



Safety Data Sheet

acc. to 29 CFR 1910.1200 App D

Armor All FRESHfx Car Air Freshener Island Oasis Vent Sticks

Version number: GHS 4.0
Replaces version of: 2020-06-09 (GHS 3)

Revision: 2020-10-21

SECTION 1: Identification

1.1 Product identifier

Trade name

Armor All FRESHfx Car Air Freshener Island Oasis Vent Sticks

Alternative number(s)

070612185419, 070612188762

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

Relevant identified uses

General use

1.3 Details of the supplier of the safety data sheet

Energizer Manufacturing, Inc.
25225 Detroit Rd.
Westlake OH 44145
United States

Telephone: 800-383-7323; 314-985-2000 (USA / CANADA)
Website: <http://data.energizer.com>

Energizer Trading Ltd.
Sword House, Totteridge Road, High Wycombe, HP13 6DG, UK

Telephone: +44(0)8000353376
e-mail: ConsumerServiceEU@energizer.com

1.4 Emergency telephone number

Emergency information service

1-314-985-1511 Int'l: 1-800-526-4727
This number is only available during the following
office hours: Mon-Fri 09:00 AM - 05:00 PM

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Section	Hazard class	Category	Hazard class and category	Hazard statement
A.10	acute toxicity (oral)	4	Acute Tox. 4	H302
A.2	skin corrosion/irritation	2	Skin Irrit. 2	H315
A.3	serious eye damage/eye irritation	2	Eye Irrit. 2	H319
A.4S	skin sensitization	1	Skin Sens. 1	H317
A.7	reproductive toxicity	2	Repr. 2	H361f



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Section	Hazard class	Category	Hazard class and category	Hazard statement
B.6	flammable liquid	3	Flam. Liq. 3	H226

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

The product is combustible and can be ignited by potential ignition sources.

2.2 Label elements

Labelling acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

- Signal word warning

- Pictograms

GHS02, GHS07, GHS08



- Hazard statements

H226 Flammable liquid and vapor.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361f Suspected of damaging fertility.

- Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P270 Do not eat, drink or smoke when using this product.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/eye protection/face protection.
P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
P302+P352 If on skin: Wash with plenty of water.
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 If exposed or concerned: Get medical advice/attention.
P321 Specific treatment (see on this label).
P330 Rinse mouth.



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- Precautionary statements

P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P370+P378	In case of fire: Use sand, carbon dioxide or powder extinguisher to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.2.1.7 - Hazardous ingredients for labelling

(R)-p-mentha-1,8-diene, Linal, Allyl heptanoate, Geraniol, Hexyl cinnamaldehyde, Cyclamal, Benzyl salicylate, Methyl Ionone, Linalool, Lyril, acetyl cedrene, citral, delta-Damascone, Hexyl salicylate, allyl 3-cyclohexylpropionate

2.3 Other hazards

Hazards not otherwise classified

Explosive with or without contact with air.
May be harmful if inhaled (GHS category 5: acutely toxic - inhalation).
Very toxic to aquatic life with long lasting effects (GHS category 1: aquatic toxicity - acute and/or chronic).

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Hexyl cinnamaldehyde	CAS No 165184-98-5 101-86-0	5 - < 10	Acute Tox. 4 / H332	
α,α-dimethylphenethyl butyrate	CAS No 10094-34-5	5 - < 10	Skin Irrit. 2 / H315	
Cyclamal	CAS No 103-95-7	5 - < 10	Skin Irrit. 2 / H315 Skin Sens. 1B / H317	



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Name of substance	Identifier	Wt%	Classification acc. to GHS	Pictograms
Allyl heptanoate	CAS No 142-19-8	5 – < 10	Acute Tox. 3 / H301 Acute Tox. 3 / H311 Flam. Liq. 4 / H227	
Dihydromyrcenol	CAS No 18479-58-8	5 – < 10	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Flam. Liq. 4 / H227	
Linalool	CAS No 78-70-6	5 – < 10	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1B / H317 Flam. Liq. 4 / H227	
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	CAS No 28219-61-6 106185-75-5	5 – < 10	Eye Irrit. 2 / H319	
Lilial	CAS No 80-54-6	5 – < 10	Acute Tox. 4 / H302 Flam. Liq. 4 / H227	
(R)-p-mentha-1,8-diene	CAS No 5989-27-5	5 – < 10	Skin Irrit. 2 / H315 Skin Sens. 1 / H317 Flam. Liq. 3 / H226	
Geraniol	CAS No 106-24-1	1 – < 5	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317	
Methyl Ionone	CAS No 127-51-5	1 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1B / H317	
Lylal	CAS No 31906-04-4	1 – < 5	Skin Sens. 1B / H317	
acetyl cedrene	CAS No 32388-55-9	1 – < 5	Skin Sens. 1B / H317	
citral	CAS No 5392-40-5	1 – < 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Asp. Tox. 1 / H304	
delta-Damascone	CAS No 57378-68-4	1 – < 5	Acute Tox. 4 / H302 Skin Irrit. 2 / H315 Skin Sens. 1 / H317	
Hexyl salicylate	CAS No 6259-76-3	1 – < 5	Skin Sens. 1B / H317	
allyl 3-cyclohexylpropionate	CAS No 2705-87-5	1 – < 5	Acute Tox. 4 / H302 Acute Tox. 4 / H312 Acute Tox. 4 / H332 Skin Sens. 1B / H317	



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For full text of abbreviations: see SECTION 16.

SECTION 4: First-aid measures

4.1 Description of first- aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. In case of respiratory tract irritation, consult a physician. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

4.3 Indication of any immediate medical attention and special treatment needed

none

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO₂)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

In case of insufficient ventilation and/or in use, may form flammable/explosive vapor-air mixture. Solvent vapors are heavier than air and may spread along floors. Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures.

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO₂)



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5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Avoidance of ignition sources. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharge. Use only in well-ventilated areas. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools.



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- Specific notes/details

Places which are not ventilated, e.g. unventilated below ground level areas such as trenches, conduits and shafts, are particularly prone to the presence of flammable substances or mixtures. Vapors are heavier than air, spread along floors and form explosive mixtures with air. Vapors may form explosive mixtures with air.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

Managing of associated risks

- Explosive atmospheres

Keep container tightly closed and in a well-ventilated place. Use local and general ventilation. Keep cool. Protect from sunlight.

- Flammability hazards

Keep away from sources of ignition - No smoking. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharge. Protect from sunlight.

- Ventilation requirements

Use local and general ventilation. Ground/bond container and receiving equipment.

- Packaging compatibilities

Only packagings which are approved (e.g. acc. to the Dangerous Goods Regulations) may be used.

7.3 Specific end use(s)

See section 16 for a general overview.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)											
Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m ³]	STEL [ppm]	STEL [mg/m ³]	Ceiling-C [ppm]	Ceiling-C [mg/m ³]	Notation	Source
US	citral	5392-40-5	TLV®	5						iv	AC-GIH® 2019

Notation

Ceiling-C

iv

STEL

TWA

ceiling value is a limit value above which exposure should not occur

inhalable fraction and vapor

short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)



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Relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
Hexyl cinnamaldehyde	165184-98-5 101-86-0	DNEL	0.078 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Hexyl cinnamaldehyde	165184-98-5 101-86-0	DNEL	6.28 mg/m ³	human, inhalatory	worker (industry)	acute - local effects
Hexyl cinnamaldehyde	165184-98-5 101-86-0	DNEL	18.2 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hexyl cinnamaldehyde	165184-98-5 101-86-0	DNEL	525 µg/cm ²	human, dermal	worker (industry)	chronic - local effects
Hexyl cinnamaldehyde	165184-98-5 101-86-0	DNEL	525 µg/cm ²	human, dermal	worker (industry)	acute - local effects
α,α-dimethylphenethyl butyrate	10094-34-5	DNEL	4.4 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
α,α-dimethylphenethyl butyrate	10094-34-5	DNEL	8.33 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Cyclamal	103-95-7	DNEL	1.67 mg/kg	human, dermal	worker (industry)	chronic - systemic effects
Cyclamal	103-95-7	DNEL	5.83 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Allyl heptanoate	142-19-8	DNEL	2.97 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Allyl heptanoate	142-19-8	DNEL	0.84 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Dihydromyrcenol	18479-58-8	DNEL	73.5 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Dihydromyrcenol	18479-58-8	DNEL	20.8 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Linalool	78-70-6	DNEL	2.8 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Linalool	78-70-6	DNEL	16.5 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
Linalool	78-70-6	DNEL	2.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Linalool	78-70-6	DNEL	5 mg/kg bw/day	human, dermal	worker (industry)	acute - systemic effects
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	DNEL	6 mg/kg	human, dermal	worker (industry)	acute - systemic effects



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2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	DNEL	7 mg/m ³	human, inhalatory	worker (industry)	acute - systemic effects
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	DNEL	21 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	DNEL	6 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Lilial	80-54-6	DNEL	0.44 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Lilial	80-54-6	DNEL	1.79 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Lilial	80-54-6	DNEL	410 µg/cm ²	human, dermal	worker (industry)	chronic - local effects
Lilial	80-54-6	DNEL	410 µg/cm ²	human, dermal	worker (industry)	acute - local effects
(R)-p-mentha-1,8-diene	5989-27-5	DNEL	66.7 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
(R)-p-mentha-1,8-diene	5989-27-5	DNEL	9.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Geraniol	106-24-1	DNEL	161.6 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Geraniol	106-24-1	DNEL	12.5 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Geraniol	106-24-1	DNEL	11,800 µg/cm ²	human, dermal	worker (industry)	chronic - local effects
Methyl Ionone	127-51-5	DNEL	8.22 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
Methyl Ionone	127-51-5	DNEL	0.375 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
acetyl cedrene	32388-55-9	DNEL	1.175 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects
acetyl cedrene	32388-55-9	DNEL	0.333 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
citral	5392-40-5	DNEL	9 mg/m ³	human, inhalatory	worker (industry)	chronic - systemic effects



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Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
citral	5392-40-5	DNEL	1.7 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
citral	5392-40-5	DNEL	140 µg/cm²	human, dermal	worker (industry)	chronic - local effects
Hexyl salicylate	6259-76-3	DNEL	20,830 mg/kg	human, dermal	worker (industry)	acute - systemic effects
Hexyl salicylate	6259-76-3	DNEL	7.29 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Hexyl salicylate	6259-76-3	DNEL	1.7 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Hexyl salicylate	6259-76-3	DNEL	6.4 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects
Hexyl salicylate	6259-76-3	DNEL	885 µg/cm²	human, dermal	worker (industry)	chronic - local effects
Hexyl salicylate	6259-76-3	DNEL	885 µg/cm²	human, dermal	worker (industry)	acute - local effects
allyl 3-cyclohexylpropionate	2705-87-5	DNEL	15 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
allyl 3-cyclohexylpropionate	2705-87-5	DNEL	4.3 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	0.001 mg/l	aquatic organisms	freshwater	short-term (single instance)
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	3.2 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	0.064 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Hexyl cinnamaldehyde	165184-98-5 101-86-0	PNEC	0.398 mg/kg	terrestrial organisms	soil	short-term (single instance)



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α,α -dimethylphen-ethyl butyrate	10094-34-5	PNEC	4.766 $\mu\text{g}/\text{l}$	aquatic organisms	freshwater	short-term (single instance)
α,α -dimethylphen-ethyl butyrate	10094-34-5	PNEC	31.25 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
α,α -dimethylphen-ethyl butyrate	10094-34-5	PNEC	0.189 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
α,α -dimethylphen-ethyl butyrate	10094-34-5	PNEC	0.103 mg/kg	terrestrial organisms	soil	short-term (single instance)
Cyclamal	103-95-7	PNEC	1.09 $\mu\text{g}/\text{l}$	aquatic organisms	freshwater	short-term (single instance)
Cyclamal	103-95-7	PNEC	0.11 $\mu\text{g}/\text{l}$	aquatic organisms	marine water	short-term (single instance)
Cyclamal	103-95-7	PNEC	1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Cyclamal	103-95-7	PNEC	0.126 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Cyclamal	103-95-7	PNEC	0.0126 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Cyclamal	103-95-7	PNEC	33.3 mg/kg	aquatic organisms	water	short-term (single instance)
Cyclamal	103-95-7	PNEC	0.0245 mg/kg	terrestrial organisms	soil	short-term (single instance)
Cyclamal	103-95-7	PNEC	10.92 $\mu\text{g}/\text{l}$	aquatic organisms	water	intermittent release
Allyl heptanoate	142-19-8	PNEC	51.78 mg/kg	aquatic organisms	water	short-term (single instance)
Allyl heptanoate	142-19-8	PNEC	1.2 $\mu\text{g}/\text{l}$	aquatic organisms	water	intermittent release
Allyl heptanoate	142-19-8	PNEC	0.12 $\mu\text{g}/\text{l}$	aquatic organisms	freshwater	short-term (single instance)
Allyl heptanoate	142-19-8	PNEC	0.012 $\mu\text{g}/\text{l}$	aquatic organisms	marine water	short-term (single instance)
Allyl heptanoate	142-19-8	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Allyl heptanoate	142-19-8	PNEC	0.012 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)



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Allyl heptanoate	142-19-8	PNEC	0.001 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Allyl heptanoate	142-19-8	PNEC	0.002 mg/kg	terrestrial organisms	soil	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	111 mg/kg	aquatic organisms	water	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	0.278 mg/l	aquatic organisms	water	intermittent release
Dihydromyrcenol	18479-58-8	PNEC	27.8 µg/l	aquatic organisms	freshwater	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	2.78 µg/l	aquatic organisms	marine water	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	0.594 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	0.059 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Dihydromyrcenol	18479-58-8	PNEC	0.103 mg/kg	terrestrial organisms	soil	short-term (single instance)
Linalool	78-70-6	PNEC	7.8 mg/kg	aquatic organisms	water	short-term (single instance)
Linalool	78-70-6	PNEC	2 mg/l	aquatic organisms	water	intermittent release
Linalool	78-70-6	PNEC	0.2 mg/l	aquatic organisms	freshwater	short-term (single instance)
Linalool	78-70-6	PNEC	0.02 mg/l	aquatic organisms	marine water	short-term (single instance)
Linalool	78-70-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Linalool	78-70-6	PNEC	2.22 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Linalool	78-70-6	PNEC	0.222 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Linalool	78-70-6	PNEC	0.327 mg/kg	terrestrial organisms	soil	short-term (single instance)



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Relevant PNECs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	1 mg/kg	aquatic organisms	water	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	8.8 µg/l	aquatic organisms	freshwater	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	0.88 µg/l	aquatic organisms	marine water	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	1 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	1.05 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	0.105 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	PNEC	0.206 mg/kg	terrestrial organisms	soil	short-term (single instance)
Lilial	80-54-6	PNEC	0.024 mg/l	aquatic organisms	water	intermittent release
Lilial	80-54-6	PNEC	0.004 mg/l	aquatic organisms	freshwater	short-term (single instance)
Lilial	80-54-6	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
Lilial	80-54-6	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Lilial	80-54-6	PNEC	0.528 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Lilial	80-54-6	PNEC	0.053 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Lilial	80-54-6	PNEC	0.103 mg/kg	terrestrial organisms	soil	short-term (single instance)
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	14 µg/l	aquatic organisms	freshwater	short-term (single instance)
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	1.4 µg/l	aquatic organisms	marine water	short-term (single instance)



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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	1.8 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	3.85 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	0.385 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
(R)-p-mentha-1,8-diene	5989-27-5	PNEC	0.763 mg/kg	terrestrial organisms	soil	short-term (single instance)
Geraniol	106-24-1	PNEC	0.108 mg/l	aquatic organisms	water	intermittent release
Geraniol	106-24-1	PNEC	0.011 mg/l	aquatic organisms	freshwater	short-term (single instance)
Geraniol	106-24-1	PNEC	0.001 mg/l	aquatic organisms	marine water	short-term (single instance)
Geraniol	106-24-1	PNEC	0.7 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Geraniol	106-24-1	PNEC	0.115 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Geraniol	106-24-1	PNEC	0.011 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Geraniol	106-24-1	PNEC	0.017 mg/kg	terrestrial organisms	soil	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	1.43 µg/l	aquatic organisms	freshwater	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	0.143 µg/l	aquatic organisms	marine water	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	0.443 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	44.3 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
Methyl Ionone	127-51-5	PNEC	87.8 µg/kg	terrestrial organisms	soil	short-term (single instance)
acetyl cedrene	32388-55-9	PNEC	1.74 µg/l	aquatic organisms	freshwater	short-term (single instance)



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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
acetyl cedrene	32388-55-9	PNEC	0.174 µg/l	aquatic organisms	marine water	short-term (single instance)
acetyl cedrene	32388-55-9	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
acetyl cedrene	32388-55-9	PNEC	24.4 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
acetyl cedrene	32388-55-9	PNEC	2.44 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
acetyl cedrene	32388-55-9	PNEC	4.87 mg/kg	terrestrial organisms	soil	short-term (single instance)
citral	5392-40-5	PNEC	0.007 mg/l	aquatic organisms	freshwater	short-term (single instance)
citral	5392-40-5	PNEC	0.001 mg/l	aquatic organisms	marine water	short-term (single instance)
citral	5392-40-5	PNEC	1.6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
citral	5392-40-5	PNEC	0.125 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
citral	5392-40-5	PNEC	0.013 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
citral	5392-40-5	PNEC	0.021 mg/kg	terrestrial organisms	soil	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	0.00357 mg/l	aquatic organisms	water	intermittent release
Hexyl salicylate	6259-76-3	PNEC	0 mg/l	aquatic organisms	freshwater	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	0 mg/l	aquatic organisms	marine water	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	10 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	0.272 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	0.027 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
Hexyl salicylate	6259-76-3	PNEC	0.054 mg/kg	terrestrial organisms	soil	short-term (single instance)

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Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	143 mg/kg	aquatic organisms	water	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	1.3 µg/l	aquatic organisms	water	intermittent release
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	0.13 µg/l	aquatic organisms	freshwater	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	0.013 µg/l	aquatic organisms	marine water	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	0.2 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	24.13 µg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	2.413 µg/kg	aquatic organisms	marine sediment	short-term (single instance)
allyl 3-cyclohexylpropionate	2705-87-5	PNEC	4.75 µg/kg	terrestrial organisms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.



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Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	various
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	193 °C at 100.9 kPa
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	0.25 kPa at 25 °C
Density	not determined
Vapor density	this information is not available
Relative density	information on this property is not available
Solubility(ies)	not determined

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
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	Auto-ignition temperature	
	Viscosity	not determined
	Explosive properties	explosive
	Oxidizing properties	none
9.2	Other information	there is no additional information

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials". The mixture contains reactive substance(s). Risk of ignition.

If heated:

Risk of ignition

If exposed to air:

Danger of explosion.

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints to prevent fire or explosion

Use explosion-proof electrical/ventilating/lighting/equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

10.5 Incompatible materials

Oxidizers

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.



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SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to OSHA "Hazard Communication Standard" (29 CFR 1910.1200)

Acute toxicity

Harmful if swallowed.

GHS of the United Nations, annex 4: May be harmful if inhaled.

Acute toxicity estimate (ATE) of components of the mixture

Name of substance	CAS No	Exposure route	ATE
Hexyl cinnamaldehyde	165184-98-5 101-86-0	inhalation: vapor	11 mg/l/4h
Hexyl cinnamaldehyde	165184-98-5 101-86-0	inhalation: dust/mist	2.12 mg/l/4h
Allyl heptanoate	142-19-8	oral	218 mg/kg
Allyl heptanoate	142-19-8	dermal	810 mg/kg
Lilial	80-54-6	oral	1,390 mg/kg
delta-Damascone	57378-68-4	oral	500 mg/kg
allyl 3-cyclohexylpropionate	2705-87-5	oral	500 mg/kg
allyl 3-cyclohexylpropionate	2705-87-5	dermal	1,600 mg/kg
allyl 3-cyclohexylpropionate	2705-87-5	inhalation: vapor	11 mg/l/4h

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

Respiratory or skin sensitization

May cause an allergic skin reaction.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.



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Carcinogenicity

Shall not be classified as carcinogenic.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

Name of substance	CAS No	Classification	Number
(R)-p-mentha-1,8-diene	5989-27-5	3	

Legend

3 Not classifiable as to carcinogenicity in humans

Reproductive toxicity

Suspected of damaging fertility.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hexyl cinnamaldehyde	165184-98-5 101-86-0	LC50	1.7 mg/l	fish	96 h
Hexyl cinnamaldehyde	165184-98-5 101-86-0	EC50	<0.59 mg/l	aquatic invertebrates	48 h
Hexyl cinnamaldehyde	165184-98-5 101-86-0	ErC50	>0.065 mg/l	algae	72 h
α,α -dimethylphenethyl butyrate	10094-34-5	EC50	21.3 mg/l	aquatic invertebrates	24 h
Cyclamal	103-95-7	LC50	1.092 mg/l	fish	96 h
Cyclamal	103-95-7	EC50	1.4 mg/l	aquatic invertebrates	48 h
Cyclamal	103-95-7	ErC50	4.3 mg/l	algae	72 h



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Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Allyl heptanoate	142-19-8	LC50	0.201 mg/l	fish	24 h
Allyl heptanoate	142-19-8	EC50	0.89 mg/l	aquatic invertebrates	48 h
Allyl heptanoate	142-19-8	ErC50	>4.6 mg/l	algae	72 h
Dihydromyrcenol	18479-58-8	LC50	27.8 mg/l	fish	96 h
Dihydromyrcenol	18479-58-8	EC50	38 mg/l	aquatic invertebrates	48 h
Dihydromyrcenol	18479-58-8	ErC50	80 mg/l	algae	72 h
Linalool	78-70-6	LC50	27.8 mg/l	fish	96 h
Linalool	78-70-6	EC50	59 mg/l	aquatic invertebrates	48 h
Linalool	78-70-6	ErC50	156.7 mg/l	algae	96 h
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	LC50	1.1 mg/l	fish	96 h
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	EC50	2.59 mg/l	aquatic invertebrates	24 h
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	ErC50	2.5 mg/l	algae	96 h
Lilial	80-54-6	LC50	2.04 mg/l	fish	96 h
Lilial	80-54-6	EC50	10.7 mg/l	aquatic invertebrates	48 h
Lilial	80-54-6	ErC50	29.16 mg/l	algae	72 h
(R)-p-mentha-1,8-diene	5989-27-5	LC50	720 µg/l	fish	96 h
(R)-p-mentha-1,8-diene	5989-27-5	EC50	688 µg/l	fish	96 h
(R)-p-mentha-1,8-diene	5989-27-5	ErC50	0.32 mg/l	algae	72 h
Geraniol	106-24-1	LC50	22 mg/l	fish	96 h
Geraniol	106-24-1	EC50	10.8 mg/l	aquatic invertebrates	48 h
Geraniol	106-24-1	ErC50	13.1 mg/l	algae	72 h
Methyl Ionone	127-51-5	LC50	10.9 mg/l	fish	96 h
Methyl Ionone	127-51-5	EC50	1.428 mg/l	fish	96 h



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Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Methyl Ionone	127-51-5	ErC50	>20 mg/l	algae	72 h
acetyl cedrene	32388-55-9	LC50	2.3 mg/l	fish	96 h
acetyl cedrene	32388-55-9	EC50	0.86 mg/l	aquatic invertebrates	48 h
acetyl cedrene	32388-55-9	ErC50	>4.3 mg/l	algae	96 h
citral	5392-40-5	LC50	6.78 mg/l	fish	96 h
citral	5392-40-5	EC50	6.8 mg/l	aquatic invertebrates	48 h
citral	5392-40-5	ErC50	103.8 mg/l	algae	72 h
Hexyl salicylate	6259-76-3	EC50	0.543 mg/l	aquatic invertebrates	24 h
Hexyl salicylate	6259-76-3	ErC50	0.61 mg/l	algae	72 h
allyl 3-cyclohexylpropionate	2705-87-5	LC50	0.13 mg/l	fish	96 h
allyl 3-cyclohexylpropionate	2705-87-5	EC50	3.8 mg/l	aquatic invertebrates	48 h
allyl 3-cyclohexylpropionate	2705-87-5	ErC50	3 mg/l	algae	72 h

Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
Hexyl cinnamaldehyde	165184-98-5 101-86-0	EC50	>157 µg/l	aquatic invertebrates	21 d
α,α-dimethylphenethyl butyrate	10094-34-5	EC50	684 mg/l	microorganisms	3 h
Cyclamal	103-95-7	EC50	100 mg/l	microorganisms	3 h
Dihydromyrcenol	18479-58-8	EC50	17 mg/l	aquatic invertebrates	21 d
Linalool	78-70-6	LC50	27.8 mg/l	fish	24 h
Linalool	78-70-6	EC50	>100 mg/l	microorganisms	30 min
2-ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol	28219-61-6 106185-75-5	EC50	0.788 mg/l	aquatic invertebrates	21 d



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Aquatic toxicity (chronic) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
(R)-p-mentha-1,8-diene	5989-27-5	EC50	<0.67 mg/l	fish	8 d
(R)-p-mentha-1,8-diene	5989-27-5	LC50	0.41 mg/l	fish	8 d
Geraniol	106-24-1	EC50	70 mg/l	microorganisms	30 min
acetyl cedrene	32388-55-9	EC50	0.32 mg/l	aquatic invertebrates	21 d
citral	5392-40-5	EC50	160 mg/l	microorganisms	30 min
allyl 3-cyclohexylpropi- onate	2705-87-5	EC50	7.7 mg/l	aquatic invertebrates	24 h

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Data are not available.

12.6 Other adverse effects

Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste treatment-relevant information

Solvent reclamation/regeneration.

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Only packagings which are approved (e.g. acc. to DOT) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.



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Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.



SECTION 14: Transport information

14.1 UN number	1993
14.2 UN proper shipping name	Flammable liquid, n.o.s.
Technical name (hazardous ingredients)	(R)-p-mentha-1,8-diene, Allyl heptanoate
14.3 Transport hazard class(es)	
Class	3 (flammable liquids)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmental hazards	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	Hexyl cinnamaldehyde
14.6 Special precautions for user	
There is no additional information.	
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	
The cargo is not intended to be carried in bulk.	

Information for each of the UN Model Regulations

DOT




Transport of dangerous goods by road or rail (49 CFR US DOT)

Index number	1993
Proper shipping name	Flammable liquid, n.o.s.
- Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: (R)-p-mentha-1,8-diene, Allyl heptanoate), 3, III, environmentally hazardous
Class	3
Packing group	III
Danger label(s)	3, fish and tree
 	
Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	B1, B52, IB3, T4, TP1, TP29

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ERG No	128
International Maritime Dangerous Goods Code (IMDG)	
UN number	1993
Proper shipping name	FLAMMABLE LIQUID, N.O.S.
- Particulars in the shipper's declaration	UN1993, FLAMMABLE LIQUID, N.O.S., (contains: (R)-p-mentha-1,8-diene, Allyl heptanoate, Hexyl cinnamaldehyde), 3, III, >23°C c.c., MARINE POLLUTANT
Class	3
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3, fish and tree
 	
Special provisions (SP)	223, 274, 955
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-E, <u>S-E</u>
Stowage category	A
International Civil Aviation Organization (ICAO-IATA/DGR)	
UN number	1993
Proper shipping name	Flammable liquid, n.o.s.
- Particulars in the shipper's declaration	UN1993, Flammable liquid, n.o.s., (contains: (R)-p-mentha-1,8-diene, Allyl heptanoate), 3, III
Class	3
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	3
	
Special provisions (SP)	A3
Excepted quantities (EQ)	E1
Limited quantities (LQ)	10 L



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SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA)

all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

none of the ingredients are listed

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

none of the ingredients are listed

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	Name acc. to inventory	CAS No	Functional-ity	Authoritative Lists
Hexyl cinnamaldehyde	Hexyl cinnam-aldehyde	101-86-0	fragrance	EU Fragrance Allergens
Dihydromyrcenol		18479-58-8	fragrance	
Lilial	2-(4-tert-Butylbenzyl) propional-dehyde	80-54-6	fragrance	EU Fragrance Allergens
Linalool	Linalool	78-70-6	fragrance	EU Fragrance Allergens
Benzyl salicylate	Benzyl salicylate	118-58-1	fragrance	EU Fragrance Allergens
Cyclamal		103-95-7	fragrance	
Allyl heptanoate		142-19-8	fragrance	
2-Ethyl-4-(2,2,3-trimethyl-3-cyclopenten-1-yl)-2-buten-1-ol		28219-61-6 106185-75-5	fragrance	
A,α-dimethylphenethyl butyrate		10094-34-5	fragrance	
(R)-p-mentha-1,8-diene	d-Limonene	5989-27-5	fragrance	EU Fragrance Allergens
Hexyl salicylate		6259-76-3	fragrance	



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Name of substance	Name acc. to inventory	CAS No	Functional-ity	Authoritative Lists
Citral	Citral	5392-40-5	fragrance	EU Fragrance Allergens
Allyl 3-cyclohexylpropionate		2705-87-5	fragrance	
Methyl Ionone	3-Methyl-4-(2,6,6-tri-methyl-2-cyclohexen-1-yl)-3-buten-2-one	127-51-5	fragrance	EU Fragrance Allergens
Aquanal		1205-17-0	fragrance	
Delta-Damascone		57378-68-4	fragrance	
Geraniol	Geraniol	106-24-1	fragrance	EU Fragrance Allergens
Lylal	Hydroxy-methylpentyl-cyclo-hexenecarboxalde-hyde	31906-04-4	fragrance	EU Fragrance Allergens
Acetyl cedrene		32388-55-9	fragrance	

- Toxic or Hazardous Substance List (MA-TURA)

none of the ingredients are listed

- Hazardous Substances List (MN-ERTK)

none of the ingredients are listed

- Hazardous Substance List (NJ-RTK)

Name of substance	Name acc. to inventory	CAS No	Remarks	Classifications
(R)-p-mentha-1,8-diene	dipentene	138-86-3		F2

Legend

F2 Flammable - Second Degree

- Hazardous Substance List (Chapter 323) (PA-RTK)

none of the ingredients are listed

- Hazardous Substance List (RI-RTK)

none of the ingredients are listed

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.



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Category	Rating	Description
Chronic	*	chronic (long-term) health effects may result from repeated overexposure
Health	2	temporary or minor injury may occur
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	2	material that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur
Health	2	material that, under emergency conditions, can cause temporary incapacitation or residual injury
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AICS	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed



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Country	Inventory	Status
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed

Legend

AICS	Australian Inventory of Chemical Substances
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information, including date of preparation or last revision

Indication of changes (revised safety data sheet)

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
3.2		Description of the mixture: change in the listing (table)	yes
8.1		Relevant DNELs of components of the mixture: change in the listing (table)	yes
8.1		Relevant PNECs of components of the mixture: change in the listing (table)	yes
9.2	Other information	other information: there is no additional information	yes
9.2	Solvent content: 59 %		yes
9.2	Solid content: 0 %		yes
11.1		- Acute toxicity estimate (ATE): change in the listing (table)	yes



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Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
11.1		Acute toxicity estimate (ATE) of components of the mixture: change in the listing (table)	yes
12.1		Aquatic toxicity (acute) of components of the mixture: change in the listing (table)	yes
12.1		Aquatic toxicity (chronic) of components of the mixture: change in the listing (table)	yes
15.1		Cleaning Product Right to Know Act Substance List (CA-RTK): change in the listing (table)	yes
15.1		Hazardous Substance List (NJ-RTK): change in the listing (table)	yes

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
49 CFR US DOT	49 CFR U.S. Department of Transportation
ACGIH® 2019	From ACGIH®, 2019 TLVs® and BEIs® Book. Copyright 2019. Reprinted with permission. Information on the proper use of the TLVs® and BEIs®: http://www.acgih.org/tlv-bei-guidelines/policies-procedures-presentations/tlv-bei-position-statement
Acute Tox.	Acute toxicity
Asp. Tox.	Aspiration hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
DOT	Department of Transportation (USA)
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule



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Abbr.	Descriptions of used abbreviations
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
ERG No	Emergency Response Guidebook - Number
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
Flam. Liq.	Flammable liquid
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
OSHA	Occupational Safety and Health Administration (United States)
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
RTECS	Registry of Toxic Effects of Chemical Substances (database of NIOSH with toxicological information)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STEL	Short-term exposure limit
TLV®	Threshold Limit Values
TWA	Time-weighted average
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

OSHA Hazard Communication Standard (HCS), 29 CFR 1910.1200.



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Transport of dangerous goods by road or rail (49 CFR US DOT). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H226	Flammable liquid and vapor.
H227	Combustible liquid.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361f	Suspected of damaging fertility.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.