



SAFETY DATA SHEET

This Safety Data Sheet (SDS) was created pursuant to the requirements of: Regulation (EC) No. 1907/2006 (in particular as amended by Commission Regulation (EU) 2020/878 with respect to SDSs) and Regulation (EC) No. 1272/2008 (CLP)

Issuing Date: 11-Dec-2023

Revision date 11-Dec-2023

Revision Number 1

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

1.1. Product identifier

Product Identifier 91848915_RET_CLPR7_EUR_SAW-90823044-91993650
Product Name Febreze 3Volution Lenor Citrus & White Verbena
Synonyms 91848915(+90823044+91993650)/C-91848915-001(+C-90823044-002+C-91993650-001)
APP: C-91683871-001
Product Form Mixture
Pure substance/mixture Mixture

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

Recommended use Intended for general public
Uses advised against No information available
Main user category SU 21 - Consumer uses: Private households (= general public = consumers)
Product category Energized & Continuous
Use category PC3 - Air care products

1.3. Details of the supplier of the safety data sheet

Supplier

Procter & Gamble UK Brooklands, Weybridge, Surrey, KT13 0XP, UK Tel: 01932 896000 Fax: 01932 896200

P&G DCE bvba/sprl-Belgium Dist. Div., Temselaan 100, B-1853 Strombeek-Bever, Belgium (IE) 1800 535 119

For further information, please contact

E-mail address pgsds.im@pg.com

1.4. Emergency telephone number

Emergency Telephone (UK) Emergency Tel: 0800 328 8304 (IRL) Emergency Tel: 1800 509 497

(IRL) Poisons information: for information or to report a poisoning incident contact The National Poisons Information Centre 01 8092166 (8.00 a.m. to 10.00 p.m. 7 days a week)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 - (H315)
Serious eye damage/eye irritation	Category 2 - (H319)
Skin sensitization	Category 1 - (H317)
Chronic aquatic toxicity	Category 2 - (H411)

2.2. Label elements



Signal word
Warning

Hazard statements

H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P102 - Keep out of reach of children
 P305 + P351 - IF IN EYES: Rinse cautiously with water for several minutes
 P501 - Dispose of contents/container to an appropriate local waste system
 P312 - Call a POISON CENTRE/doctor if you feel unwell
 P302 + P352 - IF ON SKIN: Wash with plenty of water

2.3. Other hazards

No information available

Endocrine Disruptor Information There are no substances contained at or above the regulated value for declaration of >0.1% that fall under the definition of confirmed endocrine disruptors of any EU regulation.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not applicable

3.2 Mixtures

Chemical name	CAS No	Weight-%	REACH registration number	EC No	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
PPG-2 Methyl Ether	34590-94-8	20 - 30	01-21194500 11-60	236-547-9 252-104-2	NC	-	-	-
Linalool	78-70-6	10 - 20	01-21194740 16-42	201-134-4	Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) Skin Sens. 1B (H317)	-	-	-
2-T-Butylcyclohexyl Acetate	20298-69-5	5 - 10	01-21199707 13-33	201-828-7 243-718-1	Aquatic Chronic 2 (H411)	-	-	-
Benzyl Acetate	140-11-4	5 - 10	01-21196382 72-42	205-399-7	Aquatic Chronic 3 (H412)	-	-	-
Cyclamen Aldehyde	103-95-7	1 - 5	01-21199705 82-32	203-161-7	Aquatic Chronic 3 (H412) Skin Irrit. 2	-	-	-

					(H315) Skin Sens. 1B (H317)			
Tetramethyl Acetyloctahydronaphthalenes	54464-57-2	1 - 5	01-21194899 89-04	259-174-3 259-175-9 268-978-3 268-979-9 915-730-3	Aquatic Chronic 2 (H411) Skin Irrit. 2 (H315) Skin Sens. 1B (H317)	-	-	-
Isobutyl Methyl Tetrahydropyranol	63500-71-0	1 - 5	01-21194555 47-30	405-040-6	Eye Irrit. 2 (H319)	-	-	-
2,6-Dimethyl-7-Octen-2-ol	18479-51-1	1 - 5	No data available	242-359-8 242-362-4	Skin Irrit. 2(H315)	-	-	-
Alpha-Isomethyl Ionone	127-51-5	1 - 5	01-21201385 69-45	204-846-3	Aquatic Chronic 2 (H411) Skin Sens. 1B (H317)	-	-	-
Gamma-Undecalactone	104-67-6	1 - 5	01-21199593 33-34	203-225-4	Aquatic Chronic 3 (H412)	-	-	-
Ethyl Hydroxypyrene	4940-11-8	1 - 5	No data available	225-582-5	Acute Tox. 4 (Oral) (H302)	-	-	-
2,4-Dimethyl-3-Cyclohexene Carboxaldehyde	68039-49-6	1 - 5	01-21199823 84-28	268-264-1	Aquatic Chronic 2 (H411) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)	-	-	-
Isoamyl Allylglycolate	67634-00-8	0 - 1	No data available	266-803-5 266-804-0 916-328-0	Acute Tox. 2 (Inhalation: dust,mist) (H330) Acute Tox. 4 (Oral) (H302) Skin Irrit. 2 (H315)	-	-	-
Limonene	5989-27-5	0 - 1	01-21195292 23-47	227-813-5	Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412) Asp. Tox. 1 (H304) Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) Skin Sens. 1B (H317)	-	-	-
Methylenedioxyphenyl Methylpropanal	1205-17-0	0 - 1	01-21207401 19-58	214-881-6	Aquatic Chronic 2 (H411) Repr. 2 (H361) Skin Sens. 1B (H317)	-	-	-
Methyl Decenol	81782-77-6	0 - 1	01-21199835 28-21	279-815-0	Aquatic Acute 1 (H400) Aquatic	-	-	-

					Chronic 2 (H411)			
Linalyl Acetate	115-95-7	0 - 1	01-21194547 89-19	204-116-4	Skin Irrit. 2 (H315) Skin Sens. 1B (H317)	-	-	-
Delta-Damascone	57378-68-4	0 - 1	01-21195351 22-53	260-709-8 275-156-8	Acute Tox. 4 (Oral) (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315) Skin Sens. 1A (H317)	-	-	-
Allyl Cyclohexylpropionate	2705-87-5	0 - 1	01-21199763 55-27	220-292-5	Acute Tox. 4 (Dermal) (H312) Acute Tox. 4 (Oral) (H302) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411) Skin Sens. 1 (H317)	-	-	-
Citral	5392-40-5	0 - 1	01-21194628 29-23	226-394-6	Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) Skin Sens. 1 (H317)	-	-	-
Dimethyl Heptenal	106-72-9	0 - 1	01-21202703 05-62	203-427-2	Skin Sens. 1B (H317)	-	-	-
Isoeugenol	97-54-1	0 - 1	01-21202236 82-61	202-590-7 227-678-2	Acute Tox. 4 (Dermal) (H312) Acute Tox. 4 (Inhalation: dust, mist) (H332) Acute Tox. 4 (Oral) (H302) Eye Irrit. 2 (H319) Skin Irrit. 2 (H315) Skin Sens. 1A (H317) STOT SE 3 (H335)	Skin Sens. 1A :: 0.01%<=C<100%	-	-
Cyclopropanecarboxylic acid, 2-methyl-2-[(1,2,4-trimethyl-2-penten-1-yl)oxy]propyl ester	676532-44-8	0 - 1	01-21194074 67-38	700-118-9	Aquatic Chronic 2 (H411) Skin Sens. 1 (H317)	-	-	-
Cis-3-Hexenyl Salicylate	65405-77-8	0 - 1	01-21199873 20-37	265-745-8	Aquatic Acute 1 (H400) Aquatic	-	-	-

					Chronic 2 (H411)			
Coumarin	91-64-5	0 - 1	01-2119949300-45	202-086-7	Acute Tox. 3 (Oral) (H301) Skin Sens. 1B (H317)	-	-	-
p-Anisyl acetate	104-21-2	0 - 1	No data available	203-185-8	Skin Sens. 1B (H317)	-	-	-
Undecylenal	112-45-8	0 - 1	01-2119980959-11	203-973-1	Aquatic Chronic 3 (H412) Skin Sens. 1B (H317)	-	-	-
trans-2-Hexanal	6728-26-3	0 - 1	No data available	229-778-1	Acute Tox. 3 (Dermal) (H311) Acute Tox. 4 (Oral) (H302) Eye Irrit. 2 (H319) Flam. Liq. 3 (H226) Skin Irrit. 2 (H315) Skin Sens. 1B (H317)	-	-	-
Isobutenyl Methyltetrahydropyran	16409-43-1	0 - 1	01-2119976300-42	221-217-9 225-017-2 240-457-5 618-036-6 618-038-7	Eye Irrit. 2 (H319) Repr. 2 (H361f) Skin Irrit. 2 (H315)	-	-	-
4-(tricyclo[5.2.1.0.2,6]dec-8-ylidene)Butyraldehyde	30168-23-1	0 - 1	No data available	250-078-7	Acute Tox. 4 (Inhalation:dust,mist) (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) Skin Irrit. 2 (H315)	-	-	-
Methyl Octine Carbonate	111-80-8	0 - 1	01-2120139912-55	203-909-2	Acute Tox. 4 (Oral) (H302) Aquatic Acute 1 (H400) Aquatic Chronic 3 (H412) Skin Irrit. 2 (H315) Skin Sens. 1A (H317)	-	-	-

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

Acute Toxicity Estimate
 No information available

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59).

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. (Call a physician if symptoms occur).
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. Remove and isolate contaminated clothing and shoes. Get medical attention if symptoms occur. Discontinue use of product.
Ingestion	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).

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

Symptoms	Coughing and/ or wheezing. Redness. Swelling of tissue. Itching. Drowsiness. Dizziness. Sneezing. Dryness. Pain. Blurred vision. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Excessive secretion. Shortness of breath. Headache.
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4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians	May cause sensitization in susceptible persons. Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media	Dry chemical. Alcohol resistant foam. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical	None in particular.
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5.3. Advice for firefighters

Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	See Section 12 for additional Ecological Information.
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6.3. Methods and material for containment and cleaning up

Methods for containment	Scoop absorbed substance into closing containers.
Methods for cleaning up	Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Small quantities of liquid spill: Large Spills: contain released substance, pump into suitable containers. This material and its container must be disposed of in a safe way, and as per local legislation.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.
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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Avoid contact with skin. Avoid contact with eyes. Use personal protection equipment. Do not eat, drink or smoke when using this product. Use only with adequate ventilation. People suffering from perfume sensitivity should be cautious when using this product.

General hygiene considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep/store only in original container. Keep tightly closed in a dry and cool place.

7.3. Specific end use(s)

Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits

Chemical name	European Union	Austria	Belgium	Bulgaria	Croatia
PPG-2 Methyl Ether	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 307 mg/m ³ STEL 100 ppm STEL 614 mg/m ³ H*	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 308.0 mg/m ³ K*	TWA: 50 ppm TWA: 308 mg/m ³ *
Benzyl Acetate	-	-	TWA: 10 ppm TWA: 62 mg/m ³	-	-
Citral	-	-	TWA: 5 ppm TWA: 32 mg/m ³ *	-	-
Chemical name	Cyprus	Czech Republic	Denmark	Estonia	Finland
PPG-2 Methyl Ether	* TWA: 50 ppm TWA: 308 mg/m ³	TWA: 270 mg/m ³ Ceiling: 550 mg/m ³ *	TWA: 50 ppm TWA: 309 mg/m ³ H* STEL: 100 ppm STEL: 618 mg/m ³	TWA: 50 ppm TWA: 308 mg/m ³ A*	TWA: 50 ppm TWA: 310 mg/m ³ iho*
Benzyl Acetate	-	-	TWA: 10 ppm TWA: 61 mg/m ³ STEL: 20 ppm STEL: 122 mg/m ³	-	-
Limonene	-	-	-	TWA: 25 ppm TWA: 150 mg/m ³ STEL: 50 ppm STEL: 300 mg/m ³	TWA: 25 ppm TWA: 140 mg/m ³ STEL: 50 ppm STEL: 280 mg/m ³
Chemical name	France	Germany	Germany DFG	Greece	Hungary
PPG-2 Methyl Ether	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 310 mg/m ³	TWA: 50 ppm TWA: 310 mg/m ³ Peak: 50 ppm Peak: 310 mg/m ³	TWA: 100 ppm TWA: 600 mg/m ³ STEL: 150 ppm STEL: 900 mg/m ³ skin - potential for cutaneous absorption	TWA: 308 mg/m ³ TWA: 50 ppm
Limonene	TWA: 1000 mg/m ³ STEL: 1500 mg/m ³	TWA: 5 ppm TWA: 28 mg/m ³ H*	TWA: 5 ppm TWA: 28 mg/m ³ Peak: 20 ppm Peak: 112 mg/m ³ * skin sensitizer	-	-
Isoeugenol	-	-	skin sensitizer	-	-

Chemical name	Ireland	Italy	Italy REL	Latvia	Lithuania
PPG-2 Methyl Ether	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm STEL: 924 mg/m ³ Sk*	TWA: 50 ppm TWA: 308 mg/m ³ pelle*	TWA: 100 ppm TWA: 606 mg/m ³ STEL: 150 ppm STEL: 909 mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ *	* TWA: 300 mg/m ³ TWA: 50 ppm STEL: 450 mg/m ³ STEL: 75 ppm
Benzyl Acetate	TWA: 10 ppm STEL: 30 ppm	-	TWA: 10 ppm TWA: 61 mg/m ³	TWA: 5 mg/m ³	TWA: 5 mg/m ³
Limonene	-	-	-	-	Sensitizer TWA: 25 ppm TWA: 150 mg/m ³ STEL: 50 ppm STEL: 300 mg/m ³
Citral	TWA: 5 ppm STEL: 15 ppm	-	TWA: 5 ppm TWA: 31 mg/m ³ *	-	-
Chemical name	Luxembourg	Malta	Netherlands	Norway	Poland
PPG-2 Methyl Ether	* TWA: 308 mg/m ³ TWA: 50 ppm	* TWA: 50 ppm TWA: 308 mg/m ³	TWA: 48.7 ppm TWA: 300 mg/m ³	TWA: 50 ppm TWA: 300 mg/m ³ STEL: 75 ppm STEL: 375 mg/m ³ H*	STEL: 480 mg/m ³ TWA: 240 mg/m ³ *
Limonene	-	-	-	TWA: 25 ppm TWA: 140 mg/m ³ STEL: 37.5 ppm STEL: 175 mg/m ³	-
Citral	-	-	-	-	STEL: 54 mg/m ³ TWA: 27 mg/m ³
Chemical name	Portugal	Romania	Slovakia	Slovenia	Spain
PPG-2 Methyl Ether	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm P*	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ STEL: STEL ppm STEL: STEL mg/m ³ *	TWA: 50 ppm TWA: 308 mg/m ³ via dérmica*
Benzyl Acetate	TWA: 10 ppm	TWA: 8 ppm TWA: 50 mg/m ³ STEL: 13 ppm STEL: 80 mg/m ³	-	-	TWA: 10 ppm TWA: 62 mg/m ³
Limonene	-	-	-	TWA: 28 mg/m ³ TWA: 5 ppm STEL: STEL ppm STEL: STEL mg/m ³ *	TWA: 30 ppm TWA: 168 mg/m ³ via dérmica* sensitizer
Citral	TWA: 5 ppm P* Sensitizer dermal	-	-	-	TWA: 5 ppm via dérmica* sensitizer
Chemical name	Sweden	Switzerland	United Kingdom	Israel - Occupational Exposure Limits - TWAs	Turkey
PPG-2 Methyl Ether	NGV: 50 ppm NGV: 300 mg/m ³ Vägledande KGV: 75 ppm Vägledande KGV: 450 mg/m ³ *	TWA: 50 ppm TWA: 300 mg/m ³ STEL: 50 ppm STEL: 300 mg/m ³	TWA: 50 ppm TWA: 308 mg/m ³ STEL: 150 ppm STEL: 924 mg/m ³ Sk*	50ppmTWA	50ppmTWA 308mg/m ³ TWA
Benzyl Acetate	-	-	-	10ppmTWA	-
Limonene	NGV: 25 ppm NGV: 150 mg/m ³ Sensitizer	TWA: 7 ppm TWA: 40 mg/m ³ STEL: 14 ppm STEL: 80 mg/m ³	-	-	-
Citral	-	-	-	5ppmTWA	-

Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) Long term.

Chemical name	Worker - dermal, long-term - systemic	Worker - inhalative, long-term - systemic	Worker - dermal, long-term - local	Worker - inhalative, long-term - local
PPG-2 Methyl Ether	283 mg/kg bw/day	308 mg/m ³	-	-
Linalool	3.5 mg/kg bw/day	24.58 mg/m ³	3 mg/cm ²	-
Benzyl Acetate	2.5 mg/kg bw/day	9 mg/m ³	-	-
Cyclamen Aldehyde	0.35 mg/kg bw/day	1.23 mg/m ³	0.00743 mg/cm ²	-
Tetramethyl Acetyloctahydronaphthalenes	28.7 mg/kg bw/day	30 mg/m ³	0.648 mg/cm ²	-
Alpha-Isomethyl Ionone	0.375 mg/kg bw/day	8.22 mg/m ³	-	-
Ethyl Hydroxypyronone	-	58.7 mg/m ³	16.7 mg/cm ²	-
Gamma-Undecalactone	5.38 mg/kg bw/day	19 mg/m ³	-	-
Isoamyl Allylglycolate	1.4 mg/kg bw/day	4.93 mg/m ³	-	-
Limonene	9.5 mg/kg bw/day	66.7 mg/m ³	-	-
Methylenedioxyphenyl Methylpropanal	0.17 mg/kg bw/day	1.2 mg/m ³	0.01 mg/cm ²	-
Methyl Decenol	10 mg/kg bw/day	98.7 mg/m ³	25 mg/cm ²	88.16 mg/m ³
Linalyl Acetate	2.5 mg/kg bw/day	2.75 mg/m ³	0.236 mg/cm ²	0.2362 mg/cm ²
Allyl Cyclohexylpropionate	5.99 mg/kg bw/day	21.13 mg/m ³	-	-
Delta-Damascone	0.4 mg/kg bw/day	1.5 mg/m ³	0.014 mg/cm ²	-
Citral	1.7 mg/kg bw/day	9 mg/m ³	0.14 mg/cm ²	-
Dimethyl Heptenal	2 mg/kg bw/day	7.05 mg/m ³	141.67 mg/cm ²	17.63 mg/m ³
Coumarin	0.79 mg/kg bw/day	6.78 mg/m ³	-	-
p-Anisyl acetate	0.7 mg/kg bw/day	2.468 mg/m ³	-	-

Chemical name	Consumer - oral, long-term - local	Consumer - inhalative, long-term - local	Consumer - dermal, long-term - local
Linalool	-	-	1.5 mg/cm ²
Cyclamen Aldehyde	-	-	0.00372 mg/cm ²
Tetramethyl Acetyloctahydronaphthalenes	-	-	0.38 mg/cm ²
Methylenedioxyphenyl Methylpropanal	-	-	0.005 mg/cm ²
Methyl Decenol	-	21.74 mg/m ³	12.5 mg/cm ²
Linalyl Acetate	-	-	0.236 mg/cm ²
Allyl Cyclohexylpropionate	-	-	2.1 mg/cm ²
Citral	-	-	0.14 mg/cm ²
Dimethyl Heptenal	-	4.35 mg/m ³	70.83 mg/cm ²

Chemical name	Consumer - oral, long-term - systemic	Consumer - inhalative, long-term - systemic	Consumer - dermal, long-term - systemic
PPG-2 Methyl Ether	36 mg/kg bw	37.2 mg/m ³	121 mg/kg bw/day
Linalool	2.49 mg/kg bw	4.33 mg/m ³	1.25 mg/kg bw/day
Benzyl Acetate	1.3 mg/kg bw	22 mg/m ³	1.3 mg/kg bw/day
Cyclamen Aldehyde	0.13 mg/kg bw	0.22 mg/m ³	0.13 mg/kg bw/day
Tetramethyl Acetyloctahydronaphthalenes	3 mg/kg bw	9 mg/m ³	17.2 mg/kg bw/day
Alpha-Isomethyl Ionone	0.036 mg/kg bw	1.45 mg/m ³	0.045 mg/kg bw/day
Ethyl Hydroxypyronone	10 mg/kg bw	17.4 mg/m ³	10 mg/kg bw/day
Gamma-Undecalactone	2.7 mg/kg bw	4.68 mg/m ³	2.7 mg/kg bw/day
Isoamyl Allylglycolate	0.5 mg/kg bw	0.87 mg/m ³	0.5 mg/kg bw/day
Limonene	4.8 mg/kg bw	16.6 mg/m ³	4.8 mg/kg bw/day
Methylenedioxyphenyl Methylpropanal	0.17 mg/kg bw	0.29 mg/m ³	0.083 mg/kg bw/day
Methyl Decenol	10 mg/kg bw	14.38 mg/m ³	0.089 mg/kg bw/day
Linalyl Acetate	0.2 mg/kg bw	0.68 mg/m ³	1.25 mg/kg bw/day

Allyl Cyclohexylpropionate	2.1 mg/kg bw	3.7 mg/m ³	-
Delta-Damascone	0.25 mg/kg bw	0.43 mg/m ³	0.25 mg/kg bw/day
Citral	0.6 mg/kg bw	2.7 mg/m ³	1 mg/kg bw/day
Dimethyl Heptenal	1 mg/kg bw	1.74 mg/m ³	1 mg/kg bw/day
Coumarin	0.39 mg/kg bw	1.69 mg/m ³	0.39 mg/kg bw/day
p-Anisyl acetate	0.25 mg/kg bw	0.37 mg/m ³	0.25 mg/kg bw/day

Derived No Effect Level (DNEL) Short term.

Chemical name	Worker - dermal, short-term - systemic	Worker - inhalative, short-term - systemic	Worker - dermal, short-term - local	Worker - inhalative, short-term - local
Linalool	-	16.5 mg/m ³	3 mg/cm ²	3 mg/cm ²
Limonene	-	-	0.222 mg/cm ²	-
Methyl Decenol	10 mg/kg bw/day	35.26 mg/m ³	25 mg/cm ²	88.16 mg/m ³
Linalyl Acetate	-	-	8 mg/cm ²	-
Allyl Cyclohexylpropionate	17.97 mg/kg bw/day	-	-	-
Delta-Damascone	-	-	0.014 mg/cm ²	-
Citral	-	-	0.14 mg/cm ²	0.14 mg/cm ²
Dimethyl Heptenal	170 mg/kg bw/day	21.16 mg/m ³	425 mg/cm ²	52.89 mg/m ³
Methyl Octine Carbonate	-	-	-	-

Chemical name	Consumer - inhalative, short-term - local	Consumer - dermal, short-term - local
Linalool	-	1.5 mg/cm ²
Limonene	-	0.111 mg/cm ²
Methyl Decenol	21.74 mg/m ³	12.5 mg/cm ²
Linalyl Acetate	-	236.2 mg/cm ²
Delta-Damascone	-	0.009 mg/cm ²
Dimethyl Heptenal	13.04 mg/m ³	212.5 mg/cm ²
Methyl Octine Carbonate	-	-

Chemical name	Consumer - oral, short-term - systemic	Consumer - inhalative, short-term - systemic	Consumer - dermal, short-term - systemic
Linalool	1.2 mg/kg bw/d	4.1 mg/m ³	2.5 mg/kg bw/d
Methyl Decenol	5 mg/kg bw	8.7 mg/m ³	5 mg/kg bw/day
Linalyl Acetate	-	-	8 mg/cm ²
Allyl Cyclohexylpropionate	6.3 mg/kg bw	-	6.3 mg/kg bw/day
Dimethyl Heptenal	85 mg/kg bw	5.22 mg/m ³	85 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Chemical name	Fresh Water	Marine water	Intermittent release
PPG-2 Methyl Ether	19 mg/L	1.9 mg/L	190 mg/L
Linalool	0.2 mg/L	0.02 mg/L	2 mg/L
2-T-Butylcyclohexyl Acetate	0.057 mg/L	0.006 mg/L	0.017 mg/L
Benzyl Acetate	0.018 mg/L	0.002 mg/L	0.04 mg/L
Cyclamen Aldehyde	0.009 mg/L	0.001 mg/L	0.014 mg/L
Tetramethyl Acetyloctahydronaphthalenes	0.004 mg/L	0 mg/L	-
Alpha-Isomethyl Ionone	0.001 mg/L	0 mg/L	0.014 mg/L
Gamma-Undecalactone	0.084 mg/L	0.008 mg/L	0.059 mg/L
Ethyl Hydroxypyrrone	0.007 mg/L	0.001 mg/L	-
Isoamyl Allylglycolate	0.001 mg/L	0 mg/L	0.008 mg/L
Limonene	0.014 mg/L	0.001 mg/L	-
Methylenedioxyphenyl Methylpropanal	0.005 mg/L	0.001 mg/L	0.053 mg/L
Methyl Decenol	0.001 mg/L	0 mg/L	0.004 mg/L
Linalyl Acetate	0.011 mg/L	0.001 mg/L	0.11 mg/L
Delta-Damascone	0.007 mg/L	0.001 mg/L	0.004 mg/L
Allyl Cyclohexylpropionate	0.001 mg/L	0 mg/L	0.001 mg/L
Citral	0.007 mg/L	0.001 mg/L	0.068 mg/L

Dimethyl Heptenal	0.002 mg/L	0 mg/L	0.023 mg/L
Coumarin	0.019 mg/kg bw	0.002 mg/kg bw	0.014 mg/L
p-Anisyl acetate	0.013 mg/L	0.001 mg/L	0.131 mg/L

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment plant	Soil	Air	Oral
PPG-2 Methyl Ether	70.2 mg/kg dwt	7.02 mg/kg dwt	4168 mg/L	2.74 mg/kg dwt	-	-
Linalool	2.22 mg/kg dwt	0.222 mg/kg dwt	10 mg/L	0.327 mg/kg dwt	-	-
2-T-Butylcyclohexyl Acetate	7.62 mg/kg dwt	0.762 mg/kg dwt	10 mg/L	4.4 mg/kg dwt	-	-
Benzyl Acetate	0.526 mg/kg dwt	0.053 mg/kg dwt	8.55 mg/L	0.094 mg/kg dwt	-	-
Cyclamen Aldehyde	1.02 mg/kg dwt	0.102 mg/kg dwt	1 mg/L	0.199 mg/kg dwt	-	-
Tetramethyl Acetyloctahydronaphthalenes	3.73 mg/kg dwt	0.75 mg/kg dwt	10 mg/L	2.7 mg/kg dwt	-	-
Alpha-Isomethyl Ionone	0.443 mg/kg dwt	0.044 mg/kg dwt	10 mg/L	0.088 mg/kg dwt	-	-
Gamma-Undecalactone	5.341 mg/kg dwt	0.534 mg/kg dwt	80 mg/L	1.019 mg/kg dwt	-	-
Ethyl Hydroxypyrene	0.27 mg/kg dwt	0.027 mg/kg dwt	1.55 mg/L	0.049 mg/kg dwt	-	-
Isoamyl Allylglycolate	0.009 mg/kg dwt	0.001 mg/kg dwt	-	0.001 mg/kg dwt	-	-
Limonene	3.85 mg/kg dwt	0.385 mg/kg dwt	1.8 mg/L	0.763 mg/kg dwt	-	-
Methylenedioxyphenyl Methylpropanal	0.057 mg/kg dwt	0.006 mg/kg dwt	10 mg/L	0.008 mg/kg dwt	-	-
Methyl Decenol	0.092 mg/kg dwt	0.009 mg/kg dwt	10 mg/L	0.018 mg/kg dwt	-	-
Linalyl Acetate	0.609 mg/kg dwt	0.061 mg/kg dwt	1 mg/L	0.115 mg/kg dwt	-	-
Delta-Damascone	0.906 mg/kg dwt	0.091 mg/kg dwt	2.41 mg/L	0.177 mg/kg dwt	-	-
Allyl Cyclohexylpropionate	0.238 mg/kg dwt	0.024 mg/kg dwt	0.2 mg/L	0 mg/kg dwt	-	-
Citral	0.125 mg/kg dwt	0.013 mg/kg dwt	1.6 mg/L	0.021 mg/kg dwt	-	-
Dimethyl Heptenal	0.045 mg/kg dwt	0.004 mg/kg dwt	10 mg/L	0.021 mg/kg dwt	-	-
Coumarin	0.15 mg/kg dwt	0.015 mg/kg dwt	6.4 mg/L	0.018 mg/kg dwt	-	-
p-Anisyl acetate	0.18 mg/kg dwt	0.018 mg/kg dwt	0.2 mg/L	0.028 mg/kg dwt	-	-

8.2. Exposure controls

Personal Protective Equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Hand protection Wear suitable gloves.

Skin and body protection Wear suitable protective clothing.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

Environmental exposure controls No information available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Color	clear
Odor	Pleasant (perfume)
Odor threshold	Not applicable

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
Melting point / freezing point	No data available	Not available. This property is not relevant for the safety and classification of this product
Initial boiling point and boiling range	> 200 °C	
Flammability		Not applicable. This property is not relevant for liquid product forms
Flammability Limit in Air		Not available. This property is not relevant for the safety and classification of this product No Data Available
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Flash point	> 60 °C	Closed cup
Autoignition temperature	No data available	Not applicable. This property is not relevant for liquid product forms
Decomposition temperature	No Data Available	Not available. This property is not relevant for the safety and classification of this product
pH	No data available	
Dynamic viscosity	3 - 12 mPa s	
Water solubility	Insoluble in water	
Solubility(ies)	No Data Available	Not available. This property is not relevant for the safety and classification of this product
Partition coefficient	No Data Available	Not available. This property is not relevant for the safety and classification of this product
Vapor pressure	No Data Available	Not available. This property is not relevant for the safety and classification of this product
Relative density	0.93 - 0.99	
Relative vapor density	No data available	Not applicable. This property is not relevant for liquid product forms
Particle characteristics		Not available. This property is not relevant for the safety and classification of this product
Particle Size	No information available	
Particle Size Distribution	No information available	

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No information available

9.2.2. Other safety characteristics

No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

10.4. Conditions to avoid

Conditions to avoid None known based on information supplied.

10.5. Incompatible materials

Incompatible materials None known based on information supplied.

10.6. Hazardous decomposition products

Hazardous decomposition products None known based on information supplied.

SECTION 11: Toxicological information

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

Information on likely routes of exposure

Product Information

Inhalation	Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
Eye contact	Specific test data for the substance or mixture is not available. Causes serious eye irritation. (based on components). May cause redness, itching, and pain.
Skin contact	May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
Ingestion	Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

Numerical measures of toxicity

No information available

Acute toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
PPG-2 Methyl Ether	5001 mg/kg (RAT)	9510 mg/kg (RABBIT)	-
Linalool	2790 mg/kg bodyweight (RAT)	5610 mg/kg (RABBIT)	21 mg/L (RAT)
2-T-Butylcyclohexyl Acetate	4600 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Benzyl Acetate	4999 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Cyclamen Aldehyde	4999 mg/kg (RAT)	5001 mg/kg (RAT)	-
Tetramethyl Acetyloctahydronaphthalenes	//	5001 mg/kg (RAT)	//
Isobutyl Methyl Tetrahydropyranol	-	> 2000 mg/kg (Rabbit)	-
Alpha-Isomethyl Ionone	5001 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Gamma-Undecalactone	6600 mg/kg (RAT)	5001 mg/kg (RAT)	-
Ethyl Hydroxypyrene	1221 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
2,4-Dimethyl-3-Cyclohexene Carboxaldehyde	-	5000 mg/kg (RABBIT)	-
Isoamyl Allylglycolate	500 mg/kg (RAT)	5001 mg/kg (RAT)	0 mg/l/4h (RAT)
Limonene	5001 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Methylenedioxyphenyl Methylpropanal	3363 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Linalyl Acetate	9001 mg/kg (RAT)	5001 mg/kg (RAT)	> 18.94 mg/L (Rat) 8 h
Delta-Damascone	1400 mg/kg (RAT)	5001 mg/kg (RABBIT)	-
Allyl Cyclohexylpropionate	480 mg/kg (RAT)	1600 mg/kg (RABBIT)	-
Citral	6800 mg/kg (RAT)	5001 mg/kg (RAT)	-

Dimethyl Heptenal	5001 mg/kg (RAT)	5001 mg/kg (RAT)	-
Isoeugenol	= 1560 mg/kg (Rat)	1900 mg/kg (rabbit)	-
Cyclopropanecarboxylic acid, 2-methyl-2-[(1,2,4-trimethyl-2-penten-1-yl)oxy]propyl ester	> 2000 mg/kg (Rat)	-	-
Cis-3-Hexenyl Salicylate	= 5 g/kg (Rat)	> 2000 mg/kg (Rabbit)	-
Coumarin	520 mg/kg bodyweight (RAT)	= 293 mg/kg (Rat)	-
p-Anisyl acetate	5001 mg/kg (RAT)	5001 mg/kg (RAT)	-
Undecylenal	> 5 g/kg (Rat)	> 5000 mg/kg (Rabbit)	-
trans-2-Hexanal	900 mg/kg (rat)	600 mg/kg (rabbit)	-
Isobutenyl Methyltetrahydropyran	= 4300 mg/kg (Rat)	-	-
4-(tricyclo[5.2.1.0 _{2,6}]dec-8-ylidene)Butyraldehyde	5001 mg/kg (RAT)	2.8 - 5.6 mL/kg (Rabbit)	4.9 mg/L (RAT)
Methyl Octine Carbonate	1600 mg/kg (RAT)	4500 mg/kg (RAT)	-

Chemical name	Carcinogenicity	Species	Eye Damage	Species	Developmental toxicity	Species	Mutagenicity	Species
Linalool	-	-	Y (OECD 405)	-	-	-	-	-
Citral	-	-	OECD 405	-	-	-	-	-
trans-2-Hexanal	-	-	Y	-	-	-	-	-

Chemical name	Reproductive toxicity	Species	Skin corrosion/irritation	Species	Sensitization	Species
Linalool	-	-	Y (OECD 404)	-	-	-
2-T-Butylcyclohexyl Acetate	-	-	Y (OECD 404)	-	-	-
Cyclamen Aldehyde	-	-	Y	-	-	-
Tetramethyl Acetyloctahydronaphthalenes	-	-	OECD 439	-	-	-
Isoamyl Allylglycolate	-	-	Y	-	-	-
Limonene	-	-	Y (OECD 404)	-	-	-
Methylenedioxyphenyl Methylpropanal	(100 mg/kg bw/d (OECD 422))	-	-	-	-	-
Linalyl Acetate	-	-	Y (OECD 404)	-	-	-
Delta-Damascone	-	-	Y (EU Method B.46)	-	-	-
Citral	-	-	Y	-	-	-
4-(tricyclo[5.2.1.0 _{2,6}]dec-8-ylidene)Butyraldehyde	-	-	Y (OECD 404)	-	-	-
trans-2-Hexanal	-	-	Y	-	-	-
Methyl Octine Carbonate	-	-	Y	-	-	-

Chemical name	Skin sensitization	Species	STOT - single exposure	Target Organs	Species	STOT - repeated exposure	Target Organs	Species	Aspiration hazard
Linalool	Y (OECD 429)	-	-	-	-	-	-	-	-
Benzyl Acetate	-	-	-	kidneys	-	-	nasal cavity	-	-
Cyclamen Aldehyde	Y (OECD 429)	-	-	-	-	-	-	-	-
Tetramethyl	OECD 429	-	-	-	-	-	-	-	-

Chemical name	Skin sensitization	Species	STOT - single exposure	Target Organs	Species	STOT - repeated exposure	Target Organs	Species	Aspiration hazard
Acetyloctahydronaphthalenes									
Limonene	Y (OECD 429)	-	-	-	-	-	-	-	-
Methylenedioxyphenyl Methylpropanal	Y (OECD 429)	-	-	-	-	-	-	-	-
Delta-Damascone	Y (OECD 429)	-	-	-	-	-	-	-	-
Allyl Cyclohexylpropionate	OECD 406	-	-	-	-	-	-	-	-
Citral	OECD 406	-	-	-	-	-	-	-	-
Dimethyl Heptenal	Y (OECD 429)	-	-	-	-	-	-	-	-
Isoeugenol	-	-	-	-	-	-	nasal cavity	-	-
Coumarin	OECD 429	-	-	-	-	-	kidneys,liver	-	-
p-Anisyl acetate	Y (OECD 429)	-	-	-	-	-	-	-	-
trans-2-Hexanal	Y (OECD 429)	-	-	-	-	-	-	-	-
Methyl Octine Carbonate	Y	-	-	-	-	-	-	-	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	None known.
Carcinogenicity	None known.
Reproductive toxicity	None known.
STOT - single exposure	None known.
STOT - repeated exposure	None known.
Aspiration hazard	Not applicable.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Endocrine disrupting properties There are no substances contained at or above the regulated value for declaration of >0.1% that fall under the definition of confirmed endocrine disruptors of any EU regulation.

11.2.2. Other information

Other adverse effects None known.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
PPG-2 Methyl Ether	970 mg/L (OECD 201; Raphidocelis subcapitata; 72 h)	1001 mg/L (OECD 203; Poecilia reticulata; 96 h)	-	1001 mg/L (EPA OPP 72-3; Crangon crangon; 48 h)
Linalool	156.7 mg/L (Desmodesmus subspicatus; 96 h)	27.8 mg/L (OECD 203; Oncorhynchus mykiss; 96 h)	100 mg/L (OECD 209; activated sludge; 3 h)	59 mg/L (OECD 202; Daphnia magna; 48 h)
2-T-Butylcyclohexyl Acetate	4.2 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	5.6 mg/L (EU Method C.1; Danio rerio; 96 h)	-	17 mg/L (EU Method C.2; Daphnia magna; 48 h)
Benzyl Acetate	110 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	4 mg/L (Oryzias latipes; 96 h)	855 mg/L (OECD 209; activated sludge; 3 h)	17 mg/L (OECD 202; Daphnia magna; 48 h)
Cyclamen Aldehyde	4.3 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	2.49 mg/L (96 h)	100 mg/L (OECD 209; activated sludge; 3 h)	1.4 mg/L (OECD 202; Daphnia magna; 48 h)
Tetramethyl Acetyloctahydronaphthalenes	2.7 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	1.3 mg/L (OECD 203; Lepomis macrochirus; 96 h)	-	1.38 mg/L (OECD 202; Daphnia magna; 48 h)
Alpha-Isomethyl Ionone	20 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	-	-	-
Gamma-Undecalactone	5.94 mg/L (OECD 201; Pseudokirchneriella subcapitata; 48 h)	5.5 mg/L (QSAR ECOSAR v1.11; 96 h)	-	5.853 mg/L (EC 440/2008 C.2; Daphnia magna; 48 h)
Ethyl Hydroxypyrrone	-	85 mg/L (OECD 203; Oncorhynchus mykiss; 96 h)	-	-
Isoamyl Allylglycolate	2.06 mg/L (Desmodesmus subspicatus or Pseudokirchneriella subcapitata; 96 h)	-	8.47 mg/L (OECD 209; activated sludge; 3 h)	5.09 mg/L (Daphnia; 48 h)
Limonene	0.32 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	0.72 mg/L (OECD 203; Pimephales promelas; 96 h)	(EC50: 209 mg/L (OECD 209; activated sludge of a predominantly domestic sewage; 3 h))	0.307 mg/L (OECD 202; Daphnia magna; 48 h)
Methylenedioxyphenyl Methylpropanal	28 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	5.3 mg/L (OECD 203; Oncorhynchus mykiss; 96 h)	100 mg/L (OECD 209; activated sludge of a predominantly domestic sewage; 3 h)	8.3 mg/L (OECD 202; Daphnia magna; 48 h)
Methyl Decenol	3.6 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	3 mg/L (OECD 203; Pimephales promelas; 96 h)	-	0.4 mg/L (OECD 202; Daphnia magna; 48 h)
Linalyl Acetate	1 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	11 mg/L (OECD 203; Cyprinus carpio; 96 h)	100 mg/L (OECD 209; activated sludge of a predominantly domestic sewage; 3 h)	59 mg/L (OECD 202; daphnia magna; static; 48 h)
Delta-Damascone	4.54 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	0.97 mg/L (OECD 203; Oryzias latipes; 96 h)	241 mg/L (OECD 209; activated sludge; 3 h)	1.18 mg/L (OECD 211; Daphnia magna; 21 d)
Allyl Cyclohexylpropionate	3 mg/L (OECD 201; 72 h)	0.13 mg/L (OECD 203; 96 h)	-	3.8 mg/L (OECD 202; 48 h)

	Raphidocelis subcapitata; 72 h)	Pimephales promelas; 96 h)		Daphnia magna; 48 h)
Citral	103.8 mg/L (DIN 38412 L9; Desmodesmus subspicatus; 72 h)	6.78 mg/L (German standard DIN 38412, part L; Leuciscus idus; 96 h)	160 mg/L (OECD 209; activated sludge, domestic; 0.5 h)	6.8 mg/L (Directive 79/831 EWG, C2 annex V; Daphnia magna; 48 h)
Dimethyl Heptenal	4.3 mg/L (Green algae; 96 h)	2.288 mg/L (96 h)	-	2.4 mg/L (OECD 202; Daphnia magna; 48 h)
Coumarin	(QSAR; 96 h)	2.94 mg/L (QSAR; fathead minnow; 96 h)	640 mg/L (ISO 8192; activated sludge; 3 h)	> 24.3 mg/L (ASTM E729-80; Daphnia magna; 48 h)
p-Anisyl acetate	59.9 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	13.1 mg/L (OECD 203; danio rerio; 96 h)	-	31 mg/L (OECD 202; daphnia magna; 48 h)
trans-2-Hexanal	8.16 mg/L (Pseudokirchnerella subcapitata; 72 h)	-	-	22.8 mg/L (Daphnia magna; 48 h)
4-(tricyclo[5.2.1.0 ^{2,6}]dec-8-ylidene)Butyraldehyde	2.7 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	-	-	0.573 mg/L (OECD 202; Daphnia magna; 48 h)
Methyl Octine Carbonate	0.83 mg/L (OECD 201; Pseudokirchneriella subcapitata; 72 h)	-	-	1.1 mg/L (OECD 202; Daphnia magna; 48 h)

Chronic Toxicity

Chemical name	Toxicity to algae (NOEC or ECx)*	Toxicity to fish (NOEC or ECx)*	Toxicity to daphnia and other aquatic invertebrates (NOEC or ECx)*	Toxicity to Microorganisms (NOEC or ECx)*	Toxicity to other organisms
PPG-2 Methyl Ether	970 mg/L (OECD 201; Raphidocelis subcapitata; 3 d)	-	(&&)	(4168 mg/L (Pseudomonas putida; 0.75 d))	-
Linalool	54.3 mg/L (DIN 38412 L 9; Desmodesmus subspicatus; 4 d)	3.5 mg/L (OECD 203; Oncorhynchus mykiss; 4 d)	25 mg/L (OECD 202; Daphnia magna; 2 d)	(> 100 mg/L (OECD 209; 0.125 d))	-
2-T-Butylcyclohexyl Acetate	0.57 mg/L (OECD 201; Desmodesmus subspicatus; 3 d)	0.8 mg/L (OECD 210; Pimephales promelas; 33 d)	-	(100 mg/L (OECD 301 F; activated sludge of a predominantly domestic sewage; 61 d))	-
Benzyl Acetate	52 mg/L (OECD 201; Desmodesmus subspicatus; 3 d)	0.92 mg/L (Oryzias latipes; 28 d)	10 mg/L (OECD 202; Daphnia magna; 2 d)	-	-
Cyclamen Aldehyde	0.72 mg/L (OECD 201; Pseudokirchneriella subcapitata; 4 d)	-	0.71 mg/L (OECD 211; Daphnia magna; 21 d)	-	-
Tetramethyl Acetyloctahydronaphthalenes	2.6 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	0.16 mg/L (OECD 210; Danio rerio; 30 d)	0.028 mg/L (OECD 211; Daphnia magna; 21 d)	(> 100 mg/L (OECD 301 F; 42 d))	101 (OECD 301 F; activated sludge of a predominantly domestic sewage; 42 d)
Alpha-Isomethyl Ionone	10 mg/L (OECD 201; Desmodesmus subspicatus; 72 h)	7.8 mg/L (OECD 203; Oncorhynchus mykiss; 4 d)	1 mg/L (OECD 202; Daphnia magna; 2 d)	(894.195 mg/L (Colletotrichum musae DAR 24962; 10 d))	-
Gamma-Undecalactone	3.33 mg/L (OECD 201; Pseudokirchneriella subcapitata; 2 d)	-	0.138 mg/L (OECD 211; Daphnia magna; 21 d)	-	-
Ethyl Hydroxypyrene	-	-	-	(15.5 mg/L (OECD 301 B; activated sludge; 28 d))	-
Limonene	50 mg/L (OECD 201; Desmodesmus subspicatus; 3 d)	0.19 mg/L (0.19 - 0.059 mg/L (OECD 212; Pimephales promelas; 8 d))	-	(18 mg/L (OECD 209; 0.125 d))	-
Methylenedioxyphenyl Methylpropanal	6.25 mg/L (OECD 201; Pseudokirchneriella subcapitata; 3 d)	2.4 mg/L (OECD 203; Oncorhynchus mykiss; 4 d)	-	(100 mg/L (OECD 209; activated sludge of a predominantly	-

				domestic sewage; 0.125 d))	
Methyl Decenol	1.3 mg/L (OECD 201; Pseudokirchneriella subcapitata; 4 d)	-	0.025 mg/L (OECD 211; Daphnia magna; 21 d)	(100 mg/L (activated sludge of a predominantly domestic sewage; 28 d))	-
Linalyl Acetate	13.1 mg/L (OECD 201; desmodesmus subspicatus; 72 h)	10 mg/L (Leuciscus idus; 4 d)	25 mg/L (OECD 202; daphnia magna; 2 d)	(> 1000 mg/L (ISO 8192; 0.5 h))	-
Delta-Damascone	0.883 mg/L (OECD 201; Pseudokirchneriella subcapitata; 3 d)	-	0.35 mg/L (OECD 211; Daphnia magna; 21 d)	-	-
Allyl Cyclohexylpropionate	0.74 mg/L (OECD 201; Raphidocelis subcapitata; 3 d)	0.059 mg/L (OECD 203; Danio rerio; 4 d)	0.86 mg/L (OECD 202; Daphnia magna; 2 d)	-	-
Citral	3 mg/L (DIN 38412 L9; Desmodesmus subspicatus; 3 d)	4.6 mg/L (German standard DIN 38412, part L; Leuciscus idus; 4 d)	-	(68 mg/L (OECD 209; 0.02083 d))	-
Dimethyl Heptenal	-	-	-	(100 mg/L (OECD 301F; activated sludge of a predominantly domestic sewage; 39 d))	-
p-Anisyl acetate	6.99 mg/L (OECD 201; Pseudokirchneriella subcapitata; 3 d)	-	-	-	-
trans-2-Hexanal	-	-	11.9 mg/L (Daphnia magna; 2 d)	-	-
Methyl Octine Carbonate	0.29 mg/L (OECD 201; Pseudokirchneriella subcapitata; 3 d)	-	0.38 mg/L (OECD 202; Daphnia magna; 2 d)	-	-

12.2. Persistence and degradability

Persistence and degradability

Chemical name	Ready Biodegradation Test (OECD 301)	Abiotic Degradation Hydrolysis	Abiotic Degradation Photolysis	Biodegradation Other Tests
PPG-2 Methyl Ether	76 % (CO ₂ ; OECD 301 F; 28 d)	-	-	-
Linalool	64.2 % (O ₂ ; OECD 301 D; 28 d)	-	-	-
2-T-Butylcyclohexyl Acetate	43 % (O ₂ ; OECD 301 F; 28 d)	-	-	-
Benzyl Acetate	100.9 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Cyclamen Aldehyde	65.5 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Tetramethyl Acetyloctahydronaphthalenes	96.3 % (OECD 301 F; aerobic; activated sludge, domestic, non-adapted O ₂ consumption; 28 d)	-	0.054	50 (OECD 314; aerobic; 1.9 d)
Alpha-Isomethyl Ionone	42.51 % (O ₂ ; OECD 301 D; 28 d)	-	-	-
Gamma-Undecalactone	82 % (O ₂ ; OECD 301 D; 28 d)	-	-	-
Ethyl Hydroxypyrrone	104.4 % (; OECD 301 B; 28 d)	-	-	-
Isoamyl Allylglycolate	78.12 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Limonene	71.4 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Methylenedioxyphenyl Methylpropanal	24 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Methyl Decenol	73 % (O ₂ ; OECD 301 F; 28 d)	-	-	-
Linalyl Acetate	70 % (≥ 70 - ≤ 8002;)	-	-	-

	OECD 301 F; 28 d)			
Delta-Damascone	16 % (O2; OECD 301; 28 d)	332 d (OECD 111)	-	0% O2; 28 d; OECD 301 C
Allyl Cyclohexylpropionate	60 % ((7 d), 86% (28 d) OECD 301 D; O2 consumption; 28 d, 10-day window criteria fulfilled)	-	-	-
Citral	90 % (EU Method C.4-D; O2 consumption; 28 d; 10-d window criteria fulfilled)	-	-	-
Dimethyl Heptenal	75 % (O2; OECD 301 F; 28 d; 68)	-	-	-
Coumarin	90 % (ECD 301 F; aerobic; activated sludge; O2 consumption; 28 d)	-	-	-
p-Anisyl acetate	70 % (O2; OECD 301 D; 28 d)	-	-	-
4-(tricyclo[5.2.1.0 _{2,6}]dec-8-ylidene) Butyraldehyde	5.8 % (CO ₂ ; OECD 301 B; 28 d)	-	-	-
Methyl Octine Carbonate	71 % (O2; OECD 301 F; 28 d)	-	-	-

12.3. Bioaccumulative potential Bioaccumulation

Component Information

Chemical name	Partition coefficient
PPG-2 Methyl Ether	0.35
Linalool	2.9
2-T-Butylcyclohexyl Acetate	4.8
Benzyl Acetate	1.96
Cyclamen Aldehyde	3.4
Tetramethyl Acetyloctahydronaphthalenes	5.7
Isobutyl Methyl Tetrahydropyranol	1.65
Alpha-Isomethyl Ionone	4.288
Gamma-Undecalactone	3.6
Ethyl Hydroxypyrene	2.9
Isoamyl Allylglycolate	1.96
Limonene	4.38
Methylenedioxyphenyl Methylpropanal	2.4
Methyl Decenol	3.9
Linalyl Acetate	3.9
Allyl Cyclohexylpropionate	4.28
Citral	2.76
Dimethyl Heptenal	3.4
Cyclopropanecarboxylic acid, 2-methyl-2-[(1,2,4-trimethyl-2-penten-1-yl)oxy]propyl ester	4.4
Cis-3-Hexenyl Salicylate	4.8
p-Anisyl acetate	1.9
Undecylenal	4.672
Isobutenyl Methyltetrahydropyran	3.3
4-(tricyclo[5.2.1.0 _{2,6}]dec-8-ylidene)Butyraldehyde	4
Methyl Octine Carbonate	3.4

Chemical name	Octanol/water partition coefficient	Bioconcentration factor (BCF)
PPG-2 Methyl Ether	0.004	-
Linalool	2.9	-
2-T-Butylcyclohexyl Acetate	4.8 (OECD 117)	156 L/kg (OECD 305)
Benzyl Acetate	1.96	8
Cyclamen Aldehyde	3.4 (OECD 117)	155 L/kg
Tetramethyl Acetyloctahydronaphthalenes	5.6 (OECD 117)	-
Alpha-Isomethyl Ionone	4.288 (OECD 117)	-
Gamma-Undecalactone	3.6 (OECD 117)	36.2 - 47.79 L/kg

Ethyl Hydroxypyrene	2.39 (OECD 117)	232 L/kg ww
Isoamyl Allylglycolate	1.96	-
Limonene	4.38 (OECD 117)	864.8 L/kg
Methylenedioxyphenyl Methylpropanal	2.4 (OECD 117)	-
Methyl Decenol	3.9 (OECD 117)	123 - 387 L/kg
Linalyl Acetate	3.9 (OECD 107)	174 L/kg
Allyl Cyclohexylpropionate	4.28 (OECD 107)	-
Citral	2.76 (OECD 107)	-
Dimethyl Heptenal	3.4 (OECD 117)	-
Coumarin	1.39	-
p-Anisyl acetate	1.9 (OECD 117)	-
trans-2-Hexanal	1.58	-
4-(tricyclo[5.2.1.0 ^{2,6}]dec-8-ylidene)Butyraldehyde	4 (OECD 117)	-
Methyl Octine Carbonate	3.4	-

12.4. Mobility in soil

Mobility in soil

Chemical name	log Koc
2-T-Butylcyclohexyl Acetate	1300 (1300 (OECD 121))
Benzyl Acetate	250 (250)
Cyclamen Aldehyde	3.05 (3.05 (OECD 121))
Tetramethyl Acetyloctahydronaphthalenes	4.12
Alpha-Isomethyl Ionone	3061.96 (3061.963 (OECD 121))
Gamma-Undecalactone	709.2
Isoamyl Allylglycolate	80 (80 L/kg)
Limonene	6324
Methylenedioxyphenyl Methylpropanal	71.3 (71.3 (OECD 121))
Methyl Decenol	1175 (1175 (OECD 121))
Linalyl Acetate	432.4
Delta-Damascone	1259 (1259 (OECD 121))
Citral	147.7 (147.7)
Dimethyl Heptenal	159 (159 (OECD121))
Coumarin	1.63

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment

Chemical name	PBT and vPvB assessment
PPG-2 Methyl Ether	The substance is not PBT / vPvB
Linalool	The substance is not PBT / vPvB
2-T-Butylcyclohexyl Acetate	The substance is not PBT / vPvB
Benzyl Acetate	The substance is not PBT / vPvB
Cyclamen Aldehyde	The substance is not PBT / vPvB
Isobutyl Methyl Tetrahydropyranol	The substance is not PBT / vPvB
Alpha-Isomethyl Ionone	The substance is not PBT / vPvB
Gamma-Undecalactone	The substance is not PBT / vPvB
Ethyl Hydroxypyrene	The substance is not PBT / vPvB
Isoamyl Allylglycolate	The substance is not PBT / vPvB
Limonene	The substance is not PBT / vPvB
Methylenedioxyphenyl Methylpropanal	The substance is not PBT / vPvB
Methyl Decenol	The substance is not PBT / vPvB
Linalyl Acetate	The substance is not PBT / vPvB
Allyl Cyclohexylpropionate	The substance is not PBT / vPvB
Citral	The substance is not PBT / vPvB
Dimethyl Heptenal	The substance is not PBT / vPvB
Cyclopropanecarboxylic acid, 2-methyl-2-[(1,2,4-trimethyl-2-penten-1-yl)oxy]propyl ester	The substance is not PBT / vPvB
Cis-3-Hexenyl Salicylate	The substance is not PBT / vPvB
Coumarin	The substance is not PBT / vPvB
p-Anisyl acetate	The substance is not PBT / vPvB
Undecylenal	The substance is not PBT / vPvB
trans-2-Hexanal	PBT assessment does not apply
Isobutenyl Methyltetrahydropyran	The substance is not PBT / vPvB

4-(tricyclo[5.2.1.0 ^{2,6}]dec-8-ylidene)Butyraldehyde	The substance is not PBT / vPvB
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12.6. Endocrine disrupting properties

Endocrine disrupting properties There are no substances contained at or above the regulated value for declaration of >0.1% that fall under the definition of confirmed endocrine disruptors of any EU regulation.

12.7. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products The waste codes/waste designations below are in accordance with EWC. Waste must be delivered to an approved waste disposal company. Waste is to be kept separate from other types of waste until its disposal. Do not throw waste product into the sewer. Where possible recycling is preferred to disposal or incineration. Empty, uncleaned packaging need the same disposal considerations as filled packaging. For handling waste, see measures described in section 8. Dispose of in accordance with local regulations.

Contaminated packaging Do not reuse empty containers.

Waste codes / waste designations according to EWC / AVV 20 01 29* - detergents containing dangerous substances
 15 01 10* - packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

IATA

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product), 9, III
14.5 Environmental hazards Yes
14.6 Special precautions for user A97, A158, A197
Special Provisions
Note: The shipper is responsible for identifying any exemptions, including Limited Quantity, that may apply based on package size.

IMDG

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product)
14.3 Transport hazard class(es) 9
14.4 Packing group III
Description UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product), 9, III, Marine pollutant
14.5 Environmental hazards Yes
14.6 Special precautions for user 274, 335, 969
Special Provisions F-A, S-F
EmS-No
14.7 Maritime transport in bulk according to IMO instruments No information available
Note: The shipper is responsible for identifying any exemptions, including Limited Quantity, that may apply based on package size.

RID

14.1 UN number or ID number UN3082
14.2 UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product)

14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product), 9, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 375, 601
Classification code	M6

ADR

14.1 UN number or ID number	UN3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product)
14.3 Transport hazard class(es)	9
14.4 Packing group	III
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product), 9, III
14.5 Environmental hazards	Yes
14.6 Special precautions for user	
Special Provisions	274, 335, 601, 375
Classification code	M6
Tunnel restriction code	(-)

ADN

14.1 UN number or ID number	UN3082
14.2 Extended proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product)
Description	UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Perfumery Product), 9, III
14.3 Transport hazard class(es)	9
14.4 Packing group	III
14.5 Marine pollutant	Yes
Classification code	M6
Hazard label(s)	9
Limited quantity (LQ)	5 L
Equipment Requirements	PP

SECTION 15: Regulatory information

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

National regulations

France

Occupational Illnesses (R-463-3, France)

Chemical name	French RG number	Title
PPG-2 Methyl Ether	RG 84	-
Limonene	RG 84	-

Germany

Water hazard class (WGK) obviously hazardous to water (WGK 2)

Poland

Announcement of the Speaker of the Sejm of the Republic of Poland of 13 April 2018 regarding the publication of a uniform text of the Act - Labor Code (Journal of Laws 2018, item 917, as amended). Announcement of the Speaker of the Sejm of the Republic of Poland of March 15, 2019 regarding the publication of a uniform text of the Act on Waste (Journal of Laws 2019 item 701, as amended). Regulation of the Minister of Development of 7 July 2016, repealing the Regulation on specific requirements for certain products due to their negative environmental impact (Journal of Laws of 2016, item 1099, as amended). Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 regarding the highest permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286 with subsequent amendments).

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use:

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII) Regulation (EC) No. 648/2004 (Detergents regulation) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP] Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorization per REACH Annex XIV
Linalool	75.	-
Isobutyl Methyl Tetrahydropyranol	75.	-
Limonene	75.	-
Citral	75.	-
Isoeugenol	75.	-

Persistent Organic Pollutants

Not applicable

Dangerous substance category per Seveso Directive (2012/18/EU)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

EU - Plant Protection Products (1107/2009/EC)

Chemical name	EU - Plant Protection Products (1107/2009/EC)
Limonene	Plant protection agent

15.2. Chemical safety assessment

Chemical Safety Report

No chemical safety assessment has been carried out for this mixture per REACH regulation.

SECTION 16: Other information

Key or legend to abbreviations and acronyms used in the safety data sheet

Full text of H-Statements referred to under section 3

- H226 - Flammable liquid and vapor
- 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
- H319 - Causes serious eye irritation
- H330 - Fatal if inhaled
- H332 - Harmful if inhaled
- H335 - May cause respiratory irritation
- H361 - Suspected of damaging fertility or the unborn child
- H361f - Suspected of damaging fertility
- 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

Legend

SVHC: Substances of Very High Concern for Authorization:

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)
Ceiling Maximum limit value Sk* Skin designation

Classification procedure	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	Method Used
Skin corrosion/irritation	On basis of test data
Serious eye damage/eye irritation	On basis of test data
Skin sensitization	On basis of test data
Chronic aquatic toxicity	On basis of test data

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Further information Salts listed in Section 3 without a REACH Registration number are exempt, based on Annex V.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

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End of Safety Data Sheet