

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006



PINECONES & PEARLS

Version 2.0 Revision Date: 24.05.2022 SDS Number: Date of last issue: 23.04.2022
Date of first issue: 23.04.2022

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

1.1 Product identifier

Trade name : PINECONES & PEARLS

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

Use of the Sub-stance/Mixture : Fragrance mix

1.3 Details of the supplier of the safety data sheet

Candle Supply Pty Ltd
Unit 3 8-9 Lagana Place
Wetherill Park, NSW 2164
ABN: 70612899626

Phone Number: 02 8741 4000
e-mail: customerservice@candlesupply.com.au

1.4 Emergency telephone number

13 11 26

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin sensitisation, Category 1 H317: May cause an allergic skin reaction.

Long-term (chronic) aquatic hazard, Category 2 H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



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Signal word : Warning

Hazard statements : H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : **Prevention:**
P261 Avoid breathing mist or vapours.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves.

Response:
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P391 Collect spillage.

Hazardous components which must be listed on the label:

(R)-p-mentha-1,8-diene; d-limonene
Eugenol
citral
Cinnamaldehyde
Dodecanal
4-tert-Butylcyclohexyl acetate
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool
Linalyl acetate
(Ethoxymethoxy)cyclododecane
Pin-2(3)-ene
Caryophyllene
2,4-Dimethylcyclohex-3-ene-1-carbaldehyde
Pin-2(10)-ene
Cineole
Methyl 2,4-dihydroxy-3,6-dimethylbenzoate
(1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene
Citronellal
4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-
isoeugenol

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
2-Ethylhexyl salicylate	118-60-5 204-263-4 01-2119978235-29-0000, 01-2119978235-29-0013, 01-2119978235-29-0014	Aquatic Chronic 1; H410 M-Factor (Chronic aquatic toxicity): 1	$\geq 2,5 - < 10$
(R)-p-mentha-1,8-diene; d-limonene	5989-27-5 227-813-5 601-029-00-7	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 2,5 - < 10$
Eugenol	97-53-0 202-589-1	Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 1 - < 10$
2-Ethyl-3-hydroxy-4-pyrone	4940-11-8 225-582-5	Acute Tox. 4; H302	$\geq 1 - < 10$
Decanal	112-31-2 203-957-4 01-2119967771-26 01-2119967771-26	Eye Irrit. 2; H319 Aquatic Chronic 3; H412	$\geq 1 - < 2,5$
citral	5392-40-5 226-394-6 605-019-00-3 01-2119462829-23 01-2119462829-23	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 1 - < 10$

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Cinnamaldehyde	104-55-2 203-213-9 01-2119935242-45 01-2119935242-45 01-2119935242-45	Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1A; H317	$\geq 1 - < 10$
Dodecanal	112-54-9 203-983-6 01,2119969441-33 01-2119969441-33	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 0,1 - < 1$
4-tert-Butylcyclohexyl acetate	32210-23-4 250-954-9 01-2119976286-24	Skin Sens. 1B; H317	$\geq 0,1 - < 1$
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool	78-70-6 201-134-4 603-235-00-2	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 0,1 - < 1$
Linalyl acetate	115-95-7 204-116-4	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 0,1 - < 1$
(Ethoxymethoxy)cyclododecane	58567-11-6 261-332-1 01-2119971571-34-0000, 01-2119971571-34-0002	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	$\geq 0,25 - < 1$
Pin-2(3)-ene	80-56-8 201-291-9	Flam. Liq. 3; H226 Acute Tox. 4; H302 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 0,25 - < 1$

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		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
Caryophyllene	87-44-5 201-746-1	Skin Sens. 1B; H317 Asp. Tox. 1; H304	$\geq 0,1 - < 1$
2,4-Dimethylcyclohex-3-ene-1-carbaldehyde	68039-49-6 68039-48-5 268-264-1 01-2119982384-28 01-2119982384-28 01-2119982384-28 01-2119982384-28 01-2119982384-28 01-2119982384-28	Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Chronic 2; H411	$\geq 0,25 - < 1$
Camphene	79-92-5 201-234-8	Flam. Sol. 2; H228 Eye Irrit. 2; H319 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 0,25 - < 1$
		M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	
Pin-2(10)-ene	127-91-3 18172-67-3 204-872-5 01-2119519230-54 01-2119519230-54	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	$\geq 0,25 - < 1$
Cineole	470-82-6 207-431-5	Flam. Liq. 3; H226 Skin Sens. 1B; H317	$\geq 0,1 - < 1$

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Methyl 2,4-dihydroxy-3,6-dimethylbenzoate	4707-47-5 225-193-0 01-2120762759-36 01-2120762759-36	Skin Sens. 1B; H317	$\geq 0,1 - < 1$
(1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene	498-15-7 13466-78-9 207-856-6	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 Acute toxicity estimate Acute inhalation toxicity (vapour): 1,5 mg/l	$\geq 0,1 - < 0,25$
7-Methyl-3-methyleneocta-1,6-diene	123-35-3 204-622-5	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	$\geq 0,1 - < 0,25$
p-Mentha-1,4-diene	99-85-4 202-794-6	Flam. Liq. 3; H226 Repr. 2; H361 Aquatic Chronic 2; H411	$\geq 0,1 - < 0,25$
Citronellal	106-23-0 203-376-6	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	$\geq 0,1 - < 1$

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4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-	86803-90-9 429-860-9 01-0000017614-70	Skin Sens. 1; H317 Aquatic Chronic 2; H411	$\geq 0,1 - < 0,25$
isoeugenol	97-54-1 202-590-7 604-094-00-X	Acute Tox. 4; H302 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1A; H317 STOT SE 3; H335 (Respiratory system) <hr/> specific concentration limit Skin Sens. 1A; H317 $\geq 0,01 \%$	$\geq 0,01 - < 0,1$

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- Protection of first-aiders : First Aid responders should pay attention to self-protection
and use the recommended protective clothing
- If inhaled : Remove person to fresh air. If signs/symptoms continue, get
medical attention.
Keep patient warm and at rest.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.
- In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

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If swallowed

: Rinse mouth with water.
Keep respiratory tract clear.
Do NOT induce vomiting.

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Never give anything by mouth to an unconscious person.
If ptoms persist, call a physician.

4.2 Most important ptoms and effects, both acute and delayed

Risks : May cause an allergic skin reaction.

First aider needs to protect himself.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.
There is no specific antidote available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : In the event of fire and/or explosion do not breathe fumes.
Standard procedure for chemical fires.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Ensure adequate ventilation.
Evacuate personnel to safe areas.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.
Prevent further leakage or spillage if safe to do so.

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If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal considerations see section 13., For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid formation of aerosol.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : When using do not eat or drink. Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Electrical installations / working materials must comply with the technological safety standards.

Advice on common storage : No special restrictions on storage with other products.

Storage class (TRGS 510) : 10, Combustible liquids

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Fragrance mix

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SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
(R)-p-mentha-1,8-diene; d-limonene	5989-27-5	MAK	5 ppm 28 mg/m ³	DFG
		AGW	5 ppm 28 mg/m ³	DE TRGS 900

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
(Ethoxymethoxy)cyclododecane	Workers	Inhalation	Long-term systemic effects	23,5 mg/m ³
	Workers	Skin contact	Long-term systemic effects	3,3 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5,8 mg/m ³
	Consumers	Skin contact	Long-term systemic effects	1,67 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1,67 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
(Ethoxymethoxy)cyclododecane	Fresh water	0,002 mg/l
	Fresh water sediment	2,35 mg/kg dry weight (d.w.)
	Marine water	0,00016 mg/l
	Marine sediment	0,235 mg/kg dry weight (d.w.)
	Sewage treatment plant	100 mg/l
	Soil	0,468 mg/kg dry weight (d.w.)

8.2 Exposure controls

Personal protective equipment

Eye protection : Eye wash bottle with pure water
Tightly fitting safety goggles

Hand protection

Remarks : Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Wear chemicals-resistant gloves, e.g. safety gloves of nitril (thickness 0.4mm) or of butyl rubber (thickness 0.7mm).

Skin and body protection : Impervious clothing

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Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory protection : Not required; except in case of aerosol formation.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : clear liquid

Colour : yellow to dark yellow

Odour : characteristic

Odour Threshold : No data available

Melting point/freezing point :
not determined

Boiling point/boiling range : not determined

Upper explosion limit / Upper flammability limit : Vapours may form explosive mixtures with air.

Lower explosion limit / Lower flammability limit : Vapours may form explosive mixtures with air.

Flash point : 85 °C

Decomposition temperature : not determined

pH : Not applicable

Viscosity
Viscosity, dynamic : not determined
Viscosity, kinematic : not determined

Solubility(ies)
Water solubility : immiscible

Partition coefficient: n-octanol/water : not determined

Vapour pressure : < 1 kPa (50 °C)
calculated

Relative density : not determined

Bulk density : Not applicable

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Relative vapour density : not determined

9.2 Other information

Explosives : Due to its structural properties, the product is not classified as explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Self-ignition : The substance or mixture is not classified as self heating.

Evaporation rate : Lower than the evaporation rate of butyl acetate = 1

Molecular weight : not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

No decomposition if stored and applied as directed.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.
Vapours may form explosive mixture with air.

10.4 Conditions to avoid

Conditions to avoid : No data available

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 2.000 mg/kg

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Method: Calculation method

Components:

|| 2-Ethylhexyl salicylate:

Acute oral toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

|| (R)-p-mentha-1,8-diene; d-limonene:

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Remarks: Information given is based on data obtained from similar substances.

|| Eugenol:

Acute oral toxicity : LD50 (Rat, male and female): > 2.000 mg/kg
Method: OECD 423
GLP: No information available.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
GLP: No information available.

|| 2-Ethyl-3-hydroxy-4-pyrone:

Acute oral toxicity : LD50 Oral (Rat): ca. 1.220 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: no

|| citral:

Acute oral toxicity : LD50 Oral (Rat, male and female): ca. 6.800 mg/kg
GLP: no

Acute dermal toxicity : LD50 Dermal (Rabbit): 2.250 mg/kg
GLP: no

|| Cinnamaldehyde:

Acute oral toxicity : LD50 (Rat): 2.500 mg/kg

Acute dermal toxicity : LD50 (Rat): 1.100 mg/kg

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|| Dodecanal:

Acute oral toxicity : LD50 (Rat): 23.100 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

|| 4-tert-Butylcyclohexyl acetate:

Acute oral toxicity : LD50 Oral (Rat, male and female): 3.370 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 4.680 mg/kg
Method: OECD Test Guideline 402
GLP: no

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Acute oral toxicity : LD50 (Rat, male and female): 2.790 mg/kg
Method: OECD Test Guideline 401
GLP: no
Remarks: Weight of Evidence

Acute dermal toxicity : LD50 (Rabbit): 5.610 mg/kg
Method: OECD Test Guideline 402
GLP: no

|| Linalyl acetate:

Acute oral toxicity : LD50 (Rat, male and female): > 9.000 mg/kg
GLP: no

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
GLP: no

|| (Ethoxymethoxy)cyclododecane:

Acute oral toxicity : LD50 Oral (Rat, male): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

|| Pin-2(3)-ene:

Acute oral toxicity : LD50 Oral: 500 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

|| Caryophyllene:

Acute oral toxicity : LD50 (Mouse, male): > 5.000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

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|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Acute oral toxicity : LD50 Oral (Rat): 3.900 mg/kg
GLP: No information available.

Acute dermal toxicity : LD50 Dermal (Rabbit): > 5.000 mg/kg
GLP: No information available.

|| Camphene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2.500 mg/kg

|| Pin-2(10)-ene:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

|| Cineole:

Acute oral toxicity : LD50 Oral (Rat, male and female): 4.500 mg/kg
Method: OECD Test Guideline 401
GLP: No information available.
Remarks: Information given is based on data obtained from similar substances.

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Acute oral toxicity : LD50 Oral (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 5.000 mg/kg
Method: OECD Test Guideline 402
GLP: no

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Acute oral toxicity : LD50 Oral (Rat): 4.800 mg/kg

Acute inhalation toxicity : Acute toxicity estimate: 1,5 mg/l
Exposure time: 4 h
Test atmosphere: vapour

|| 7-Methyl-3-methyleneocta-1,6-diene:

Acute oral toxicity : LD50 (Mouse, male and female): > 3.380 mg/kg

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Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Method: OECD Test Guideline 402

|| p-Mentha-1,4-diene:

Acute oral toxicity : LD50 Oral (Rat, female): > 2.000 mg/kg
Method: OECD 423
GLP: yes

Acute dermal toxicity : LD50 Dermal (Rat, male and female): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

|| Citronellal:

Acute oral toxicity : LD50 (Rat): 2.555 mg/kg
Method: OECD Test Guideline 401
GLP: no

Acute dermal toxicity : LD50 (Rabbit): > 2.500 mg/kg

|| 4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Acute oral toxicity : LD50 (Rat, male and female): 2.800 mg/kg

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.000 mg/kg

|| isoeugenol:

Acute oral toxicity : LD50 (Rat): 1.560 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

|| 2-Ethylhexyl salicylate:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Dose : 0,5 ml
Concentration : 100 %

|| Eugenol:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Mild skin irritation
GLP : yes
Dose : 0,5 ml
Concentration : 100 %

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|| 2-Ethyl-3-hydroxy-4-pyrone:

Species : Humans
Result : No skin irritation
Concentration : 10 %

Species : Rabbit
Result : No skin irritation
Concentration : 0,5 %

|| Decanal:

Species : Rabbit
Exposure time : 4 h
Method : Regulation (EC) No. 440/2008, Annex, B.4
Result : Mild skin irritation
GLP : yes
Dose : 0,5 ml
Concentration : 100 %

|| Cinnamaldehyde:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Moderate irritation of skin
GLP : yes
Dose : 0,5 ml
Concentration : 100 %

|| Dodecanal:

Species : Humans
Exposure time : 48 h
Result : Mild skin irritation
Dose : 5 mg

Species : Rabbit
Exposure time : 24 h
Result : Mild skin irritation
Dose : 500 mg

|| 4-tert-Butylcyclohexyl acetate:

Species : reconstructed human epidermis (RhE)
Exposure time : 15 min
Method : OECD 439
Result : No skin irritation
GLP : yes
Concentration : 100 %

Species : Rabbit
Exposure time : 24 h
Result : No skin irritation

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Dose : 0,5
Concentration : 100 %

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Skin irritation
GLP : yes
Concentration : 100 %

|| Linalyl acetate:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Skin irritation
GLP : No information available.
Concentration : 100 %

|| (Ethoxymethoxy)cyclododecane:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : Irritating to skin.
GLP : yes
Dose : 0,5 ml
Concentration : 100 %

|| Pin-2(3)-ene:

Species : reconstructed human epidermis (RhE)
Exposure time : 15 min
Result : Skin irritation
GLP : yes
Concentration : 100 %

|| Caryophyllene:

Species : reconstructed human epidermis (RhE)
Exposure time : 1 h
Method : OECD 439
Result : No skin irritation
GLP : yes
Concentration : 100 %

Species : Humans
Exposure time : 48 h
Method : Closed patch test
Result : No skin irritation
Concentration : 4 %
solvents : Petrolatum

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|| Camphene:

Species : Rabbit
Exposure time : 4 h
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Concentration : 100 %

Species : Humans
Exposure time : 48 h
Method : Closed patch test
Result : No skin irritation
Concentration : 4 %
solvents : Petrolatum

|| Pin-2(10)-ene:

Species : Rabbit
Exposure time : 24 h
Result : Moderate irritation of skin

Species : Humans
Exposure time : 48 h
Method : Closed patch test
Result : No skin irritation
Concentration : 12 %
solvents : Petrolatum

|| Cineole:

Species : reconstructed human epidermis (RhE)
Exposure time : 15 min
Method : OECD 439
Result : No skin irritation
GLP : yes
Concentration : 100 %

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Species : reconstructed human epidermis (RhE)
Method : OECD 439
Result : No skin irritation
GLP : yes
Dose : 0,025 ml
Concentration : 100 %

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Species : Humans
Exposure time : 0,25 h
Result : Skin irritation
Concentration : 100 %

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||7-Methyl-3-methyleneocta-1,6-diene:

Species : Humans
Exposure time : 0,25 h
Result : Skin irritation
GLP : yes
Concentration : 100 %

||p-Mentha-1,4-diene:

Species : reconstructed human epidermis (RhE)
Exposure time : 1 h
Method : OECD Test Guideline 439
Result : No skin irritation
GLP : yes
Concentration : 100 %

||Citronellal:

Species : Humans
Result : No skin irritation
Concentration : 4 %
solvents : Petrolatum

||4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Species : Rabbit
Method : Draize Test
Result : No skin irritation
Dose : 0,5 ml
Concentration : 100 %

Species : Humans
Method : HRIPT
Result : No skin irritation
Concentration : 5 %
solvents : Diethylphthalate

Species : Humans
Method : HRIPT
Result : No skin irritation
Concentration : 25 %
solvents : Ethyl alcohol

Serious eye damage/eye irritation

Not classified based on available information.

Components:

||2-Ethylhexyl salicylate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : yes
Dose : 0,1 ML

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Concentration : 100 %

|| Eugenol:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Eye irritation
Dose : 0,1 ML
Concentration : 100 %

|| 2-Ethyl-3-hydroxy-4-pyrone:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : no
Dose : 5
Concentration : 100 %

|| Decanal:

Species : Rabbit
Method : Regulation (EC) No. 440/2008, Annex, B.5
Result : Eye irritation
GLP : yes
Dose : 0,1 ML
Concentration : 100 %

|| citral:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Eye irritation
GLP : no
Concentration : 100 %

|| Cinnamaldehyde:

Species : Rabbit
Exposure time : 24 h
Method : OECD Test Guideline 405
Result : Irritating to eyes.
GLP : yes
Concentration : 100 %

|| 4-tert-Butylcyclohexyl acetate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : no
Dose : 0,1 ML
Concentration : 100 %

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|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Irritating to eyes.
GLP : no
Concentration : 100 %
Remarks : Weight of Evidence

|| Linalyl acetate:

Species : Rabbit
Result : Eye irritation
GLP : no
Concentration : 100 %

||(Ethoxymethoxy)cyclododecane:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation
GLP : yes
Dose : 0,1 ML
Concentration : 100 %

|| Caryophyllene:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation
GLP : yes
Concentration : 100 %

|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Species : Rabbit
Result : Eye irritation
GLP : No information available.
Dose : 0,1 ML
Concentration : 100 %

|| Camphene:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Moderate eye irritation
GLP : yes
Concentration : 100 %

|| Cineole:

Species : Bovine cornea
Method : OECD 437
Result : Mild eye irritation
GLP : yes
Dose : 0,75 ML

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Concentration : 100 %
Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation
GLP : yes
Concentration : 100 %
Remarks : Information given is based on data obtained from similar substances.

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation
GLP : no
Concentration : 100 %

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Mild eye irritation
GLP : yes
Concentration : 100 %

|| 7-Methyl-3-methyleneocta-1,6-diene:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Eye irritation
GLP : yes
Concentration : 100 %

|| p-Mentha-1,4-diene:

Species : Bovine cornea
Method : OECD 437
Result : Mild eye irritation
GLP : yes
Concentration : 100 %

|| Citronellal:

Species : Rabbit
Method : OECD Test Guideline 405
Result : Eye irritation
GLP : no
Concentration : 100 %

|| 4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Species : Rabbit
Result : Mild eye irritation
Dose : 0,1 ML

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Concentration : 100 %

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

|| 2-Ethylhexyl salicylate:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : No sensitizing effect.
GLP : yes
Concentration : 50 %
solvents : Diethylphthalate/Ethyl alcohol (1:1)

|| Eugenol:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : No information available.
Concentration : > 5,4 %
solvents : Diethylphthalate/Ethyl alcohol (3:1)

|| 2-Ethyl-3-hydroxy-4-pyrone:

Test Type : Maximisation Test
Result : No sensitizing effect.

|| Decanal:

Test Type : HRIPT
Species : Humans
Result : No sensitizing effect.
Concentration : 5 %
solvents : Ethyl alcohol

|| citral:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Sensitizing effect.
GLP : no
Concentration : 6,3 %
solvents : Diethylphthalate/Ethyl alcohol (3:1)

Test Type : Local Lymph Node Assay

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Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
Concentration : 6,3 %
solvents : Diethylphthalate/Ethyl alcohol (3:1)

|| Cinnamaldehyde:

Test Type : Klecak Open Epicutaneous test
Species : Guinea pig
Result : Sensitizing effect.
Concentration : 3 %

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
Concentration : 3,1 %
solvents : Acetone/Olive oil (4:1)

|| 4-tert-Butylcyclohexyl acetate:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : yes
Concentration : 81 %
solvents : Acetone/Olive oil (4:1)

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : yes
Concentration : 35,5 %
solvents : N,N-Dimethylformamide

|| (Ethoxymethoxy)cyclododecane:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : yes
Concentration : 25,1 %
solvents : Acetone/Olive oil (4:1)

|| Caryophyllene:

Test Type : Freund's complete adjuvant test
Species : Guinea pig
Method : OECD Test Guideline 406

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Result : Sensitizing effect.
Concentration : 6,8 %

Test Type : Maximisation Test
Species : Humans
Result : No sensitizing effect.
Concentration : 4 %
solvents : Petrolatum

|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Test Type : Maximisation Test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Sensitizing effect.
GLP : yes
Concentration : 25 %
solvents : Diethylphthalate/Ethyl alcohol (1:1)

|| Pin-2(10)-ene:

Test Type : Maximisation Test
Species : Humans
Result : No sensitizing effect.
Concentration : 12 %
solvents : Petrolatum

|| Cineole:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : yes
Concentration : 65,9 %
solvents : Acetone/Olive oil (4:1)

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD 429
Result : Sensitizing effect.
GLP : yes
Concentration : 19 %
solvents : Diethylphthalate/Ethyl alcohol (3:1)

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Species : Guinea pig
Result : Sensitizing effect.
GLP : no

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|||7-Methyl-3-methylenoocta-1,6-diene:

Test Type : Local Lymph Node Assay
Species : Mouse
Method : OECD Test Guideline 429
Result : No sensitizing effect.
GLP : yes
Concentration : 50 %
solvents : Acetone/Olive oil (4:1)

|||p-Mentha-1,4-diene:

Species : Humans
Result : No sensitizing effect.
Concentration : 5 %

|||Citronellal:

Species : Humans
Result : No sensitizing effect.
Concentration : 4 %
solvents : Petrolatum

|||4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Test Type : HRIPT
Species : Humans
Result : No sensitizing effect.
Concentration : 25 %

Test Type : Magnusson & Kligmann test
Species : Guinea pig
Method : OECD Test Guideline 406
Result : Sensitizing effect.

Test Type : Local Lymph Node Assay
Species : Mouse
Result : Sensitizing effect.

Germ cell mutagenicity

Not classified based on available information.

Components:

|||2-Ethylhexyl salicylate:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: V79 cells
Metabolic activation: with and without metabolic activation
Method: OECD 476

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Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Micro nucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD 474
Result: negative
GLP: yes

|| Eugenol:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: No information available.

Test Type: In vitro Mammalian Chromosome Aberration Test
Method: OECD 473
Result: positive
GLP: No information available.

Test Type: In vitro Mammalian Cell Gene Mutation Test
Method: OECD 476
Result: positive
GLP: No information available.

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male)
Method: OECD 474
Result: negative
GLP: No information available.

|| 2-Ethyl-3-hydroxy-4-pyrone:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Result: positive
GLP: no

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Genotoxicity in vivo

: Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

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GLP: no

|| Citral:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male and female)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

|| Cinnamaldehyde:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

Test Type: In vitro Mammalian Cell Gene Mutation Test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

|| 4-tert-Butylcyclohexyl acetate:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

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Test Type: In vitro Mammalian Chromosome Aberration Test
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: yes

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: yes

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: mouse lymphoma L5178Y cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

|| Linalyl acetate:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes

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Test Type: In vitro Mammalian Cell Gene Mutation Test

Test system: mouse lymphoma L5178Y cells

Metabolic activation: with and without metabolic activation

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Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male and female)
Strain: CD1
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

||(Ethoxymethoxy)cyclododecane:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: In Vitro Mammalian Cell Micronucleus Test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD 487
Result: negative
GLP: yes

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: V79 cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: yes

||Pin-2(3)-ene:

Genotoxicity in vitro : Test Type: Ames test
Result: negative

||Caryophyllene:

Genotoxicity in vitro : Test Type: In Vitro Mammalian Cell Micronucleus Test
Test system: Human lymphocytes
Method: OECD 487
Result: negative

Test Type: In vitro Mammalian Cell Gene Mutation Test

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Test system: mouse lymphoma L5178Y cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: positive

Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative

Genotoxicity in vivo : Test Type: sister chromatid exchange assay
Species: Mouse (male)
Cell type: Bone marrow
Application Route: Oral
Result: negative

Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male)
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Genotoxicity in vitro : Test Type: Ames test
Test system: TA98
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: Ames test
Test system: TA100
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: Ames test
Test system: TA1535
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: Ames test
Test system: TA1537
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

|| Camphene:

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Genotoxicity in vitro

: Test Type: In vitro Mammalian Cell Gene Mutation Test

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Test system: mouse lymphoma L5178Y cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative
GLP: yes

|| Cineole:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: No information available.

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Result: negative
GLP: No information available.

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Rat (male and female)
Application Route: Oral
Method: OECD 474
Result: negative
GLP: yes
Remarks: Information given is based on data obtained from similar substances.

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

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Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: positive

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GLP: yes

Genotoxicity in vivo : Test Type: Mammalian Erythrocyte Micronucleus Test
Species: Mouse (male and female)
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
GLP: yes

|(1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

||7-Methyl-3-methyleneocta-1,6-diene:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Chromosome Aberration Test
Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD 473
Result: negative
GLP: no

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative
GLP: no

||p-Mentha-1,4-diene:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: yes

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: mouse lymphoma L5178Y cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 490
Result: negative
GLP: yes

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Test Type: In Vitro Mammalian Cell Micronucleus Test
Test system: mouse lymphoma L5178Y cells
Metabolic activation: with and without metabolic activation
Method: OECD 487
Result: negative
GLP: yes

|| Citronellal:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative
GLP: no

Test Type: In vitro Mammalian Cell Gene Mutation Test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD 476
Result: negative
GLP: yes

Test Type: In Vitro Mammalian Cell Micronucleus Test
Test system: V79 cells
Metabolic activation: with and without metabolic activation
Method: OECD 487
Result: negative
GLP: yes

|| 4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Genotoxicity in vitro : Test Type: Ames test
Metabolic activation: with and without metabolic activation
Method: OECD 471
Result: negative

Genotoxicity in vivo : Test Type: Micro nucleus test
Species: Mouse (male and female)
Cell type: Bone marrow
Application Route: Intraperitoneal injection
Method: Directive 67/548/EEC, Annex V, B.12.
Result: negative

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

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Repeated dose toxicity

Components:

|| Linalyl acetate:

Species : Rat, male and female
NOAEL : 160 mg/kg
Application Route : Oral
Exposure time : 28 d
Number of exposures : daily
Method : OECD Test Guideline 407
GLP : yes

Species : Rat, male and female
NOAEL : 250 mg/kg
Application Route : Dermal
Exposure time : 91 d
Number of exposures : daily
Method : OECD Test Guideline 411
GLP : yes

Aspiration toxicity

Not classified based on available information.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Components:

|| Pin-2(10)-ene:

Remarks : Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

|| 2-Ethylhexyl salicylate:

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Toxicity to fish

: LC50 (Danio rerio (zebra fish)): > 82 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test

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- Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
Remarks: No effect in the area of water solubility of the substance
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 10 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.2.
GLP: yes
Remarks: No effect in the area of water solubility of the substance
- Toxicity to algae/aquatic plants : EC10 (Pseudokirchneriella subcapitata (green algae)): > 0,011 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: No effect in the area of water solubility of the substance
- EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,011 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
Remarks: No effect in the area of water solubility of the substance
- Toxicity to microorganisms : EC50 (Activated sludge): > 10.000 mg/l
End point: Respiration inhibition
Test Type: static test
Analytical monitoring: no
Method: OECD 209 / ISO 8192 - 1986 (E)
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC10: 0,0082 mg/l
End point: Reproduction rate
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD 211
GLP: yes

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M-Factor (Chronic aquatic toxicity) : 1

|| Eugenol:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 13 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,13 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 24 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

|| Decanal:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 1,45 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 1,17 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 4,5 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

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NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0,759
mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test

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Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Activated sludge): ca. 70 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes

|| Citral:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 6,78 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Method: DIN 38412
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6,8 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: Directive 67/548/EEC, Annex V, C.2.
GLP: no

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 103,8 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no

EC10 (Desmodesmus subspicatus (green algae)): 3 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no

Toxicity to microorganisms : EC50 (Activated sludge): ca. 160 mg/l
Exposure time: 0,5 h
Test Type: static test
Method: OECD 209
GLP: no

|| Cinnamaldehyde:

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Toxicity to fish

: LC50 (Zebrafish (*Brachydanio rerio*)): 2,35 mg/l
End point: mortality
Exposure time: 96 h

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Test Type: semi-static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.1.
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 3,21 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: no
Remarks: Weight of Evidence

Toxicity to algae/aquatic plants : EC50 (*Desmodesmus subspicatus* (green algae)): 31,6 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: no
Remarks: Weight of Evidence

Toxicity to microorganisms : EC50 (Activated sludge): 71 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Method: ISO 8192
GLP: yes

4-tert-Butylcyclohexyl acetate:

Toxicity to fish : LC50 (*Cyprinus carpio* (Carp)): 8,6 mg/l
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.1.
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna*): 5,3 mg/l
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD 202 / ISO 6341
GLP: yes

Toxicity to algae/aquatic plants : EC50 (*Desmodesmus subspicatus* (green algae)): 22 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

EC10 (*Desmodesmus subspicatus* (green algae)): 11 mg/l
End point: Growth rate

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Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.3.
GLP: yes

Toxicity to microorganisms : EC50 (Activated sludge): 302 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: 88/302/EC
GLP: yes

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 27,8 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 59 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 156,7 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no

EC10 (Desmodesmus subspicatus (green algae)): 54,3 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no

Toxicity to microorganisms : EC50 (Activated sludge): > 100 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: yes
Method: OECD 209

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GLP: yes

|| Linalyl acetate:

- Toxicity to fish : LC50 (Cyprinus carpio (Carp)): 11 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 59 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae/aquatic plants : EC10 (Desmodesmus subspicatus (green algae)): 54,3 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no
- EC50 (Desmodesmus subspicatus (green algae)): 156,7 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no
- Toxicity to microorganisms : EC20 (Activated sludge): > 1.000 mg/l
End point: Respiration inhibition
Exposure time: 0,5 h
Test Type: static test
Analytical monitoring: no
Method: ISO 8192
GLP: no

|| (Ethoxymethoxy)cyclododecane:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1,9 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

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Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,6 mg/l

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aquatic invertebrates		End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 2 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes NOEC (Pseudokirchneriella subcapitata (green algae)): 0,89 mg/l End point: Growth rate Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes
Toxicity to microorganisms	:	NOEC (Activated sludge): >= 1.000 mg/l End point: Respiration inhibition Exposure time: 3 h Test Type: static test Analytical monitoring: no Method: OECD 209 GLP: yes

|| Pin-2(3)-ene:

M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

|| Caryophyllene:

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0,17 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes
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Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): > 0,033 mg/l
End point: Growth rate
Exposure time: 72 h

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Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

EC10 (Pseudokirchneriella subcapitata (green algae)): > 0,033 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 7,5 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 22,4 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: Directive 67/548/EEC, Annex V, C.2.
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 31 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

NOEC (Desmodesmus subspicatus (green algae)): 10 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes

|| Camphene:

Toxicity to fish : LC50 (Zebrafish (Brachydanio rerio)): 0,72 mg/l
End point: mortality
Exposure time: 96 h
Test Type: flow-through test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes

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- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 0,72 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes
- Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 1,75 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
- NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0,07 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes
- M-Factor (Acute aquatic toxicity) : 1
- Toxicity to microorganisms : EC50 (Activated sludge): > 1.000 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Method: OECD 209
GLP: No information available.
- M-Factor (Chronic aquatic toxicity) : 1

|| Cineole:

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 57 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 203
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): > 100 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes

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Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 74 mg/l
End point: Growth rate
Exposure time: 96 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Activated sludge): > 100 mg/l
End point: Growth inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD 209
GLP: yes

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0,8 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: semi-static test
Method: OECD Test Guideline 202
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (Activated sludge): 326 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes

EC10 (Activated sludge): 38 mg/l
End point: Respiration inhibition
Exposure time: 3 h
Test Type: static test
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes

M-Factor (Chronic aquatic toxicity) : 1

|| 7-Methyl-3-methylenoocta-1,6-diene:

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Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1,47 mg/l
aquatic invertebrates End point: Immobilization

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Exposure time: 48 h
Test Type: semi-static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 0,342 mg/l
End point: Growth rate
Exposure time: 72 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 201
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

p-Mentha-1,4-diene:

Toxicity to fish : EC50 (*Danio rerio* (zebra fish)): 2,792 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (*Daphnia magna* (Water flea)): 10,189 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EC50 (*Scenedesmus capricornutum* (fresh water algae)): > 10,82 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201
GLP: yes

Toxicity to microorganisms : EC50 (Activated sludge): > 1.000 mg/l
Exposure time: 3 h
Analytical monitoring: yes
Method: OECD 209
GLP: yes

Citronellal:

Toxicity to fish : LC50 (*Leuciscus idus* (Golden orfe)): 22 mg/l
End point: mortality
Exposure time: 96 h
Test Type: static test
Method: DIN 38412 (Part 15)
GLP: No information available.

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- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 8,7 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: no
Method: 79/831/ECC
GLP: no
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 13,33 mg/l
End point: Growth rate
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no
- EC10 (Desmodesmus subspicatus (green algae)): 4,52 mg/l
End point: Growth rate
Test Type: static test
Analytical monitoring: no
Method: DIN 38412 (part 9)
GLP: no
- Toxicity to microorganisms : EC10 : 650 mg/l
Exposure time: 0,5 h
- LC50 : > 1.000 mg/l
Exposure time: 0,5 h

4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-

- Toxicity to fish : LC50 (Rainbow trout (Salmo gairdneri)): 42 mg/l
End point: mortality
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 5,5 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
- Toxicity to algae/aquatic plants : NOEL (Desmodesmus subspicatus (green algae)): 0,246 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
- EC50 (Desmodesmus subspicatus (green algae)): 1,7 mg/l
End point: Growth rate
Exposure time: 72 h
Method: OECD Test Guideline 201
- Toxicity to microorganisms : EC50 (Activated sludge): 900 mg/l
Exposure time: 3 h

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|| isoeugenol:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): 7,5 mg/l
End point: Immobilization
Exposure time: 48 h
Test Type: static test
Analytical monitoring: yes
Method: OECD Test Guideline 202
GLP: yes

12.2 Persistence and degradability

Components:

|| 2-Ethylhexyl salicylate:

Biodegradability : Test Type: Closed bottle test, OECD 301-D, (BOD[28]/COD):
Result: Readily biodegradable.
Biodegradation: 89 %
Exposure time: 28 d
Method: OECD 301D
GLP: yes

|| (R)-p-mentha-1,8-diene; d-limonene:

Biodegradability : Test Type: CO2 Evolution Test
Result: Readily biodegradable.
Biodegradation: 71 %
Exposure time: 28 d
Method: OECD 301B
GLP: yes

|| Eugenol:

Biodegradability : Test Type: Closed Bottle test
Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 28 d
Method: OECD 301D
GLP: yes

|| 2-Ethyl-3-hydroxy-4-pyrone:

Biodegradability : Test Type: Sturm test, OECD 301-B, (CO2):
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD 301B
GLP: yes

|| Decanal:

Biodegradability : Test Type: Inherent biodegradability Test
Result: Readily biodegradable.

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Biodegradation: 78 %
Exposure time: 28 d
Method: OECD Test Guideline 302C
GLP: yes

|| Citral:

Biodegradability : Test Type: Manometric respiration test
Result: Readily biodegradable.
Biodegradation: > 90 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

|| Cinnamaldehyde:

Biodegradability : Test Type: Modified OECD screening test
Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d
Method: OECD 301E
GLP: yes

|| Dodecanal:

Biodegradability : Test Type: Manometric respiration test
Result: not readily biodegradable (only 10 day window failed)
Biodegradation: 73 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

|| 4-tert-Butylcyclohexyl acetate:

Biodegradability : Test Type: Modified Sturm Test
Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.C.
GLP: yes

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Biodegradability : Test Type: Closed Bottle test
Result: Readily biodegradable.
Biodegradation: 64,2 %
Exposure time: 28 d
Method: OECD 301D
GLP: yes

|| Linalyl acetate:

Biodegradability : Test Type: Manometric respiration test
Result: Readily biodegradable.
Biodegradation: 76 %

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Exposure time: 28 d
Method: OECD 301F
GLP: no

||(Ethoxymethoxy)cyclododecane:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: < 5 %
Exposure time: 28 d
Method: OECD 301B
GLP: yes

||Pin-2(3)-ene:

Biodegradability : Test Type: Closed Bottle test
Result: Readily biodegradable.
Biodegradation: 68 %
Exposure time: 28 d
Method: OECD 301D
GLP: yes

||Caryophyllene:

Biodegradability : Test Type: Headspace Test
Result: Readily biodegradable.
Biodegradation: 64 %
Exposure time: 28 d
Method: OECD Test Guideline 310
GLP: yes

||2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Biodegradability : Test Type: MITI Test I
Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD 301C
GLP: yes

||Camphene:

Biodegradability : Test Type: Manometric respiration test
Result: not readily biodegradable (only 10 day window failed)
Biodegradation: 78 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

||Pin-2(10)-ene:

Biodegradability : Test Type: Manometric respiration test
Result: Readily biodegradable.
Biodegradation: 81 %
Exposure time: 28 d
Method: OECD 301F

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GLP: yes

|| Cineole:

Biodegradability : Test Type: Manometric Respirometry Test
Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Biodegradability : Test Type: Manometric respiration test
Inoculum: activated sludge
Result: Readily biodegradable.
Biodegradation: 63 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

|| (1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Biodegradability : Test Type: Closed Bottle test
Result: Readily biodegradable.
Biodegradation: 79,3 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
GLP: yes

|| 7-Methyl-3-methyleneocta-1,6-diene:

Biodegradability : Test Type: Closed Bottle test
Inoculum: activated sludge, non-adapted
Result: Readily biodegradable.
Biodegradation: 76 %
Exposure time: 28 d
Method: OECD 301D
GLP: yes

|| p-Mentha-1,4-diene:

Biodegradability : Test Type: MITI test, (BOD/COD):
Result: Readily biodegradable.
Biodegradation: 94 %
Exposure time: 28 d
Method: OECD 301C

|| Citronellal:

Biodegradability : Test Type: Sturm test, OECD 301-B, (CO₂):
Inoculum: activated sludge, non-adapted
Result: Readily biodegradable.
Biodegradation: 83 %
Exposure time: 28 d

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Method: OECD 301B
GLP: yes

|| 4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Biodegradability : Test Type: Closed Bottle test
Result: Not readily biodegradable.
Biodegradation: 40 %
Exposure time: 28 d
Method: OECD 301D

|| isoeugenol:

Biodegradability : Test Type: Manometric respiration test
Result: Readily biodegradable.
Biodegradation: 79 %
Exposure time: 28 d
Method: OECD 301F
GLP: yes

12.3 Bioaccumulative potential

Components:

|| 2-Ethylhexyl salicylate:

Partition coefficient: n-octanol/water : log Pow: 5,94 (25 °C)
pH: 7,8
Method: OECD Test Guideline 123
GLP: yes

|| Eugenol:

Partition coefficient: n-octanol/water : log Pow: 1,83 (30 °C)
pH: 5,5
Method: OECD 117
GLP: no

|| 2-Ethyl-3-hydroxy-4-pyrone:

Partition coefficient: n-octanol/water : log Pow: 2,9 (25 °C)
Method: OECD Test Guideline 117
GLP: no

|| Decanal:

Partition coefficient: n-octanol/water : log Pow: 3,8 (35 °C)
Method: OECD 117
GLP: yes

|| citral:

Partition coefficient: n-octanol/water : log Pow: 2,76 (25 °C)
Method: OECD Test Guideline 107
GLP: no

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|| Cinnamaldehyde:

Partition coefficient: n-octanol/water : log Pow: 2,107 (25 °C)
Method: OECD 117
GLP: no

|| Dodecanal:

Partition coefficient: n-octanol/water : log Pow: 6

|| 4-tert-Butylcyclohexyl acetate:

Bioaccumulation : Bioconcentration factor (BCF): 334,6
Remarks: calculated

Partition coefficient: n-octanol/water : log Pow: 4,8 (25 °C)
Method: OECD 117
GLP: yes

|| linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool:

Partition coefficient: n-octanol/water : log Pow: 2,84 (25 °C)
Method: OECD Test Guideline 107
GLP: no

|| Linalyl acetate:

Partition coefficient: n-octanol/water : log Pow: 3,9 (25 °C)
Method: OECD Test Guideline 107
GLP: yes

|| (Ethoxymethoxy)cyclododecane:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Exposure time: 28 d
Bioconcentration factor (BCF): 340 - 580
Method: OECD Test Guideline 305
GLP: yes

Partition coefficient: n-octanol/water : log Pow: 5,4 (25 °C)
Method: OECD Test Guideline 123
GLP: yes

|| Pin-2(3)-ene:

Partition coefficient: n-octanol/water : log Pow: 5,7 (35 °C)

|| Caryophyllene:

Partition coefficient: n-octanol/water : log Pow: 6,23 (25 °C)
pH: 7
Method: OECD Test Guideline 123
GLP: yes

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2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Partition coefficient: n-octanol/water : log Pow: 2,7 (25 °C)
Method: OECD Test Guideline 117
GLP: yes

Camphene:

Partition coefficient: n-octanol/water : log Pow: 4,22 (37 °C)
pH: 7,2
Method: OECD 117

Pin-2(10)-ene:

Partition coefficient: n-octanol/water : log Pow: 5,4 (35 °C)

Cineole:

Partition coefficient: n-octanol/water : log Pow: 3,4
Method: OECD 117
GLP: yes

Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Partition coefficient: n-octanol/water : log Pow: 2,6 (20 °C)
Method: OECD 117
GLP: no

(1S)-3,7,7-Trimethylbicyclo[4.1.0]hept-3-ene:

Partition coefficient: n-octanol/water : log Pow: 4,38
pH: 7,2
Method: OECD Test Guideline 117

7-Methyl-3-methyleneocta-1,6-diene:

Partition coefficient: n-octanol/water : log Pow: 4,82 (30 °C)
pH: 6,5
Method: OECD Test Guideline 117
GLP: no

p-Mentha-1,4-diene:

Partition coefficient: n-octanol/water : log Pow: 5,4 (25 °C)
Method: OECD Test Guideline 117
GLP: no

Citronellal:

Partition coefficient: n-octanol/water : log Pow: 3,62 (25 °C)
Method: OECD Test Guideline 107
GLP: no

4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Partition coefficient: n-octanol/water : log Pow: 2,73 (21 °C)

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octanol/water

|| **isoeugenol:**

Partition coefficient: n-octanol/water : log Pow: 2,55

12.4 Mobility in soil

Components:

|| **Decanal:**

Distribution among environmental compartments : Adsorption/Soil
Medium: Soil
log Koc: 2,9
Method: OECD 121

|| **Cinnamaldehyde:**

Distribution among environmental compartments : Adsorption/Soil
Medium: Soil
log Koc: 1,958
Method: OECD 121

|| **(Ethoxymethoxy)cyclododecane:**

Distribution among environmental compartments : Adsorption/Soil
log Koc: 4,165
Remarks: calculated

|| **2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:**

Distribution among environmental compartments : Adsorption/Soil
Medium: Soil
log Koc: 2,2
Method: OECD 121

|| **Cineole:**

Distribution among environmental compartments : Adsorption/Soil
Medium: Sludge
log Koc: 2,33
Method: OECD 121

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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Components:

|| citral:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

|| 4-tert-Butylcyclohexyl acetate:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

|| (Ethoxymethoxy)cyclododecane:

Assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT).. This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

Components:

|| 2-Ethylhexyl salicylate:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

|| Decanal:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

|| citral:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

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|| Cinnamaldehyde:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

|| 4-tert-Butylcyclohexyl acetate:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

|| (Ethoxymethoxy)cyclododecane:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

|| 2,4-Dimethylcyclohex-3-ene-1-carbaldehyde:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

|| Pin-2(10)-ene:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

|| Methyl 2,4-dihydroxy-3,6-dimethylbenzoate:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

|| 4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy-:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Toxic to aquatic life with long lasting effects.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.
- Contaminated packaging : Dispose of as unused product.
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not re-use empty containers.

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SECTION 14: Transport information

14.1 UN number or ID number

ADR : UN 3082
RID : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-ETHYLHEXYL SALICYLATE, LIMONENE)
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-ETHYLHEXYL SALICYLATE, LIMONENE)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
(2-ETHYLHEXYL SALICYLATE, LIMONENE)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(2-ETHYLHEXYL SALICYLATE, LIMONENE)

14.3 Transport hazard class(es)

ADR : 9
RID : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
Tunnel restriction code : (-)
RID
Packing group : III
Classification Code : M6
Hazard Identification Number : 90
Labels : 9
IMDG
Packing group : III
Labels : 9
EmS Code : F-A, S-F
IATA (Cargo)
Packing instruction (cargo) : 964

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aircraft)
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

IATA_P (Passenger)

Packing instruction (passenger aircraft) : 964
Packing instruction (LQ) : Y964
Packing group : III
Labels : Miscellaneous

14.5 Environmental hazards

ADR

Environmentally hazardous : yes

RID

Environmentally hazardous : yes

IMDG

Marine pollutant : yes

IATA (Cargo)

Environmentally hazardous : yes

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 3

Eucalyptus globulus, ext. (Number on list 40, 3)
Fir, Abies sibirica, ext. (Number on list 40, 3)
Lemon, ext. (Number on list 40, 3)
Orange, sweet, ext. (Number on list 40, 3)
Decanal (Number on list 3)
4,7-Methano-1H-indene-2-carboxaldehyde, octahydro-5-methoxy- (Number on list 3)
2,4-Dimethylcyclohex-3-ene-1-carbaldehyde (Number on list 3)

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Dodecanal (Number on list 3)
Pin-2(10)-ene (Number on list 40, 3)
linalool; 3,7-dimethyl-1,6-octadien-3-ol; dl-linalool (Number on list 3)
Linalyl acetate (Number on list 3)
p-Menth-1-en-8-ol (Number on list 3)
(Z)-Hex-3-enyl acetate (Number on list 40, 3)
2-Ethylhexyl salicylate (Number on list 3)
citral (Number on list 3)
Citronellal (Number on list 3)
(Ethoxymethoxy)cyclododecane (Number on list 3)
Eugenol (Number on list 3)
Cinnamaldehyde (Number on list 3)
4-tert-Butylcyclohexyl acetate (Number on list 3)
Clove, ext. (Number on list 3)

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59) : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

Water hazard class (Germany) : WGK 3 highly hazardous to water
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : Total dust:
Not applicable
Inorganic substances in powdered form:
Not applicable
Inorganic substances in vapour or gaseous form:
Not applicable
Organic Substances:
portion Class 1: 0,14 %

Carcinogenic substances:
Not applicable
Mutagenic:
Not applicable
Toxic to reproduction:
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)

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Volatile organic compounds (VOC) content: 16,05 %

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Full text of H-Statements

H226 : Flammable liquid and vapour.
H228 : Flammable solid.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H312 : Harmful in contact with skin.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H332 : Harmful if inhaled.
H335 : May cause respiratory irritation.
H361 : Suspected of damaging fertility or the unborn child.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Acute : Short-term (acute) aquatic hazard
Aquatic Chronic : Long-term (chronic) aquatic hazard
Asp. Tox. : Aspiration hazard
Eye Irrit. : Eye irritation
Flam. Liq. : Flammable liquids
Flam. Sol. : Flammable solids
Repr. : Reproductive toxicity
Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation
STOT SE : Specific target organ toxicity - single exposure
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
DFG : Senate commission for the review of compounds at the work place dangerous for the health (MAK-commission).
DE TRGS 900 / AGW : Exposure limit(s):
DFG / MAK : Maximum allowable concentration:

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA -

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European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture:

Skin Sens. 1	H317
Aquatic Chronic 2	H411

Classification procedure:

Calculation method
Calculation method

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This SDS is current to the date listed above. However, the GHS classifications may change due to hazard communication updates by the overseeing governing body. For the most current SDS information please contact customerservice@candlesupply.com.au