

BLACKBERRY & FIG FO-0129

Safety Data Sheet

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



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

1.1. Product identifier

Product form	: Mixture
Trade name	: BLACKBERRY & FIG FO-0129
UFI	: 8R1K-C1R1-X00C-STWP
Product code	: FO-0129
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	: Industrial use, Professional 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

Fragrance Orchard

Neutrino,
Albert Road,
Essex CM7 3JQ
GB - United Kingdom

1.4. Emergency telephone number

Emergency number : +44 (0) 1376 555185

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4	H302
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411
Full text of H- and EUH-statements: see section 16	

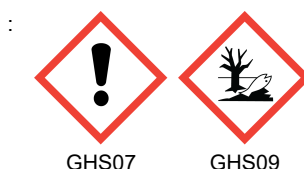
Adverse physicochemical, human health and environmental effects

Harmful if swallowed. Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction. Very toxic to aquatic life.

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word	: Warning
(CLP) Contains	: benzyl benzoate; Vertenex; Amyl salicylate; 3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol; Mayol; Hydroxy; Eugenol; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone; COUMARIN; Heliotropine; Allyl heptanoate; Cinnamic aldehyde; (R)-p-mentha-1,8-diene; d-limonene; Linalool; Helional; Triplal (Vertocitral); Hexyl cinnamic aldehyde; Cinnamalva; 1,2-Cyclopentanedione, 3-methyl-; Aldehyde C-16
Hazard statements (CLP)	: H302 - Harmful if swallowed. H317 - May cause an allergic skin reaction. 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. P270 - Do not eat, drink or smoke when using this product. 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.
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 %

Component	
Substance(s) not 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	Lyril Replacement (Ventos) (0000-00-02)

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]
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	32.825 – 65.65	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Vertenex	CAS-No.: 32210-23-4 EC-No.: 250-954-9 REACH-no: 01-2119976286-24	2.25 – 4.5	Skin Sens. 1B, H317
Amyl salicylate	CAS-No.: 2050-08-0 EC-No.: 218-080-2 REACH-no: 01-2119969444-27	1.75 – 3.5	Acute Tox. 4 (Oral), H302 Aquatic Chronic 1, H410

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lyrar Replacement	CAS-No.: 0000-00-02	1.5 – 3	Skin Sens. 1, H317
3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol	CAS-No.: 103694-68-4 EC-No.: 403-140-4 EC Index-No.: 603-138-00-5	0.015 – 3	Skin Sens. 1, H317 Aquatic Chronic 3, H412
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB)	CAS-No.: 1222-05-5 EC-No.: 214-946-9 EC Index-No.: 603-212-00-7 REACH-no: 01-2119488227-29	1.25 – 2.5	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
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	1.08495 – 2.1699	Not classified
Vanillin	CAS-No.: 121-33-5 EC-No.: 204-465-2 REACH-no: 01-2119516040-60	1 – 2	Eye Irrit. 2, H319
Ethyl vanillin	CAS-No.: 121-32-4 EC-No.: 204-464-7 REACH-no: 01-211958961-24	0.875 – 1.75	Eye Irrit. 2, H319
Eugenol	CAS-No.: 97-53-0 EC-No.: 202-589-1 REACH-no: 01-2119971802-33	0.6 – 1.2	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317
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	0.6 – 1.2	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	0.5 – 1	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Heliotropine	CAS-No.: 120-57-0 EC-No.: 204-409-7 REACH-no: 01-2119983608-21	0.45 – 0.9	Skin Sens. 1B, H317
Allyl heptanoate	CAS-No.: 142-19-8 EC-No.: 205-527-1 REACH-no: 01-2119488961-23	0.3 – 0.6	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 3, H412
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 REACH-no: 01-2119935242-45	0.25 – 0.5	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Camphor substance with national workplace exposure limit(s) (AT, BE, BG, DK, ES, FI, FR, GB, GR, HR, IE, LT, PL, PT, RO, SK, NO, CH)	CAS-No.: 76-22-2 EC-No.: 200-945-0	0.25 – 0.5	Flam. Sol. 2, H228 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 2, H371 Aquatic Chronic 2, H411
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8 REACH-no: 01-2119493353-35	0.25 – 0.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Benzyl acetate substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO)	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272-42	0.25 – 0.5	Aquatic Chronic 3, H412
(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	0.2385 – 0.477	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	0.201125 – 0.40225	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Helional	CAS-No.: 1205-17-0 EC-No.: 214-881-6 REACH-no: 01-2120740119-58	0.2 – 0.4	Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Mayol	CAS-No.: 13828-37-0 EC-No.: 237-539-8	0.015 – 0.3	Skin Sens. 1B, H317 Skin Irrit. 2, H315
isopentyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, DE, DK, EE, ES, FI, FR, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 123-92-2 EC-No.: 204-662-3 EC Index-No.: 607-130-00-2 REACH-no: 01-2119548408-32	0.125 – 0.25	Flam. Liq. 3, H226
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.125 – 0.25	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Hydroxy	CAS-No.: 107-75-5 EC-No.: 203-518-7 REACH-no: 01-2119973482-31	0.1161 – 0.2322	Eye Irrit. 2, H319 Skin Sens. 1B, H317

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexyl cinnamic aldehyde	CAS-No.: 101-86-0 EC-No.: 202-983-3 REACH-no: 01-2119533092-50	0.1 – 0.2	Skin Sens. 1, H317 Aquatic Chronic 2, H411
benzaldehyde substance with national workplace exposure limit(s) (BG, FI, HU, LT, LV, PL)	CAS-No.: 100-52-7 EC-No.: 202-860-4 EC Index-No.: 605-012-00-5 REACH-no: 01-2119455540-44	0.075 – 0.15	Acute Tox. 4 (Oral), H302
Cinnamalva	CAS-No.: 1885-38-7 EC-No.: 217-552-5	0.05 – 0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1B, H317
1,2-Cyclopentanedione, 3-methyl-	CAS-No.: 765-70-8 EC-No.: 212-154-8	0.05 – 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
Aldehyde C-16	CAS-No.: 77-83-8 EC-No.: 201-061-8 REACH-no: 01-2119967770-28	0.05 – 0.1	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
.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	0.00125 – 0.0025	Flam. Liq. 3, H226
.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	0.00025 – 0.0005	Flam. Liq. 3, H226

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	: Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
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 eyes with water as a precaution.
First-aid measures after ingestion	: Rinse mouth. 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	: May cause an allergic skin reaction.
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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.
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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.
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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 : Take up liquid spill into absorbent material.
up 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. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : 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. Wash contaminated clothing before reuse.

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
Special rules on heat. : Store in a closed container.
packaging Packaging : Do not store in corrodable metal.
materials

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

.beta.-Pinene (127-91-3)

Belgium - Occupational Exposure Limits

OEL TWA	20 ppm
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.beta.-Pinene (127-91-3)	
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
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
Kortidsverdi (OEL STEL)	175 mg/m ³ (value calculated) 37.5 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer
.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm

.alpha.-Pinene (80-56-8)	
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
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
Carbitol (111-90-0)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	35 mg/m ³
	6 ppm

Carbitol (111-90-0)	
MAK (OEL STEL)	140 mg/m ³
	24 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	50.1 mg/m ³
	10 ppm
OEL chemical category	Skin notation
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	35 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	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/m ³
	6 ppm
OEL STEL	70 mg/m ³
	12 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	80 mg/m ³
	15 ppm
KGV (OEL STEL)	170 mg/m ³
	30 ppm
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	50 mg/m ³ (aerosol, inhalable dust, vapour)
KZGW (OEL STEL)	100 mg/m ³ (aerosol, inhalable dust, vapour)
Camphor (76-22-2)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	13 mg/m ³
	2 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	12 mg/m ³
	2 ppm
OEL STEL	19 mg/m ³
	3 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	12 mg/m ³
OEL STEL	18 mg/m ³
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	13 mg/m ³

Camphor (76-22-2)	
	2 ppm
KGVI (OEL STEL)	19 mg/m³
	3 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	12 mg/m³
	2 ppm
OEL STEL	24 mg/m³
	4 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	1.9 mg/m³
	0.3 ppm
HTP (OEL STEL)	5.7 mg/m³
	0.9 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	12 mg/m³
	2 ppm
Greece - Occupational Exposure Limits	
OEL TWA	12 mg/m³ (inhalable fraction)
OEL STEL	18 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	12 mg/m³
	2 ppm
OEL STEL	18 mg/m³
	3 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	3 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	12 mg/m³
NDSch (OEL STEL)	18 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	2 ppm
OEL STEL	3 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
Romania - Occupational Exposure Limits	
OEL TWA	1 mg/m³
	6 ppm
OEL STEL	3 mg/m³
	18 ppm

Camphor (76-22-2)	
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	13 mg/m ³
	2 ppm
NPHV (OEL C)	26 mg/m ³
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	13 mg/m ³
	2 ppm
VLA-EC (OEL STEL)	19 mg/m ³
	3 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	13 mg/m ³
	2 ppm
WEL STEL (OEL STEL)	19 mg/m ³
	3 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	12 mg/m ³
	2 ppm
Korttidsverdi (OEL STEL)	18 mg/m ³ (value calculated)
	4 ppm (value calculated)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	13 mg/m ³ (aerosol, vapour)
	2 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 ppm (synthetic)
ACGIH OEL STEL	3 ppm (synthetic)
ACGIH chemical category	Not Classifiable as a Human Carcinogen synthetic
(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

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m ³
	5 ppm
OEL STEL	112 mg/m ³
	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	168 mg/m ³
	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m ³
	25 ppm
Kortidsverdi (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
Benzyl acetate (140-11-4)	
Belgium - Occupational Exposure Limits	
OEL TWA	62 mg/m ³
	10 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	61 mg/m ³
	10 ppm
OEL STEL	122 mg/m ³
	20 ppm
Ireland - Occupational Exposure Limits	
OEL TWA	10 ppm
OEL STEL	30 ppm (calculated)
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³

Benzyl acetate (140-11-4)	
Portugal - Occupational Exposure Limits	
OEL TWA	10 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
Romania - Occupational Exposure Limits	
OEL TWA	50 mg/m³
	8 ppm
OEL STEL	80 mg/m³
	13 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	62 mg/m³
	10 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	270 mg/m³
	50 ppm
IOEL STEL	540 mg/m³
	100 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	270 mg/m³ (Pentyl acetate (all isomers))
	50 ppm (Pentyl acetate (all isomers))
MAK (OEL STEL)	540 mg/m³ (Pentylacetate)
	100 ppm (Pentylacetate)
Belgium - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	270 mg/m³
	50 ppm
KGVI (OEL STEL)	540 mg/m³

isopentyl acetate (123-92-2)	
	100 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	271 mg/m³ (Amyl acetate, all isomers)
	50 ppm (Amyl acetate, all isomers)
OEL STEL	540 mg/m³
	100 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	270 mg/m³ (Pentyl acetate)
	50 ppm (Pentyl acetate)
HTP (OEL STEL)	540 mg/m³
	100 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	270 mg/m³ (restrictive limit)
	50 ppm (restrictive limit)
VLE (OEL C/STEL)	540 mg/m³ (restrictive limit)
	100 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	270 mg/m³
	50 ppm
Gibraltar - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Greece - Occupational Exposure Limits	
OEL TWA	530 mg/m³
	100 ppm
OEL STEL	800 mg/m³
	150 ppm

isopentyl acetate (123-92-2)	
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	270 mg/m ³
CK (OEL STEL)	540 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA	260 mg/m ³
	50 ppm
OEL STEL	520 mg/m ³
	100 ppm
Italy - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	270 mg/m ³
	50 ppm
TPRV (OEL STEL)	540 mg/m ³
	100 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Malta - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
	50 ppm
OEL STEL	540 mg/m ³
	100 ppm
Netherlands - Occupational Exposure Limits	
TGG-15min (OEL STEL)	530 mg/m ³
	98.1 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	250 mg/m ³
NDSch (OEL STEL)	500 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	270 mg/m ³ (indicative limit value)

isopentyl acetate (123-92-2)	
	50 ppm (indicative limit value (Pentyl acetate, all isomers))
OEL STEL	540 mg/m³ (indicative limit value)
	100 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	270 mg/m³
	50 ppm
NPHV (OEL C)	540 mg/m³
Slovenia - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	270 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
VLA-EC (OEL STEL)	540 mg/m³
	100 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	270 mg/m³ (Pentyl acetates)
	50 ppm (Pentyl acetates)
KGV (OEL STEL)	540 mg/m³ (Pentyl acetates)
	100 ppm (Pentyl acetates)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	260 mg/m³
	50 ppm
Korttidsverdi (OEL STEL)	325 mg/m³ (value calculated)
	75 ppm (value calculated)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	260 mg/m³ (Pentyl acetate all isomers)
	50 ppm (Pentyl acetate all isomers)
KZGW (OEL STEL)	260 mg/m³ (Pentyl acetate all isomers)
	50 ppm (Pentyl acetate all isomers)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	50 ppm (Pentyl acetate, all isomers)

isopentyl acetate (123-92-2)	
ACGIH OEL STEL	100 ppm (Pentyl acetate, all isomers)
benzaldehyde (100-52-7)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	4.4 mg/m ³
	1 ppm
HTP (OEL C)	17.4 mg/m ³
	4 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m ³
CK (OEL STEL)	10 mg/m ³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m ³
NDSch (OEL STEL)	40 mg/m ³

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.
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 °C (closed cup) ASTM
Auto-ignition temperature	D7094 : 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	: ≈ 1.09
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)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

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ATE CLP (oral)	641.347 mg/kg bodyweight
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.beta.-Pinene (127-91-3)

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

.alpha.-Pinene (80-56-8)

LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)

benzyl benzoate (120-51-4)

LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	1160 mg/kg bodyweight
LD50 dermal rabbit	4000 mg/kg (Source: NLM_CIP)

Vertenex (32210-23-4)

LD50 oral rat	5 g/kg (Source: NLM_CIP)
LD50 oral	3370 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

Amyl salicylate (2050-08-0)

LD50 oral rat	4100 mg/kg (Source: NZ_CCID)
LD50 oral	2000 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)

LD50 oral	3440 mg/kg bodyweight
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3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)	
LD50 dermal rabbit	> 5 ml/kg (Source: ECHA_API)
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)
Hydroxy (107-75-5)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)	
LD50 oral rat	> 3250 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 3250 mg/kg (Source: CHEMVIEW)
LC50 Inhalation - Rat	> 5.04 mg/l/4h
Vanillin (121-33-5)	
LD50 dermal rabbit	> 5010 mg/kg (Source: OECD_SIDS)
LD50 dermal	2600 mg/kg bodyweight
Ethyl vanillin (121-32-4)	
LD50 oral rat	1590 mg/kg (Source: NLM_CIP)
LD50 oral	3000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
Eugenol (97-53-0)	
LD50 oral rat	1930 mg/kg (Source: NZ_CCID)
LD50 oral	2500 mg/kg bodyweight
COUMARIN (91-64-5)	
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)
LD50 dermal rat	293 mg/kg (Source: ECHA_API)
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)
Allyl heptanoate (142-19-8)	
LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	218 mg/kg
LD50 dermal rabbit	810 mg/kg (Source: ECHA_API)
LD50 dermal	810 mg/kg
Cinnamic aldehyde (104-55-2)	
LD50 oral rat	2220 mg/kg (Source: NLM_CIP)
LD50 oral	2220 mg/kg

Cinnamic aldehyde (104-55-2)	
LD50 dermal rabbit	1260 mg/kg (Source: EPA_HPVP)
Camphor (76-22-2)	
LD50 oral	1500 mg/kg
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
Orange oil (8008-57-9)	
LD50 oral rat	4400 mg/kg (Source: NZ_CCID)
LD50 dermal rabbit	> 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)
Benzyl acetate (140-11-4)	
LD50 oral rat	2490 mg/kg (Source: JAPAN_GHS)
LD50 oral	2490 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)
Linalool (78-70-6)	
LD50 oral	2790 mg/kg
Helional (1205-17-0)	
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
Triplal (Vertocitral) (68039-49-6)	
LD50 oral	2330 mg/kg
Hexyl cinnamic aldehyde (101-86-0)	
LD50 oral rat	3100 mg/kg (Source: NLM_CIP)
LD50 oral	3100 mg/kg bodyweight
LD50 dermal rabbit	> 3000 mg/kg (Source: EPA_HPVP)
LC50 Inhalation - Rat	> 5 mg/l/4h
benzaldehyde (100-52-7)	
LD50 oral rat	1292 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 1250 mg/kg (Source: JAPAN_GHS)
Cinnamalva (1885-38-7)	
LD50 oral	100 mg/kg bodyweight
LD50 dermal	1100 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l/4h
1,2-Cyclopentanedione, 3-methyl- (765-70-8)	
LD50 oral	1067 mg/kg bodyweight
Aldehyde C-16 (77-83-8)	
LD50 oral rat	5470 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)

Skin corrosion/irritation	Serious	: Not classified
eye damage/irritation		: Not classified
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
COUMARIN (91-64-5)		
IARC group		3 - Not classifiable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)		
IARC group		3 - Not classifiable
Benzyl acetate (140-11-4)		
IARC group		3 - Not classifiable
Reproductive toxicity		: Not classified
STOT-single exposure		: Not classified
Camphor (76-22-2)		
STOT-single exposure		May cause damage to organs.
STOT-repeated exposure		: Not classified
Aspiration hazard		: Not classified
.beta.-Pinene (127-91-3)		
Hydrocarbon		Yes
.alpha.-Pinene (80-56-8)		
Hydrocarbon		Yes
benzyl benzoate (120-51-4)		
Viscosity, kinematic		7.456 mm²/s
Heliotropine (120-57-0)		
Viscosity, kinematic		Not applicable
Orange oil (8008-57-9)		
Hydrocarbon		Yes
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)		
Hydrocarbon		Yes

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. Very toxic to aquatic life.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

.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)
benzyl benzoate (120-51-4)	
LC50 - Fish [1]	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
NOEC (chronic)	0.168 mg/l
Vertenex (32210-23-4)	
LC50 - Fish [1]	8.6 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: ECHA)
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)
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HCHB) (1222-05-5)	
LC50 - Fish [1]	0.452 mg/l Wolf, 1996d-27682
LC50 - Other aquatic organisms [1]	> 0.14 mg/l REACH DOSSIER Pimephales promelas
EC50 - Crustacea [2]	260 µg/l REACH Dossier
EC50 - Other aquatic organisms [1]	0.131 mg/l REACH Dossier
Vanillin (121-33-5)	
LC50 - Fish [1]	53 – 61.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
NOEC (acute)	10000 mg/kg (Exposure time: 42 Days - Species: Eisenia foetida [soil dry weight])
Ethyl vanillin (121-32-4)	
LC50 - Fish [1]	81.4 – 94.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
Eugenol (97-53-0)	
LC50 - Fish [1]	13 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
Heliotropine (120-57-0)	
LC50 - Fish [1]	2.5 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static] Source: ECHA)
(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)
Linalool (78-70-6)	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)
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)

Aldehyde C-16 (77-83-8)	
LC50 - Fish [1]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)

12.2. Persistence and degradability

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Persistence and degradability	Rapidly degradable
.beta.-Pinene (127-91-3)	
Persistence and degradability	Rapidly degradable
.alpha.-Pinene (80-56-8)	
Persistence and degradability	Rapidly degradable
benzyl benzoate (120-51-4)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Vertenex (32210-23-4)	
Persistence and degradability	Rapidly degradable
Amyl salicylate (2050-08-0)	
Persistence and degradability	Rapidly degradable
Lyrat Replacement (Ventos) (0000-00-02)	
Persistence and degradability	Rapidly degradable
3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)	
Persistence and degradability	Rapidly degradable
Mayol (13828-37-0)	
Persistence and degradability	Rapidly degradable
Carbitol (111-90-0)	
Persistence and degradability	Rapidly degradable
Hydroxy (107-75-5)	
Persistence and degradability	Rapidly degradable
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) (1222-05-5)	
Persistence and degradability	Rapidly degradable
Vanillin (121-33-5)	
Persistence and degradability	Rapidly degradable
Ethyl vanillin (121-32-4)	
Persistence and degradability	Rapidly degradable
Eugenol (97-53-0)	
Persistence and degradability	Rapidly degradable
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

COUMARIN (91-64-5)	
Persistence and degradability	Rapidly degradable
Heliotropine (120-57-0)	
Persistence and degradability	Rapidly degradable
Allyl heptanoate (142-19-8)	
Persistence and degradability	Rapidly degradable
Cinnamic aldehyde (104-55-2)	
Persistence and degradability	Rapidly degradable
Camphor (76-22-2)	
Persistence and degradability	Rapidly degradable
Orange oil (8008-57-9)	
Persistence and degradability	Rapidly degradable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Persistence and degradability	Rapidly degradable
Benzyl acetate (140-11-4)	
Persistence and degradability	Rapidly degradable
Linalool (78-70-6)	
Persistence and degradability	Rapidly degradable
Helional (1205-17-0)	
Persistence and degradability	Rapidly degradable
isopentyl acetate (123-92-2)	
Persistence and degradability	Rapidly degradable
Triplal (Vertocitral) (68039-49-6)	
Persistence and degradability	Rapidly degradable
Hexyl cinnamic aldehyde (101-86-0)	
Persistence and degradability	Rapidly degradable
benzaldehyde (100-52-7)	
Persistence and degradability	Rapidly degradable
Cinnamalva (1885-38-7)	
Persistence and degradability	Rapidly degradable
1,2-Cyclopentanedione, 3-methyl- (765-70-8)	
Persistence and degradability	Rapidly degradable
Aldehyde C-16 (77-83-8)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

.alpha.-Pinene (80-56-8)

Partition coefficient n-octanol/water (Log Pow)	4.1
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benzyl benzoate (120-51-4)

Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
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Bioaccumulative potential	Not established.
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Vertenex (32210-23-4)

Partition coefficient n-octanol/water (Log Pow)	4.8 (at 25 °C)
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Amyl salicylate (2050-08-0)

BCF - Fish [1]	(1170 dimensionless (whole body w.w.))
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Partition coefficient n-octanol/water (Log Pow)	4.5 (at 30 °C)
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3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol (103694-68-4)

Partition coefficient n-octanol/water (Log Pow)	3.07 (at 20 °C)
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Carbitol (111-90-0)

Partition coefficient n-octanol/water (Log Pow)	-0.8
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Hydroxy (107-75-5)

Partition coefficient n-octanol/water (Log Pow)	1.68 (at 25 °C)
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1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCb) (1222-05-5)

BCF - Fish [1]	(1618 dimensionless (whole body w.w.))
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Partition coefficient n-octanol/water (Log Pow)	5.3 (at 25 °C (at pH 7))
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Vanillin (121-33-5)

Partition coefficient n-octanol/water (Log Pow)	1.23 (at 22 °C)
---	-----------------

Ethyl vanillin (121-32-4)

Partition coefficient n-octanol/water (Log Pow)	1.61 (at 25 °C)
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Eugenol (97-53-0)

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

Heliotropine (120-57-0)

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

Allyl heptanoate (142-19-8)

Partition coefficient n-octanol/water (Log Pow)	3.97 (at 20 °C (at pH 5.3))
---	-----------------------------

Cinnamic aldehyde (104-55-2)

Partition coefficient n-octanol/water (Log Pow)	2.1065 (at 25 °C)
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Camphor (76-22-2)

Partition coefficient n-octanol/water (Log Pow)	2.414 (at 25 °C)
---	------------------

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

Partition coefficient n-octanol/water (Log Pow)	4.38 (at 37 °C (at pH 7.2))
---	-----------------------------

Benzyl acetate (140-11-4)	
Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 7)
Helional (1205-17-0)	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C)
isopentyl acetate (123-92-2)	
Partition coefficient n-octanol/water (Log Pow)	2.7 (at 35 °C)
benzaldehyde (100-52-7)	
BCF - Fish [1]	(no significant bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	1.4 (at 25 °C)
Cinnamalva (1885-38-7)	
Partition coefficient n-octanol/water (Log Pow)	1.96
Aldehyde C-16 (77-83-8)	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C (cis isomer)

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

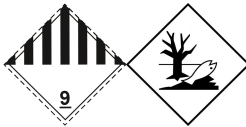
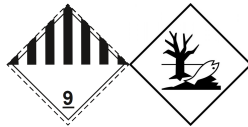
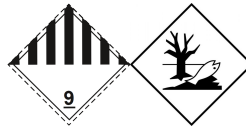
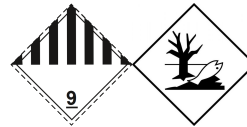
Waste treatment
methods HP Code

: Dispose of contents/container in accordance with licensed collector's sorting instructions. : HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082

ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	Environmentally hazardous substance, liquid, n.o.s. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Benzyl Benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 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) Limited : 274, 335, 375, 601
quantities (ADR) Excepted : 5I
quantities (ADR) Packing : E1
instructions (ADR) Special : P001, IBC03, LP01,
packing provisions (ADR) Mixed R001 : PP1
packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) Orange plates : 90



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

Transport by sea

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

Air transport

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

Inland waterway transport

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

Rail transport

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

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	.beta.-Pinene ; .alpha.-Pinene ; Orange oil ; (R)-p-mentha-1,8-diene; d-limonene ; isopentyl acetate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	blackberry & fig ; benzyl benzoate ; Vertenex ; Amyl salicylate ; Lyrall Replacement (Ventos) ; 3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol ; Mayol ; Hydroxy ; Eugenol ;1(-1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl) ethanone ; Allyl heptanoate ; Cinnamic aldehyde ; Orange oil ; (R)-p-mentha-1,8-diene; d-limonene ; Linalool ; Helional ; Triplal (Vertocitral) ; Hexyl cinnamic aldehyde ; benzaldehyde ; Cinnamalva ; Aldehyde C-16	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

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(c)	blackberry & fig ; benzyl benzoate ; Amyl salicylate ; 3-(2,2-dimethyl-3-hydroxypropyl)toluene; (alt.): 2,2-dimethyl-3-(3-methylphenyl)propanol ; 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran; galaxolide; (HHCB) ; 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthalenyl)ethanone ; Allyl heptanoate ; Cinnamic aldehyde ; Orange oil ; (R)-p-mentha-1,8-diene; d-limonene ; Benzyl acetate ; Helional ; Triplal (Vertocitral) ; Hexyl cinnamic aldehyde ; Aldehyde C-16	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.	.beta.-Pinene ; .alpha.-Pinene ; Camphor ; Orange oil ; (R)-p-mentha-1,8-diene; d-limonene ; isopentyl acetate	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

Dual-Use Regulation (428/2009)

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

Explosives Precursors Regulation (2019/1148)

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

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category, Subcategory	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 to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

- ABM category : A(1) - highly toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : Orange oil ,Triplal (Vertocitral) are listed
SZW-lijst van mutagene stoffen : Orange oil ,Triplal (Vertocitral) are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

- 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

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 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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

Full text of H- and EUH-statements:	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 2	Flammable solids, Category 2
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.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
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 SE 2	Specific target organ toxicity – Single exposure, Category 2

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.