



Revision: 2022-11-22

Version: 03.0

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

1.1 Product identifier

Trade name: Vacuum Air Freshener Pellets (Pack of 10) | **Stock Code 71446**

UFI: 8AW1-H0HC-700V-S94C

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

Product use: Odor Control - Continuous Action.
For professional use only.

Uses advised against: Uses other than those identified are not recommended.

SWED - Sector-specific worker exposure description :

AISE_SWED_PW_8a_1
AISE_SWED_PW_19_2

1.3 Details of the supplier of the safety data sheet

Trust Hygiene Services Ltd Email: sales@trusthygiene.co.uk
Principle House Telephone: 0370 3500 988 (09:00 to 17:00 Mon-Fri)
Leamore Lane
Bloxwich
Walsall
WS2 7PS

1.4 Emergency telephone number

(UK) NHS 111 / 999

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Skin Sens. 1 (H317)
Aquatic Chronic 3 (H412)

2.2 Label elements



Signal word: Warning.

Contains isoeugenol (Isoeugenol), 4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde (Hydroxyisohexyl 3-Cyclohexene Carboxaldehyde), linalool (Linalool), piperonal (Piperonal), 3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one (Alpha-Isomethyl Ionone), d-limonene (Limonene)

Hazard statements:

H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements:

P280 - Wear protective gloves.

2.3 Other hazards

No other hazards known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Ingredient(s)	EC number	CAS number	REACH number	Classification	Notes	Weight percent
linalyl acetate	204-116-4	115-95-7	01-2119454789-19	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)		1-3
benzyl benzoate	204-402-9	120-51-4	01-2119976371-33	Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 2 (H411)		1-3
linalool	201-134-4	78-70-6	01-2119474016-42	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1B (H317)		1-3
benzyl acetate	205-399-7	140-11-4	01-2119638272-42	STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319)		1-3
piperonal	204-409-7	120-57-0	01-2119983608-21	Skin Sens. 1B (H317)		0.1-1
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	204-846-3	127-51-5	01-2120138569-45	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)		0.1-1
d-limonene	227-813-5	5989-27-5	01-2119529223-47	Flam. Liq. 3 (H226) Asp. Tox. 1 (H304) Skin Irrit. 2 (H315) Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		0.1-1
4-tert-butylcyclohexyl acetate	250-954-9	32210-23-4	01-2119976286-24	Skin Sens. 1B (H317) Aquatic Chronic 2 (H411)		0.1-1
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	251-020-3	32388-55-9	01-2119969651-28	Skin Sens. 1B (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)		0.1-1
coumarin	202-086-7	91-64-5	01-2119949300-45,01-2119943756-26	Acute Tox. 4 (H302) STOT RE 2 (H373) Skin Sens. 1B (H317)		0.1-1
eugenol	202-589-1	97-53-0	01-2119971802-33	Eye Irrit. 2 (H319) Skin Sens. 1B (H317)		0.1-1
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	250-863-4	31906-04-4	-	Skin Sens. 1A (H317)		0.1-1
benzyl salicylate	204-262-9	118-58-1	01-2119969442-31	Eye Irrit. 2 (H319) Skin Sens. 1B (H317) Aquatic Chronic 3 (H412)		0.1-1
isoeugenol	202-590-7	97-54-1	01-2120223682-61	Skin Sens. 1A (H317)		0.1-1
2-methoxy-4-propylphenol	220-499-0	2785-87-7	01-2120223684-57	Eye Irrit. 2 (H319) Skin Sens. 1B (H317)		0.1-1
7-hydroxycitronellal	203-518-7	107-75-5	01-2119973482-31	Eye Irrit. 2 (H319) Skin Sens. 1B (H317)		0.1-1

Specific concentration limits

isoeugenol:

- Skin Sens. 1 (H317) >= 0.01%

Workplace exposure limit(s), if available, are listed in subsection 8.1.

ATE, if available, are listed in section 11.

[4] Exempted: polymer. See Article 2(9) of Regulation (EC) No 1907/2006.

For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

SECTION 4: First aid measures

4.1 Description of first aid measures

General Information:

Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident.

Inhalation:

Get medical attention or advice if you feel unwell.

Skin contact:

Wash skin with plenty of lukewarm, gently flowing water. If skin irritation occurs: Get medical advice or attention.

Eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion:

Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Get medical attention or advice if you feel unwell.

Self-protection of first aider:

Consider personal protective equipment as indicated in subsection 8.2.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	No known effects or symptoms in normal use.
Skin contact:	May cause an allergic skin reaction.
Eye contact:	No known effects or symptoms in normal use.
Ingestion:	No known effects or symptoms in normal use.

4.3 Indication of any immediate medical attention and special treatment needed

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

SECTION 5: Firefighting measures**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

No special hazards known.

5.3 Advice for firefighters

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Wear suitable gloves.

6.2 Environmental precautions

Do not allow to enter drainage system, surface or ground water. Do not allow to enter the ground/soil. Inform responsible authorities in case undiluted product reaches drainage system, surface or ground water or the ground/soil.

6.3 Methods and material for containment and cleaning up

Collect mechanically. Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

6.4 Reference to other sections

For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

SECTION 7: Handling and storage**7.1 Precautions for safe handling****Measures to prevent fire and explosions:**

No special precautions required.

Measures required to protect the environment:

For environmental exposure controls see subsection 8.2.

Advices on general occupational hygiene:

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless advised by Diversey. Wash hands before breaks and at the end of workday. Take off contaminated clothing.

Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Avoid contact with skin.

Use only with adequate ventilation. See chapter 8.2, Exposure controls / Personal protection.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.

For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure controls/personal protection**8.1 Control parameters****Workplace exposure limits**

Air limit values, if available:

Biological limit values, if available:

Recommended monitoring procedures, if available:

Additional exposure limits under the conditions of use, if available:

DNEL/DMEL and PNEC values**Human exposure**

DNEL/DMEL oral exposure - Consumer (mg/kg bw)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
linalyl acetate	-	-	-	0.2
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	-	-	-	4.76
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	-	-	-	3
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

DNEL/DMEL dermal exposure - Worker

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
linalyl acetate	No data available	-	No data available	-
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	0.222 mg/cm ² skin	-	No data available	-
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	No data available	-	No data available	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

DNEL/DMEL dermal exposure - Consumer

Ingredient(s)	Short term - Local effects	Short term - Systemic effects (mg/kg bw)	Long term - Local effects	Long term - Systemic effects (mg/kg bw)
linalyl acetate	No data available	-	No data available	-
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	0.111 mg/cm ² skin	-	No data available	-
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	No data available	-	No data available	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
linalyl acetate	-	-	-	-

benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	-	-	-	33.3
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	-	-	-	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

DNEL/DMEL inhalatory exposure - Consumer (mg/m³)

Ingredient(s)	Short term - Local effects	Short term - Systemic effects	Long term - Local effects	Long term - Systemic effects
linalyl acetate	-	-	-	-
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	-	-	-	8.33
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	-	-	-	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

Environmental exposure

Environmental exposure - PNEC

Ingredient(s)	Surface water, fresh (mg/l)	Surface water, marine (mg/l)	Intermittent (mg/l)	Sewage treatment plant (mg/l)
linalyl acetate	-	-	-	-
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available
d-limonene	0.014	0.0014	-	1.8
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	-	-	-	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

Environmental exposure - PNEC, continued

Ingredient(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soil (mg/kg)	Air (mg/m ³)
linalyl acetate	-	-	-	-
benzyl benzoate	No data available	No data available	No data available	No data available
linalool	No data available	No data available	No data available	No data available
benzyl acetate	No data available	No data available	No data available	No data available
piperonal	No data available	No data available	No data available	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available	No data available	No data available	No data available

d-limonene	3.85	0.385	0.763	-
4-tert-butylcyclohexyl acetate	No data available	No data available	No data available	No data available
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available	No data available	No data available	No data available
coumarin	No data available	No data available	No data available	No data available
eugenol	-	-	-	-
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available	No data available	No data available	No data available
benzyl salicylate	No data available	No data available	No data available	No data available
isoeugenol	No data available	No data available	No data available	No data available
2-methoxy-4-propylphenol	No data available	No data available	No data available	No data available
7-hydroxycitronellal	No data available	No data available	No data available	No data available

8.2 Exposure controls

The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet. If available, please refer to the product information sheet for application and handling instructions. Normal use conditions are assumed for this section.

Recommended safety measures for handling the undiluted product:

Appropriate engineering controls: No special requirements under normal use conditions.
Appropriate organisational controls: Avoid direct contact and/or splashes where possible. Train personnel.

REACH use scenarios considered for the undiluted product:

	SWED - Sector-specific worker exposure description	LCS	PROC	Duration (min)	ERC
Manual application	AISE_SWED_PW_19_2	PW	PROC 19	480	ERC8a
Manual transfer of product	AISE_SWED_PW_8a_1	PW	PROC 8a	60	ERC8a

Personal protective equipment

Eye / face protection:

No special requirements under normal use conditions.

Hand protection:

Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
 Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: \geq 480 min Material thickness: \geq 0.7 mm
 Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: \geq 30 min Material thickness: \geq 0.4 mm
 In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

Body protection:

No special requirements under normal use conditions.

Respiratory protection:

No special requirements under normal use conditions.

Environmental exposure controls:

No special requirements under normal use conditions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Information in this section refers to the product, unless it is specifically stated that substance data is listed

	Method / remark
Physical state: Solid	
Appearance: Granules	
Colour: Light , Yellow	
Odour: Product specific	
Odour threshold: Not applicable	
Melting point/freezing point (°C): Not determined	Not relevant to classification of this product
Initial boiling point and boiling range (°C): Not determined	Not applicable to solids or gases

Substance data, boiling point

Ingredient(s)	Value (°C)	Method	Atmospheric pressure (hPa)
linalyl acetate	No data available		
benzyl benzoate	No data available		
linalool	No data available		
benzyl acetate	No data available		
piperonal	No data available		
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available		

d-limonene	175-178	Weight of evidence	1013
4-tert-butylcyclohexyl acetate	No data available		
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available		
coumarin	No data available		
eugenol	No data available		
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available		
benzyl salicylate	No data available		
isoeugenol	No data available		
2-methoxy-4-propylphenol	No data available		
7-hydroxycitronellal	No data available		

Method / remark**Flammability (solid, gas):** Not determined**Flammability (liquid):** Not applicable.**Flash point (°C):** Not applicable.

Product contains no substance(s) with flash point < 100 °C

Sustained combustion: Not applicable.*(UN Manual of Tests and Criteria, section 32, L.2)***Lower and upper explosion limit/flammability limit (%):** Not determined

See substance data

Substance data, flammability or explosive limits, if available:

Ingredient(s)	Lower limit (% vol)	Upper limit (% vol)
d-limonene	0.7	6.1

Method / remark**Autoignition temperature:** Not determined**Decomposition temperature:** Not applicable.**pH:** Not applicable Not measured**Kinematic viscosity:** Not determined**Solubility in / Miscibility with water:** Insoluble

Not applicable to solids or gases

Substance data, solubility in water

Ingredient(s)	Value (g/l)	Method	Temperature (°C)
linalyl acetate	No data available		
benzyl benzoate	No data available		
linalool	No data available		
benzyl acetate	No data available		
piperonal	No data available		
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available		
d-limonene	Insoluble	Method not given	20
4-tert-butylcyclohexyl acetate	No data available		
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available		
coumarin	No data available		
eugenol	No data available		
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available		
benzyl salicylate	No data available		
isoeugenol	No data available		
2-methoxy-4-propylphenol	No data available		
7-hydroxycitronellal	No data available		

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

Method / remark**Vapour pressure:** Not determined

See substance data

Substance data, vapour pressure

Ingredient(s)	Value (Pa)	Method	Temperature (°C)
linalyl acetate	No data available		
benzyl benzoate	No data available		
linalool	No data available		
benzyl acetate	No data available		
piperonal	No data available		
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available		
d-limonene	190-230	Method not given	20

4-tert-butylcyclohexyl acetate	No data available		
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available		
coumarin	No data available		
eugenol	No data available		
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available		
benzyl salicylate	No data available		
isoeugenol	No data available		
2-methoxy-4-propylphenol	No data available		
7-hydroxycitronellal	No data available		

Relative density: \approx 0.92 (20 °C)
Relative vapour density: No data available.
Particle characteristics: Not determined.

Method / remark
 OECD 109 (EU A.3)
 Not applicable to solids
 Not relevant to classification of this product.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties: Not explosive.

Oxidising properties: Not oxidising.

Corrosion to metals: Not determined

Not applicable to solids or gases

9.2.2 Other safety characteristics

No other relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal storage and use conditions.

10.3 Possibility of hazardous reactions

No hazardous reactions known under normal storage and use conditions.

10.4 Conditions to avoid

None known under normal storage and use conditions.

10.5 Incompatible materials

None known under normal use conditions.

10.6 Hazardous decomposition products

None known under normal storage and use conditions.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture data:

Relevant calculated ATE(s):

ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:

Acute toxicity

Acute oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
linalyl acetate		9000				Not established
benzyl benzoate		No data available				26000
linalool	LD ₅₀	2790	Rat			Not established
benzyl acetate		No data available				Not established
piperonal		No data				270000

		available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		> 5000	Rat			Not established
d-limonene	LD ₅₀	4400 - 5100	Rat	Method not given		480000
4-tert-butylcyclohexyl acetate		3370	Rat	Method not given		390000
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				Not established
coumarin		No data available				47000
eugenol	LD ₅₀	> 2000				Not established
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				Not established
benzyl salicylate	LD ₅₀	> 2000		Method not given		Not established
isoeugenol		No data available				Not established
2-methoxy-4-propylphenol		No data available				Not established
7-hydroxycitronellal		No data available				Not established

Acute dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg)	Species	Method	Exposure time (h)	ATE (mg/kg)
linalyl acetate		No data available				Not established
benzyl benzoate		No data available				Not established
linalool		No data available				Not established
benzyl acetate		No data available				Not established
piperonal		No data available				Not established
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				Not established
d-limonene	LD ₅₀	> 5000	Rabbit	Method not given		Not established
4-tert-butylcyclohexyl acetate		No data available				Not established
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				Not established
coumarin		No data available				Not established
eugenol		No data available				Not established
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				Not established
benzyl salicylate		No data available				Not established
isoeugenol		No data available				Not established
2-methoxy-4-propylphenol		No data available				Not established
7-hydroxycitronellal		No data available				Not established

Acute inhalative toxicity

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
linalyl acetate		No data available			
benzyl benzoate		No data available			
linalool		No data available			
benzyl acetate		No data available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene		No data available			
4-tert-butylcyclohexyl acetate		No data available			
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			

		available		
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available		
benzyl salicylate		No data available		
isoeugenol		No data available		
2-methoxy-4-propylphenol		No data available		
7-hydroxycitronellal		No data available		

Acute inhalative toxicity, continued

Ingredient(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapour (mg/l)	ATE - inhalation, gas (mg/l)
linalyl acetate	Not established	Not established	Not established	Not established
benzyl benzoate	Not established	Not established	Not established	Not established
linalool	Not established	Not established	Not established	Not established
benzyl acetate	Not established	Not established	Not established	Not established
piperonal	Not established	Not established	Not established	Not established
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	Not established	Not established	Not established	Not established
d-limonene	Not established	Not established	Not established	Not established
4-tert-butylcyclohexyl acetate	Not established	Not established	Not established	Not established
[3R-(3 α ,3 $\alpha\beta$,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	Not established	Not established	Not established	Not established
coumarin	Not established	Not established	Not established	Not established
eugenol	Not established	Not established	Not established	Not established
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	Not established	Not established	Not established	Not established
benzyl salicylate	Not established	Not established	Not established	Not established
isoeugenol	Not established	Not established	Not established	Not established
2-methoxy-4-propylphenol	Not established	Not established	Not established	Not established
7-hydroxycitronellal	Not established	Not established	Not established	Not established

Irritation and corrosivity

Skin irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	Irritant	Rabbit	Method not given	
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 $\alpha\beta$,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			
benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

Eye irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	No data available			
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 $\alpha\beta$,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			

benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

Respiratory tract irritation and corrosivity

Ingredient(s)	Result	Species	Method	Exposure time
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	No data available			
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			
benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

Sensitisation

Sensitisation by skin contact

Ingredient(s)	Result	Species	Method	Exposure time (h)
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	Sensitising	Guinea pig	Method not given	
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			
benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

Sensitisation by inhalation

Ingredient(s)	Result	Species	Method	Exposure time
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	No data available			
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			
benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

Ingredient(s)	Result (in-vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vivo)
linalyl acetate	No data available		No data available	
benzyl benzoate	No data available		No data available	
linalool	No data available		No data available	
benzyl acetate	No data available		No data available	
piperonal	No data available		No data available	
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available		No data available	
d-limonene	No data available		No data available	
4-tert-butylcyclohexyl acetate	No data available		No data available	
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available		No data available	
coumarin	No data available		No data available	
eugenol	No data available		No data available	
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available		No data available	
benzyl salicylate	No data available		No data available	
isoeugenol	No data available		No data available	
2-methoxy-4-propylphenol	No data available		No data available	
7-hydroxycitronellal	No data available		No data available	

Carcinogenicity

Ingredient(s)	Effect
linalyl acetate	No data available
benzyl benzoate	No data available
linalool	No data available
benzyl acetate	No data available
piperonal	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available
d-limonene	No data available
4-tert-butylcyclohexyl acetate	No data available
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available
coumarin	No data available
eugenol	No data available
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available
benzyl salicylate	No data available
isoeugenol	No data available
2-methoxy-4-propylphenol	No data available
7-hydroxycitronellal	No data available

Toxicity for reproduction

Ingredient(s)	Endpoint	Specific effect	Value (mg/kg bw/d)	Species	Method	Exposure time	Remarks and other effects reported
linalyl acetate			No data available				
benzyl benzoate			No data available				
linalool			No data available				
benzyl acetate			No data available				
piperonal			No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one			No data available				
d-limonene			No data available				
4-tert-butylcyclohexyl acetate			No data available				
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one			No data available				
coumarin			No data available				

eugenol			No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde			No data available				
benzyl salicylate			No data available				
isoeugenol			No data available				
2-methoxy-4-propylphenol			No data available				
7-hydroxycitronellal			No data available				

Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				
isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Sub-chronic dermal toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				

isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Sub-chronic inhalation toxicity

Ingredient(s)	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time (days)	Specific effects and organs affected
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				
isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Chronic toxicity

Ingredient(s)	Exposure route	Endpoint	Value (mg/kg bw/d)	Species	Method	Exposure time	Specific effects and organs affected	Remark
linalyl acetate			No data available					
benzyl benzoate			No data available					
linalool			No data available					
benzyl acetate			No data available					
piperonal			No data available					
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one			No data available					
d-limonene			No data available					
4-tert-butylcyclohexyl acetate			No data available					
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one			No data available					
coumarin			No data available					
eugenol			No data available					
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde			No data available					
benzyl salicylate			No data available					
isoeugenol			No data available					
2-methoxy-4-propylphe			No data					

nol			available				
7-hydroxycitronellal			No data available				

STOT-single exposure

Ingredient(s)	Affected organ(s)
linalyl acetate	No data available
benzyl benzoate	No data available
linalool	No data available
benzyl acetate	No data available
piperonal	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available
d-limonene	No data available
4-tert-butylcyclohexyl acetate	No data available
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available
coumarin	No data available
eugenol	No data available
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available
benzyl salicylate	No data available
isoeugenol	No data available
2-methoxy-4-propylphenol	No data available
7-hydroxycitronellal	No data available

STOT-repeated exposure

Ingredient(s)	Affected organ(s)
linalyl acetate	No data available
benzyl benzoate	No data available
linalool	No data available
benzyl acetate	No data available
piperonal	No data available
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available
d-limonene	No data available
4-tert-butylcyclohexyl acetate	No data available
[3R-(3 α ,3 β ,7 β ,8 $\alpha\alpha$)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available
coumarin	No data available
eugenol	No data available
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available
benzyl salicylate	No data available
isoeugenol	No data available
2-methoxy-4-propylphenol	No data available
7-hydroxycitronellal	No data available

Aspiration hazard

Substances with an aspiration hazard (H304), if any, are listed in section 3.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if any, are listed in subsection 4.2.

11.2 Information on other hazards**11.2.1 Endocrine disrupting properties**

Endocrine disrupting properties - Human data, if available:

11.2.2 Other information

No other relevant information available.

SECTION 12: Ecological information**12.1 Toxicity**

No data is available on the mixture.

Substance data, where relevant and available, are listed below:

Aquatic short-term toxicity

Aquatic short-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
---------------	----------	--------------	---------	--------	-------------------

linalyl acetate	LC ₅₀	11	<i>Cyprinus carpio</i>	OECD 203, flow-through	96
benzyl benzoate	LC ₅₀	2.32	<i>Brachydanio rerio</i>	OECD 203, semi-static	96
linalool		No data available			
benzyl acetate		No data available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene	LC ₅₀	0.72	<i>Pimephales promelas</i>	OECD 203 (EU C.1)	96
4-tert-butylcyclohexyl acetate		No data available			
[3R-(3 α ,3 α β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available			
benzyl salicylate		No data available			
isoeugenol		No data available			
2-methoxy-4-propylphenol		No data available			
7-hydroxycitronellal		No data available			

Aquatic short-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
linalyl acetate	EC ₅₀	59	<i>Daphnia</i>	OECD 202, static	48
benzyl benzoate	LC ₅₀	3.09	<i>Daphnia magna</i> Straus	OECD 202, static	48
linalool		No data available			
benzyl acetate		No data available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene	EC ₅₀	0.36	<i>Daphnia magna</i> Straus	OECD 202 (EU C.2)	48
4-tert-butylcyclohexyl acetate		No data available			
[3R-(3 α ,3 α β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available			
benzyl salicylate		No data available			
isoeugenol		No data available			
2-methoxy-4-propylphenol		No data available			
7-hydroxycitronellal		No data available			

Aquatic short-term toxicity - algae

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (h)
linalyl acetate	EC ₅₀	68	<i>Pseudokirchneriella subcapitata</i>	OECD 201 (EU C.3)	72
benzyl benzoate	EC ₅₀	0.475	<i>Pseudokirchneriella subcapitata</i>	OECD 201, static	72
linalool		No data available			
benzyl acetate		No data available			

		available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene	Er C ₅₀	150	<i>Desmodemus subspicatus</i>	OECD 201 (EU C.3)	72
4-tert-butylcyclohexyl acetate		No data available			
[3R-(3α,3aβ,7β,8aα)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available			
benzyl salicylate		No data available			
isoeugenol		No data available			
2-methoxy-4-propylphenol		No data available			
7-hydroxycitronellal		No data available			

Aquatic short-term toxicity - marine species

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time (days)
linalyl acetate		No data available			
benzyl benzoate		No data available			
linalool		No data available			
benzyl acetate		No data available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene		No data available			
4-tert-butylcyclohexyl acetate		No data available			
[3R-(3α,3aβ,7β,8aα)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available			
benzyl salicylate		No data available			
isoeugenol		No data available			
2-methoxy-4-propylphenol		No data available			
7-hydroxycitronellal		No data available			

Impact on sewage plants - toxicity to bacteria

Ingredient(s)	Endpoint	Value (mg/l)	Inoculum	Method	Exposure time
linalyl acetate		No data available			
benzyl benzoate		No data available			
linalool		No data available			
benzyl acetate		No data available			
piperonal		No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available			
d-limonene		No data available			
4-tert-butylcyclohexyl acetate		No data available			

		available			
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available			
coumarin		No data available			
eugenol		No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available			
benzyl salicylate		No data available			
isoeugenol		No data available			
2-methoxy-4-propylphenol		No data available			
7-hydroxycitronellal		No data available			

Aquatic long-term toxicity

Aquatic long-term toxicity - fish

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				
isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Aquatic long-term toxicity - crustacea

Ingredient(s)	Endpoint	Value (mg/l)	Species	Method	Exposure time	Effects observed
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				

4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				
isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Ingredient(s)	Endpoint	Value (mg/kg dw sediment)	Species	Method	Exposure time (days)	Effects observed
linalyl acetate		No data available				
benzyl benzoate		No data available				
linalool		No data available				
benzyl acetate		No data available				
piperonal		No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one		No data available				
d-limonene		No data available				
4-tert-butylcyclohexyl acetate		No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one		No data available				
coumarin		No data available				
eugenol		No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde		No data available				
benzyl salicylate		No data available				
isoeugenol		No data available				
2-methoxy-4-propylphenol		No data available				
7-hydroxycitronellal		No data available				

Terrestrial toxicity

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

Terrestrial toxicity - plants, if available:

Terrestrial toxicity - birds, if available:

Terrestrial toxicity - beneficial insects, if available:

Terrestrial toxicity - soil bacteria, if available:

12.2 Persistence and degradability

Abiotic degradation

Abiotic degradation - photodegradation in air, if available:

Abiotic degradation - hydrolysis, if available:

Abiotic degradation - other processes, if available:

Biodegradation

Ready biodegradability - aerobic conditions

Ingredient(s)	Inoculum	Analytical method	DT ₅₀	Method	Evaluation
linalyl acetate				OECD 301F	Readily biodegradable
benzyl benzoate				OECD 301F	Readily biodegradable

linalool	Activated sludge, aerobic	Oxygen depletion	64.2% in 28 day(s)	OECD 301D	Readily biodegradable
benzyl acetate	Activated sludge, aerobic	CO ₂ production	100.9% in 28 day(s)	OECD 301B	Readily biodegradable
piperonal					Readily biodegradable
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one				OECD 301B	Not readily biodegradable.
d-limonene			80 % in 28 day(s)	OECD 301D	Readily biodegradable
4-tert-butylcyclohexyl acetate				OECD 301B	Readily biodegradable
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one				OECD 301F	Not readily biodegradable.
coumarin	Activated sludge, aerobic			OECD 301C	Readily biodegradable
eugenol					Readily biodegradable
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde			> 60% in 28 day(s)	OECD 301C	Readily biodegradable
benzyl salicylate				OECD 301F	Readily biodegradable
isoeugenol		Oxygen depletion	79% in 28 day(s)	OECD 301F	Readily biodegradable
2-methoxy-4-propylphenol	Activated sludge, aerobic	Oxygen depletion	> 73% in 28 day(s)	OECD 301F	Readily biodegradable
7-hydroxycitronellal				OECD 301F	Readily biodegradable

Ready biodegradability - anaerobic and marine conditions, if available:

Degradation in relevant environmental compartments, if available:

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

Ingredient(s)	Value	Method	Evaluation	Remark
linalyl acetate	No data available			
benzyl benzoate	No data available			
linalool	No data available			
benzyl acetate	No data available			
piperonal	No data available			
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available			
d-limonene	No data available		High potential for bioaccumulation	
4-tert-butylcyclohexyl acetate	No data available			
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available			
coumarin	No data available			
eugenol	No data available			
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available			
benzyl salicylate	No data available			
isoeugenol	No data available			
2-methoxy-4-propylphenol	No data available			
7-hydroxycitronellal	No data available			

Bioconcentration factor (BCF)

Ingredient(s)	Value	Species	Method	Evaluation	Remark
linalyl acetate	No data available				
benzyl benzoate	No data available				
linalool	No data available				
benzyl acetate	No data available				
piperonal	No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available				
d-limonene	683.1		Method not given	High potential for bioaccumulation	
4-tert-butylcyclohexyl acetate	No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available				
coumarin	No data available				
eugenol	No data available				

4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available				
benzyl salicylate	No data available				
isoeugenol	No data available				
2-methoxy-4-propylphenol	No data available				
7-hydroxycitronellal	No data available				

12.4 Mobility in soil

Adsorption/Desorption to soil or sediment

Ingredient(s)	Adsorption coefficient Log Koc	Desorption coefficient Log Koc(des)	Method	Soil/sediment type	Evaluation
linalyl acetate	No data available				
benzyl benzoate	No data available				
linalool	No data available				
benzyl acetate	No data available				
piperal	No data available				
3-methyl-4-(2,6,6-trimethyl-2-cyclohexen-1-yl)-3-buten-2-one	No data available				
d-limonene	No data available				High potential for mobility in soil
4-tert-butylcyclohexyl acetate	No data available				
[3R-(3 α ,3 β ,7 β ,8 α)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one	No data available				
coumarin	No data available				
eugenol	No data available				
4-(4-hydroxy-4-methylpentyl)cyclohex-3-enecarbaldehyde	No data available				
benzyl salicylate	No data available				
isoeugenol	No data available				
2-methoxy-4-propylphenol	No data available				
7-hydroxycitronellal	No data available				

12.5 Results of PBT and vPvB assessment

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

12.6 Endocrine disrupting properties

Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects

No other adverse effects known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste from residues / unused products:

The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

European Waste Catalogue:

16 03 05* - organic wastes containing dangerous substances.

Empty packaging

Recommendation:

Dispose of observing national or local regulations.

SECTION 14: Transport information

Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)

14.1 UN number: Non-dangerous goods

14.2 UN proper shipping name: Non-dangerous goods

14.3 Transport hazard class(es): Non-dangerous goods

14.4 Packing group: Non-dangerous goods

14.5 Environmental hazards: Non-dangerous goods

14.6 Special precautions for user: Non-dangerous goods

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code: Non-dangerous goods

Other relevant information:

ADR

Hazard identification number: -

SECTION 15: Regulatory information

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

National regulations :

- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code

Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII): Not applicable.

Comah - classification: Not classified

15.2 Chemical safety assessment

A chemical safety assessment has not been carried out on the mixture

SECTION 16: Other information

The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract

SDS code: MS1002006

Version: 03.0

Revision: 2022-11-22

Reason for revision:

Overall design adjusted in accordance with Amendment 2020/878, Annex II of Regulation (EC) No 1907/2006, This data sheet contains changes from the previous version in section(s):, 2, 3, 6, 7, 8, 11, 12, 16

Classification procedure

The classification of the mixture is in general based on calculation methods using substance data, as required by Regulation (EC) No 1272/2008. If for certain classifications data on the mixture is available or for example bridging principles or weight of evidence can be used for classification, this will be indicated in the relevant sections of the Safety Data Sheet. See section 9 for physical chemical properties, section 11 for toxicological information and section 12 for ecological information.

Full text of the H and EUH phrases mentioned in section 3:

- H226 - Flammable liquid and vapour.
- H302 - Harmful if swallowed.
- H304 - May be fatal if swallowed and enters airways.
- H315 - Causes skin irritation.
- H317 - May cause an allergic skin reaction.
- H319 - Causes serious eye irritation.
- H335 - May cause respiratory irritation.
- H373 - May cause damage to organs through prolonged or repeated exposure.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.
- H411 - Toxic to aquatic life with long lasting effects.
- H412 - Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms:

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories
- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative

End of Safety Data Sheet