes)
Estonia - Occupational Exposure Limits	
OEL TWA	140 mg/m³
OEL TWA [ppm]	25 ppm
OEL STEL	190 mg/m³
OEL STEL [ppm]	35 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	10 mg/m³ (Cymene (2, 3, 4-isomers mixture))
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	140 mg/m³
IPRV (OEL TWA) [ppm]	25 ppm
TPRV (OEL STEL)	190 mg/m³
TPRV (OEL STEL) [ppm]	35 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	140 mg/m³
NGV (OEL TWA) [ppm]	25 ppm
KTV (OEL STEL)	190 mg/m³
KTV (OEL STEL) [ppm]	35 ppm

Butyric acid (107-92-6)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	10 mg/m³
Latvia - Occupational Exposure Limits	
OEL TWA	10 mg/m³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	10 mg/m³

Butyric acid (107-92-6)	
Romania - Occupational Exposure Limits	
OEL TWA	15 mg/m³
OEL TWA [ppm]	4 ppm
OEL STEL	30 mg/m³
OEL STEL [ppm]	8 ppm

Carbitol (111-90-0)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	35 mg/m³
MAK (OEL TWA) [ppm]	6 ppm
MAK (OEL STEL)	140 mg/m³
MAK (OEL STEL) [ppm]	24 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	50.1 mg/m³
OEL TWA [ppm]	10 ppm
OEL chemical category	Skin notation
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	35 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	6 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Slovenia - Occupational Exposure Limits	
OEL TWA	35 mg/m³
OEL TWA [ppm]	6 ppm
OEL STEL	70 mg/m³
OEL STEL [ppm]	12 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	80 mg/m³
NGV (OEL TWA) [ppm]	15 ppm
KTV (OEL STEL)	170 mg/m³
KTV (OEL STEL) [ppm]	30 ppm
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	50 mg/m³ (aerosol, inhalable dust, vapour)
KZGW (OEL STEL)	100 mg/m³ (aerosol, inhalable dust, vapour)

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 symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	light yellow. amber. Conforms to standard.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not applicable
Explosive limits	:	Not available
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	70 °C (closed cup) ASTM D7094
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	:	Not available

Vapour pressure at 50°C : Not available
Density : Not available
Relative density : ≈ 0.92
Relative vapour density at 20°C : Not available
Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

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

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

11.1. Information on 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

Orange oil (8008-57-9)	
LD50 oral rat	4400 mg/kg (Source: NZ_CCID)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

Eugenol (97-53-0)	
LD50 oral rat	1930 mg/kg (Source: NZ_CCID)
LD50 oral	2500 mg/kg bodyweight

Cinnamic aldehyde (104-55-2)	
LD50 oral rat	2220 mg/kg (Source: NLM_CIP)
LD50 oral	2200 mg/kg bodyweight
LD50 dermal rabbit	1260 mg/kg (Source: EPA_HPV)
LD50 dermal	1100 mg/kg bodyweight

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
Benzaldehyde (100-52-7)	
LD50 oral rat	1292 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 1250 mg/kg (Source: JAPAN_GHS)
Linalool (78-70-6)	
LD50 oral	2790 mg/kg bodyweight
Geranyl acetate (105-87-3)	
LD50 oral rat	6330 mg/kg (Source: NLM_CIP)
Aldehyde C-10 (112-31-2)	
LD50 oral rat	3730 mg/kg (Source: NLM_HSDB)
LD50 dermal rabbit	5040 mg/kg (Source: NLM_HSDB)
Terpineol (8000-41-7)	
LD50 oral rat	2900 mg/kg (Source: IUCLID)
LD50 oral	4300 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg (Source: IUCLID)
Citral (5392-40-5)	
LD50 oral rat	4960 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	2250 mg/kg (Source: NLM_CIP)
Oenanthic ether (Ethyl heptanoate) (106-30-9)	
LD50 oral rat	> 34640 mg/kg (Source: NLM_CIP)
Linalyl acetate (115-95-7)	
LD50 oral rat	14550 mg/kg (Source: EPA_HPV)
LD50 dermal rabbit	> 5000 mg/kg (Source: EPA_HPV)
Camphene (79-92-5)	
LD50 oral rat	5600 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
d-Limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 5 g/kg (Source: CHEMVIEW)
.beta.-Pinene (127-91-3)	
LD50 oral rat	> 5000 mg/kg (Source: EPA_HPV)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
.alpha.-Pinene (80-56-8)	
LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 oral	500 mg/kg bodyweight

.alpha.-Pinene (80-56-8)	
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)

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

Ethyl benzoate (93-89-0)	
LD50 oral rat	2100 mg/kg (Source: NLM_CIP)
LD50 oral	2500 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)
LC50 Inhalation - Rat [ppm]	4000 ppm/4h

p-Cymene (99-87-6)	
LD50 oral rat	4750 mg/kg (Source: NLM_CIP)
LD50 oral	4750 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
LC50 Inhalation - Rat	> 9.7 mg/l (Exposure time: 5 h Source: EU_CLH)
LC50 Inhalation - Rat (Vapours)	9.7 mg/l/4h

Calamus oil (Acorus calamus L.) (8015-79-0)	
LD50 oral rat	777 mg/kg (Source: NLM_CIP)
LD50 oral	780 mg/kg bodyweight

1,2-Cyclopentanedione, 3-methyl- (765-70-8)	
LD50 oral	1067 mg/kg bodyweight

Butyric acid (107-92-6)	
LD50 oral rat	2 g/kg (Source: NLM_CIP)
LD50 oral	1630 mg/kg bodyweight
LD50 dermal rabbit	530 mg/kg (Source: NLM_HSDB)

Anise oil (Spanish) (8007-70-3)	
LD50 oral rat	2250 mg/kg (Source: NLM_CIP)
LD50 oral	2200 mg/kg bodyweight

Carbitol (111-90-0)	
LD50 oral rat	10502 mg/kg (Source: OECD_SIDS)
LD50 dermal rabbit	9143 mg/kg (Source: OECD_SIDS)
LC50 Inhalation - Rat	> 5240 mg/m³ (Exposure time: 4 h Source: NLM_CIP)

zingiber officinale (ginger) root oil (8007-08-7)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)

Heliotropine (120-57-0)	
LD50 oral rat	2700 mg/kg (Source: NLM_CIP)
LD50 oral	2700 mg/kg bodyweight
LD50 dermal rat	> 5000 mg/kg (Source: ECHA_API)

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

Eugenol (97-53-0)	
IARC group	3 - Not classifiable

d-Limonene (5989-27-5)	
IARC group	3 - Not classifiable

COUMARIN (91-64-5)	
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.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Orange oil (8008-57-9)	
Hydrocarbon	Yes

Heliotropine (120-57-0)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects. Harmful 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) : Harmful to aquatic life with long lasting effects.

Eugenol (97-53-0)	
LC50 - Fish [1]	13 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] 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)

Linalool (78-70-6)	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)
Aldehyde C-10 (112-31-2)	
LC50 - Fish [1]	1.45 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
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)
Linalyl acetate (115-95-7)	
LC50 - Fish [1]	11 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through] Source: ECHA)
Camphene (79-92-5)	
LC50 - Fish [1]	0.72 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [flow-through] Source: IUCLID)
LC50 - Fish [2]	150 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static] Source: IUCLID)
EC50 - Crustacea [1]	22 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 1000 mg/l (Species: Desmodesmus subspicatus)
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)
.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)
Ethyl benzoate (93-89-0)	
LC50 - Fish [1]	6.7 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
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])
Butyric acid (107-92-6)	
EC50 72h - Algae [1]	46.7 mg/l (Species: Desmodesmus subspicatus)
Carbitol (111-90-0)	
LC50 - Fish [1]	10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
LC50 - Fish [2]	19100 – 23900 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through] Source: EPA)
EC50 - Crustacea [1]	3940 – 4670 mg/l (Exposure time: 48 h - Species: Daphnia magna)

Heliotropine (120-57-0)	
LC50 - Fish [1]	2.5 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static] Source: ECHA)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Eugenol (97-53-0)	
Partition coefficient n-octanol/water (Log Pow)	1.83 (at 30 °C (at pH 5.5)

Cinnamic aldehyde (104-55-2)	
Partition coefficient n-octanol/water (Log Pow)	2.1065 (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)

Geranyl acetate (105-87-3)	
Partition coefficient n-octanol/water (Log Pow)	4.04

Aldehyde C-10 (112-31-2)	
Partition coefficient n-octanol/water (Log Pow)	3.8 (at 35 °C)

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

Oenanthic ether (Ethyl heptanoate) (106-30-9)	
Partition coefficient n-octanol/water (Log Pow)	3.98 (at 35 °C (at pH 7)

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

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

Camphene (79-92-5)	
Partition coefficient n-octanol/water (Log Pow)	4.22 (at 37 °C (at pH 7.2)

d-Limonene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4.38 (at 37 °C (at pH 7.2)

.alpha.-Pinene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4.1

Ethyl benzoate (93-89-0)	
Partition coefficient n-octanol/water (Log Pow)	2.59 (at 22.8 °C (at pH 6-7)

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)

p-Cymene (99-87-6)	
Partition coefficient n-octanol/water (Log Pow)	4.8 (at 20 °C (at pH 7)
Partition coefficient n-octanol/water (Log Kow)	0

Butyric acid (107-92-6)	
Partition coefficient n-octanol/water (Log Pow)	1.1 (at 25 °C (at pH 3)

Carbitol (111-90-0)	
Partition coefficient n-octanol/water (Log Pow)	-0.8

Heliotropine (120-57-0)	
Partition coefficient n-octanol/water (Log Pow)	1.2 (at 35 °C)

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

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

HP Code : HP3 - "Flammable:"
– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;
– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;
– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.
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				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. 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)	Orange oil ; Oenanthic ether (Ethyl heptanoate) ; d-Limonene ; .beta.-Pinene ; .alpha.-Pinene ; Ethyl acetate ; p-Cymene	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

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(b)	Mulled Wine ; Orange oil ; Eugenol ; Cinnamic aldehyde ; trans-Anethole ; Benzaldehyde ; Linalool ; Geranyl acetate ; Aldehyde C-10 ; Terpineol ; Citral ; Linalyl acetate ; d-Limonene ; Iso E Super ; Ethyl acetate ; p-Cymene ; Calamus oil (Acorus calamus L.) ; Butyric acid ; Anise oil (Spanish) ; zingiber officinale (ginger) root oil	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)	Mulled Wine ; Orange oil ; Cinnamic aldehyde ; Geranyl acetate ; Aldehyde C-10 ; Oenanthic ether (Ethyl heptanoate) ; d-Limonene ; Iso E Super ; p-Cymene ; Anise oil (Spanish) ; zingiber officinale (ginger) root oil	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.	Orange oil ; Oenanthic ether (Ethyl heptanoate) ; Camphene ; d-Limonene ; .beta.-Pinene ; .alpha.-Pinene ; Ethyl acetate ; p-Cymene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

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)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Piperonal		120-57-0	2932 93 00	Category 1		Annex I

15.1.2. National regulations

France

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

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).
List of sensitizing substances (TRGS 907) : Contains sensitizing substances according TRGS 907.
Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

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

Denmark

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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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

Full text of H- and EUH-statements:	
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 2	Flammable solids, Category 2
H224	Extremely flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
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.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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