Tork Constant Air Freshener Blossom

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	08.10.2024	11447864-00001	Date of first issue: 08.10.2024

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

1.1 Product identifier

Trade name : Tork Constant Air Freshener Blossom

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

Use of the Substance/Mixture : perfumes

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Company : ESSITY UK LTD
Southfields Road
LU6 3EJ Dunstable, United Kingdom

Telephone : +44 1582 677570

E-mail address of person responsible for the SDS : info@essity.com

1.4 Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Skin irritation, Category 2	H315: Causes skin irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :

Signal word : Warning

Hazard statements :
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.

Precautionary statements :

Prevention:

P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves.

Response:

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Hazardous components which must be listed on the label:
Cineole
3,7-Dimethyl 2,6-octadienal
Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal
3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-
2,6-Dimethylhept-5-enal
l-p-Mentha-1(6),8-dien-2-one
4-Allyl-2- methoxyphenol
Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol
Dodecanal
Undec-10-enal
(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one

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.
Vapours may form explosive mixture with air.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No.	Classification	Concentration (% w/w)

	Registration number		
Benzyl acetate	140-11-4 205-399-7 01-2119638272-42	Aquatic Chronic 3; H412	>= 20 - < 25
2,2-Dimethyl 7-octen-2-ol	18479-58-8 242-362-4 01-2119457274-37	Skin Irrit. 2; H315 Eye Irrit. 2; H319 STOT SE 3; H336	>= 1 - < 10
3,7-dimethyloct-6-en-3-ol	18479-51-1 242-359-8 01-2120738993-40	Skin Irrit. 2; H315	>= 1 - < 10
Cineole	470-82-6 207-431-5 01-2119967772-24	Flam. Liq. 3; H226 Skin Sens. 1B; H317	>= 1 - < 10
3,7-Dimethyl 2,6-octadienal	5392-40-5 226-394-6 605-019-00-3 01-2119462829-23	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317	>= 1 - < 10
Ethyl enantate	106-30-9 203-382-9 01-2120104876-54	Aquatic Acute 1; H400 Aquatic Chronic 3; H412 _____ M-Factor (Acute aquatic toxicity): 1	>= 0.25 - < 1
Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal	67634-14-4 01-2120758796-34	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 _____ M-Factor (Acute aquatic toxicity): 1	>= 0.25 - < 1
3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-	68039-49-6	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.25 - < 1
2,6-Dimethylhept-5-enal	106-72-9 203-427-2 01-2120270305-62	Skin Sens. 1B; H317	>= 0.1 - < 1
l-p-Mentha-1(6),8-dien-2-one	6485-40-1 229-352-5 606-148-00-8 01-2119962458-25	Skin Sens. 1B; H317	>= 0.1 - < 1
Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol	1655500-83-6 01-2120094067-52	Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.1 - < 0.25

4-Allyl-2- methoxyphenol	97-53-0 202-589-1 01-2119971802-33	Eye Irrit. 2; H319 Skin Sens. 1B; H317	>= 0.1 - < 1
Undec-10-enal	112-45-8 203-973-1 01-2119980959-11	Skin Sens. 1B; H317 Aquatic Chronic 3; H412	>= 0.1 - < 0.25
Dodecanal	112-54-9 203-983-6 01-2119969441-33	Skin Irrit. 2; H315 Skin Sens. 1B; H317	>= 0.1 - < 1
(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one	23726-93-4 245-844-2 01-2120105798-49	Skin Irrit. 2; H315 Skin Sens. 1A; H317 Aquatic Chronic 2; H411	>= 0.025 - < 0.1

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

Protection of first-aiders : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).

If inhaled : If inhaled, remove to fresh air.
Get medical attention if symptoms occur.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.

If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks : Causes skin irritation.
May cause an allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically and supportively.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-fighting : Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapours may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.

Hazardous combustion products : Carbon oxides

5.3 Advice for firefighters

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

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

6.2 Environmental precautions

Environmental precautions : Avoid release to the environment.
Prevent further leakage or spillage if safe to do so.

Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapours/mists with a water spray jet.
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

6.4 Reference to other sections

See sections: 7, 8, 11, 12 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : If sufficient ventilation is unavailable, use with local exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Avoid breathing mist or vapours.
Do not swallow.
Avoid contact with eyes.
Wash skin thoroughly after handling.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye

flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep in properly labelled containers. Keep tightly closed. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Keep away from heat and sources of ignition.

Advice on common storage : Do not store with the following product types:
Strong oxidizing agents
Explosives
Gases

Recommended storage temperature : 10 - 30 °C

7.3 Specific end use(s)

Specific use(s) : No data available

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL)

Substance name	End Use	Exposure routes	Potential health effects	Value
Benzyl acetate	Workers	Inhalation	Long-term systemic effects	21.9 mg/m3
	Workers	Inhalation	Acute systemic effects	43.8 mg/m3
	Workers	Skin contact	Long-term systemic effects	6.25 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	12.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5.5 mg/m3
	Consumers	Inhalation	Acute systemic effects	11 mg/m3
	Consumers	Skin contact	Long-term systemic effects	3.125 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	6.25 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic	3.125 mg/kg

			effects	bw/day
	Consumers	Ingestion	Acute systemic effects	6.25 mg/kg bw/day
2,2-Dimethyl 7-octen-2-ol	Workers	Inhalation	Long-term systemic effects	24.7 mg/m3
	Workers	Skin contact	Long-term systemic effects	7 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	4.35 mg/m3
	Consumers	Skin contact	Long-term systemic effects	2.5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	2.5 mg/kg bw/day
Cineole	Workers	Inhalation	Long-term systemic effects	7.05 mg/m3
	Workers	Skin contact	Long-term systemic effects	2 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.74 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	600 mg/kg bw/day
3,7-Dimethyl 2,6-octadienal	Workers	Inhalation	Long-term systemic effects	9 mg/m3
	Workers	Skin contact	Long-term systemic effects	1.7 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0.140 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	2.7 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0.140 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	0.6 mg/kg bw/day
Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal	Workers	Inhalation	Long-term systemic effects	14.7 mg/m3
	Workers	Skin contact	Long-term systemic effects	4.2 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	5.295 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	4.3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	2.5 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	2.648 mg/cm2

	Consumers	Ingestion	Long-term systemic effects	2.5 mg/kg bw/day
2,6-Dimethylhept-5-enal	Workers	Inhalation	Long-term systemic effects	7.05 mg/m3
	Workers	Inhalation	Acute systemic effects	21.16 mg/m3
	Workers	Inhalation	Long-term local effects	17.63 mg/m3
	Workers	Inhalation	Acute local effects	52.89 mg/m3
	Workers	Skin contact	Long-term systemic effects	2 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	170 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	141.67 mg/cm2
	Workers	Skin contact	Acute local effects	425 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	1.74 mg/m3
	Consumers	Inhalation	Acute systemic effects	5.22 mg/m3
	Consumers	Inhalation	Long-term local effects	4.35 mg/m3
	Consumers	Inhalation	Acute local effects	13.04 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	85 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	70.83 mg/cm2
	Consumers	Skin contact	Acute local effects	212.5 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	1 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	85 mg/kg bw/day
l-p-Mentha-1(6),8-dien-2-one	Workers	Inhalation	Long-term systemic effects	0.685 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.194 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.121 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.0694 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.0694 mg/kg bw/day
Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-	Workers	Inhalation	Long-term systemic effects	10.5 mg/m3

yl]cyclopropyl}methanol				
	Workers	Skin contact	Long-term systemic effects	1.38 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.85 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.493 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.493 mg/kg bw/day
4-Allyl-2- methoxy-phenol	Workers	Inhalation	Long-term systemic effects	21 mg/m3
	Workers	Skin contact	Long-term systemic effects	6 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	5.22 mg/m3
	Consumers	Skin contact	Long-term systemic effects	3 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	3 mg/kg bw/day
Undec-10-enal	Workers	Inhalation	Long-term systemic effects	16.4 mg/m3
	Workers	Dermal	Long-term systemic effects	4.67 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.47 mg/m3
	Consumers	Dermal	Long-term systemic effects	1.67 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	1.67 mg/kg bw/day
Dodecanal	Workers	Inhalation	Long-term systemic effects	49.7 mg/m3
	Workers	Skin contact	Long-term systemic effects	14.1 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0.00057 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	12.3 mg/m3
	Consumers	Skin contact	Long-term systemic effects	7 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0.00028 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	7 mg/kg bw/day
(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one	Workers	Inhalation	Long-term systemic effects	2.71 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.77 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.67 mg/m3
	Consumers	Skin contact	Long-term systemic	0.38 mg/kg

			effects	bw/day
	Consumers	Ingestion	Long-term systemic effects	0.38 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Substance name	Environmental Compartment	Value
Benzyl acetate	Fresh water	0.004 mg/l
	Marine water	0.0004 mg/l
	Intermittent use/release	0.04 mg/l
	Sewage treatment plant	8.55 mg/l
	Fresh water sediment	0.114 mg/kg
	Marine sediment	0.0114 mg/kg
	Soil	0.0205 mg/kg
2,2-Dimethyl 7-octen-2-ol	Fresh water	0.0278 mg/l
	Freshwater - intermittent	0.278 mg/l
	Marine water	0.00278 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.594 mg/kg dry weight (d.w.)
	Marine sediment	0.059 mg/kg dry weight (d.w.)
	Soil	0.103 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	111 mg/kg food
Cineole	Fresh water	0.057 mg/l
	Marine water	0.0057 mg/l
	Intermittent use/release	0.57 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	1.425 mg/kg
	Marine sediment	0.1425 mg/kg
	Soil	0.25 mg/kg
	Oral (Secondary Poisoning)	133 mg/kg food
3,7-Dimethyl 2,6-octadienal	Fresh water	0.007 mg/l
	Freshwater - intermittent	0.068 mg/l
	Marine water	0.001 mg/l
	Sewage treatment plant	1.6 mg/l
	Fresh water sediment	0.125 mg/kg dry weight (d.w.)
	Marine sediment	0.013 mg/kg dry weight (d.w.)
	Soil	0.021 mg/kg dry weight (d.w.)
Ethyl enantate	Fresh water	0.00044 mg/l
	Freshwater - intermittent	0.0044 mg/l
	Marine water	0.000044 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.029 mg/kg dry weight (d.w.)
	Marine sediment	0.003 mg/kg dry weight (d.w.)
	Soil	0.006 mg/kg dry weight (d.w.)

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal	Fresh water	0.006 mg/l
	Marine water	0.001 mg/l
	Sewage treatment plant	1 mg/l
	Fresh water sediment	0.635 mg/kg dry weight (d.w.)
	Marine sediment	0.064 mg/kg dry weight (d.w.)
	Soil	0.124 mg/kg dry weight (d.w.)
2,6-Dimethylhept-5-enal	Fresh water	0.002 mg/l
	Freshwater - intermittent	0.023 mg/l
	Marine water	230 ng/l
	Marine water - intermittent	0.023 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.045 mg/kg dry weight (d.w.)
	Marine sediment	0.004 mg/kg dry weight (d.w.)
	Soil	0.021 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	10 mg/kg
l-p-Mentha-1(6),8-dien-2-one	Fresh water	6.1 µg/l
	Freshwater - intermittent	61 µg/l
	Marine water	0.61 µg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.192 mg/kg dry weight (d.w.)
	Marine sediment	0.0192 mg/kg dry weight (d.w.)
	Soil	0.0348 mg/kg dry weight (d.w.)
Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol	Fresh water	3.2 µg/l
	Freshwater - intermittent	32 µg/l
	Marine water	0.32 µg/l
	Marine water - intermittent	3.2 µg/l
	Sewage treatment plant	1 mg/l
	Fresh water sediment	0.453 mg/kg dry weight (d.w.)
	Marine sediment	0.045 mg/kg dry weight (d.w.)
	Soil	0.089 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	19.73 mg/kg food
4-Allyl-2- methoxyphenol	Fresh water	0.00113 mg/l

	Marine water	0.000113 mg/l
	Fresh water sediment	0.081 mg/kg
	Marine sediment	0.0081 mg/kg
	Soil	0.0155 mg/kg
Undec-10-enal	Fresh water	20.1 µg/l
	Marine water	2.01 µg/l
	Sewage treatment plant	0.625 mg/l
	Fresh water sediment	94.5 mg/kg dry weight (d.w.)
	Marine sediment	9.45 mg/kg dry weight (d.w.)
	Soil	18.9 mg/kg dry weight (d.w.)
Dodecanal	Fresh water	0.0004 mg/l
	Freshwater - intermittent	0.035 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	1.41 mg/kg dry weight (d.w.)
	Marine sediment	0.141 mg/kg dry weight (d.w.)
	Soil	0.278 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	313 mg/kg food
(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one	Fresh water	1.09 µg/l
	Freshwater - intermittent	10.9 µg/l
	Marine water	0.11 µg/l
	Sewage treatment plant	3.2 mg/l
	Fresh water sediment	0.087 mg/kg dry weight (d.w.)
	Marine sediment	0.00867 mg/kg dry weight (d.w.)
	Soil	0.017 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	6.67 mg/kg food

8.2 Exposure controls

Engineering measures

Ensure adequate ventilation, especially in confined areas.
Minimize workplace exposure concentrations.

Personal protective equipment

Eye/face protection : Wear the following personal protective equipment:
Safety glasses
Equipment should conform to BS EN 166

Hand protection

Material : Chemical-resistant gloves
Break through time : > 10 min
Directive : Equipment should conform to BS EN 374

Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Respiratory protection	:	If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection. Equipment should conform to BS EN 14387
Filter type	:	Organic vapour type (A)

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	liquid
Colour	:	red, dark red
Odour	:	fruity, floral
Odour Threshold	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	No data available
Flash point	:	70 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper	:	No data available

flammability limit		
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.3169 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.9892 g/cm³ (20 °C)
Solubility(ies)		
Water solubility	:	practically insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.

9.2 Other information

Flammability (liquids)	:	No data available
Particle size	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Not classified as a reactivity hazard.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions	:	Combustible liquid. Vapours may form explosive mixture with air. Can react with strong oxidizing agents.

10.4 Conditions to avoid

Conditions to avoid	:	Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Information on likely routes of exposure : Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Components:

Benzyl acetate:

Acute oral toxicity : LD50 (Rat): 2,490 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.766 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

2,2-Dimethyl 7-octen-2-ol:

Acute oral toxicity : LD50 (Rat): 3,020 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

3,7-dimethyloct-6-en-3-ol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Cineole:

Acute oral toxicity : LD50 (Rat, female): 4,300 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg

Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

3,7-Dimethyl 2,6-octadienal:

Acute oral toxicity : LD50 (Rat, female): 4,895 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 0.68 mg/l
Exposure time: 7 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 2,250 mg/kg

Ethyl enantate:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Acute oral toxicity : LD50 (Rat, male): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Acute oral toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 5,000 mg/kg
Remarks: Based on data from similar materials

2,6-Dimethylhept-5-enal:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

l-p-Mentha-1(6),8-dien-2-one:

Acute oral toxicity : LD50 (Rat, female): 4,900 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Remarks: Based on data from similar materials

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol:

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg
Method: OECD Test Guideline 420
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat, female): > 1,000 - 2,000 mg/kg
Method: OECD Test Guideline 402

4-Allyl-2- methoxyphenol:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg

LD50 (Mouse): > 1,500 - 3,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 2.6 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Undec-10-enal:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 423

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

Dodecanal:

Acute oral toxicity : LD50 (Rat): 23,100 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Acute oral toxicity : LD50 (Rat): > 2,000 mg/kg
Method: Directive 67/548/EEC, Annex V, B.1.
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rat): > 2,000 - 5,000 mg/kg
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:

Benzyl acetate:

Species : Rabbit
Method : Directive 67/548/EEC, Annex V, B.4.
Result : No skin irritation

2,2-Dimethyl 7-octen-2-ol:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 431

Result : Skin irritation

3,7-dimethyloct-6-en-3-ol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Cineole:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : No skin irritation

3,7-Dimethyl 2,6-octadienal:

Species : Rabbit
Result : Skin irritation

Ethyl enantate:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : No skin irritation

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : Skin irritation

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation

Remarks : Based on data from similar materials

2,6-Dimethylhept-5-enal:

Species : Rabbit
Result : No skin irritation

l-p-Mentha-1(6),8-dien-2-one:

Species : Rabbit
Method : OECD Test Guideline 404
Result : No skin irritation
Remarks : Based on data from similar materials

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 431

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : Skin irritation

4-Allyl-2- methoxyphenol:

Species : Rabbit
Result : Mild skin irritation

Undec-10-enal:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Mild skin irritation

Dodecanal:

Species : Rabbit
Result : Skin irritation
Remarks : Based on data from similar materials

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Species : reconstructed human epidermis (RhE)
Method : OECD Test Guideline 439

Result : Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Benzyl acetate:

Species : Rabbit
Method : Directive 67/548/EEC, Annex V, B.5.
Result : No eye irritation

2,2-Dimethyl 7-octen-2-ol:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Cineole:

Species : Bovine cornea
Method : OECD Test Guideline 437

Result : No eye irritation

3,7-Dimethyl 2,6-octadienal:

Species : Rabbit
Result : Irritation to eyes, reversing within 21 days

Ethyl enantate:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Species : Chicken eye
Method : OECD Test Guideline 438

Result : No eye irritation

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Species : Rabbit
Method : Draize Test
Result : No eye irritation
Remarks : Based on data from similar materials

l-p-Mentha-1(6),8-dien-2-one:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol:

Species : Bovine cornea
Method : OECD Test Guideline 437

Species : Tissue Culture

Method : OECD Test Guideline 491

Result : Irritation to eyes, reversing within 21 days

4-Allyl-2- methoxyphenol:

Species : Rabbit
Method : Draize Test
Result : Irritation to eyes, reversing within 21 days

Undec-10-enal:

Species : Rabbit
Method : OECD Test Guideline 405
Result : No eye irritation

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Species : Rabbit
Result : No eye irritation
Remarks : Based on data from similar materials

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Benzyl acetate:

Test Type : Magnusson-Kligman-Test
Exposure routes : Skin contact
Species : Guinea pig
Result : negative

2,2-Dimethyl 7-octen-2-ol:

Test Type : Maximisation Test
Exposure routes : Skin contact
Species : Guinea pig
Method : OECD Test Guideline 406
Result : negative

3,7-dimethyloct-6-en-3-ol:

Test Type : Local lymph node assay (LLNA)
Exposure routes : Skin contact
Species : Mouse
Method : OECD Test Guideline 429
Result : negative

Cineole:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

3,7-Dimethyl 2,6-octadienal:

Test Type	:	Human repeat insult patch test (HRIPT)
Exposure routes	:	Skin contact
Result	:	positive
Assessment	:	Probability or evidence of skin sensitisation in humans

Ethyl enantate:

Test Type	:	Direct Peptide Reactivity Assay (DPRA)
Method	:	OECD Test Guideline 442C
Result	:	negative
Remarks	:	Based on data from similar materials
Test Type	:	KeratinoSens assay
Method	:	OECD Test Guideline 442D
Result	:	negative
Remarks	:	Based on data from similar materials
Test Type	:	Dendritic cell activation test
Method	:	OECD Test Guideline 442E
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Does not cause skin sensitisation.

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Test Type	:	Maximisation Test
Exposure routes	:	Skin contact
Species	:	Guinea pig

Method	:	OECD Test Guideline 406
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

2,6-Dimethylhept-5-enal:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

l-p-Mentha-1(6),8-dien-2-one:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

4-Allyl-2- methoxyphenol:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

Undec-10-enal:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

Dodecanal:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of low to moderate skin sensitisation rate in humans

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Result	:	positive
Assessment	:	Probability or evidence of high skin sensitisation rate in humans

Germ cell mutagenicity

Not classified based on available information.

Components:

Benzyl acetate:

Genotoxicity in vitro	:	Test Type: Chromosome aberration test in vitro Result: negative
Genotoxicity in vivo	:	Test Type: unscheduled DNA synthesis assay Species: Rat Application Route: Ingestion Result: negative

2,2-Dimethyl 7-octen-2-ol:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476

Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

3,7-dimethyloct-6-en-3-ol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Cineole:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

3,7-Dimethyl 2,6-octadienal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: positive

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

Ethyl enantate:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on data from similar materials

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 490
Result: negative

Test Type: in vitro micronucleus test
Method: OECD Test Guideline 487
Result: negative

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

2,6-Dimethylhept-5-enal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse

Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative

l-p-Mentha-1(6),8-dien-2-one:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: positive
Remarks: Based on data from similar materials

Test Type: In vitro sister chromatid exchange assay in mammalian cells
Method: OECD Test Guideline 479
Result: positive
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 486
Result: negative
Remarks: Based on data from similar materials

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

4-Allyl-2- methoxyphenol:

Genotoxicity in vitro : Test Type: In vitro sister chromatid exchange assay in mammalian cells
Result: positive

Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Result: negative

Test Type: Unscheduled DNA synthesis (UDS) test with mammalian liver cells in vivo
Species: Rat
Application Route: Ingestion
Result: negative

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Undec-10-enal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative

Dodecanal:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Result: negative
Remarks: Based on data from similar materials

Test Type: in vitro micronucleus test

Method: OECD Test Guideline 487
Result: negative
Remarks: Based on data from similar materials

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Components:

Benzyl acetate:

Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	103 weeks
Remarks	:	negative

3,7-Dimethyl 2,6-octadienal:

Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	104 - 105 weeks
Result	:	negative

l-p-Mentha-1(6),8-dien-2-one:

Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	103 weeks
Result	:	negative
Remarks	:	Based on data from similar materials

4-Allyl-2- methoxyphenol:

Species	:	Mouse
Application Route	:	Ingestion
Exposure time	:	2 Years
Result	:	negative

Reproductive toxicity

Not classified based on available information.

Components:

Benzyl acetate:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative

2,2-Dimethyl 7-octen-2-ol:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials

Cineole:

Effects on fertility	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 421 Result: negative

3,7-Dimethyl 2,6-octadienal:

Effects on fertility	:	Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 443 Result: negative
Effects on foetal development	:	Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 443 Result: negative

Ethyl enantate:

Effects on fertility	:	Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test Species: Rat Application Route: Ingestion Method: OECD Test Guideline 422 Result: negative Remarks: Based on data from similar materials
Effects on foetal develop-	:	Test Type: Combined repeated dose toxicity study with the

ment

reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

Effects on foetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

l-p-Mentha-1(6),8-dien-2-one:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 421
Result: negative

Effects on foetal development : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 421
Result: negative

4-Allyl-2- methoxyphenol:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Undec-10-enal:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Dodecanal:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative
Remarks: Based on data from similar materials

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Effects on foetal development : Test Type: Embryo-foetal development
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 414
Result: negative

Remarks: Based on data from similar materials

STOT - single exposure

Not classified based on available information.

Components:

2,2-Dimethyl 7-octen-2-ol:

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

Benzyl acetate:

Species	:	Rat
NOAEL	:	500 mg/kg
Application Route	:	Ingestion
Exposure time	:	14 Days

2,2-Dimethyl 7-octen-2-ol:

Species	:	Rat
LOAEL	:	> 100 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408
Remarks	:	Based on data from similar materials

Cineole:

Species	:	Rat
NOAEL	:	600 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days
Method	:	OECD Test Guideline 407

3,7-Dimethyl 2,6-octadienal:

Species	:	Rat, female
LOAEL	:	335 mg/kg
Application Route	:	Ingestion
Exposure time	:	14 Weeks

Ethyl enantate:

Species	:	Rat, female
LOAEL	:	> 300 mg/kg
Application Route	:	Ingestion
Exposure time	:	64 Days

Remarks : Based on data from similar materials

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Species : Rat
NOAEL : >= 300 mg/kg
Application Route : Ingestion
Exposure time : 42 - 56 Days
Method : OECD Test Guideline 422

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Species : Rat
NOAEL : > 100 mg/kg
Application Route : Ingestion
Exposure time : 90 Days
Remarks : Based on data from similar materials

2,6-Dimethylhept-5-enal:

Species : Rat
NOAEL : > 300 mg/kg
Application Route : Ingestion
Exposure time : 29 Days

l-p-Mentha-1(6),8-dien-2-one:

Species : Mouse
NOAEL : > 100 mg/kg
Application Route : Ingestion
Exposure time : 13 Weeks
Remarks : Based on data from similar materials

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Species : Rat, male
NOAEL : 296 mg/kg
LOAEL : 1,011 mg/kg
Application Route : Ingestion
Exposure time : 28 Days
Method : OECD Test Guideline 407

4-Allyl-2- methoxyphenol:

Species : Mouse
NOAEL : 450 mg/kg
LOAEL : 900 mg/kg
Application Route : Ingestion
Exposure time : 2 yr

Undec-10-enal:

Species : Rat

NOAEL	:	138.6 mg/kg
LOAEL	:	382.3 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408

Dodecanal:

Species	:	Rat
NOAEL	:	1,409.7 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days
Method	:	OECD Test Guideline 408

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Benzyl acetate:

Toxicity to fish	:	LC50 (Oryzias latipes (Orange-red killifish)): 4 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 17 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 110 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Desmodesmus subspicatus (green algae)): 52 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 : 855 mg/l Exposure time: 3 h
Toxicity to fish (Chronic toxicity)	:	NOEC: 0.92 mg/l Exposure time: 28 d Species: Oryzias latipes (Orange-red killifish)

2,2-Dimethyl 7-octen-2-ol:

Toxicity to fish	:	LC50 : > 10 - 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 38 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 80 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Desmodesmus subspicatus (green algae)): 25 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (activated sludge): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

3,7-dimethyloct-6-en-3-ol:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 42 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 32 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 4.6 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 ErC50 (Pseudokirchneriella subcapitata (green algae)): 78 mg/l Exposure time: 72 h Method: OECD Test Guideline 201

Cineole:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 57 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 74 mg/l Exposure time: 96 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 37 mg/l

Exposure time: 96 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 : > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

3,7-Dimethyl 2,6-octadienal:

Toxicity to fish : LC50 (Leuciscus idus (Golden orfe)): 6.78 mg/l
Exposure time: 96 h
Method: DIN 38412

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 6.8 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 103.8 mg/l
Exposure time: 72 h

EC10 (Desmodesmus subspicatus (green algae)): 3 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (activated sludge): 160 mg/l
Exposure time: 30 min
Method: OECD Test Guideline 209

Ethyl enantate:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.01 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 26.3 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 0.44 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC10 (Pseudokirchneriella subcapitata (green algae)): 0.182 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.7 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.87 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): > 1.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Pseudokirchneriella subcapitata (green algae)): 1.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
Toxicity to microorganisms	:	EC10 (activated sludge): > 10 - 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: > 0.1 - 1 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 1 - 10 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l Exposure time: 48 h Method: Directive 67/548/EEC, Annex V, C.2. Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 10 - 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOEC (Desmodesmus subspicatus (green algae)): > 1 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

2,6-Dimethylhept-5-enal:

Toxicity to fish	:	LC50 (Leuciscus idus (Golden orfe)): > 1 - 10 mg/l

Exposure time: 96 h
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 2.4 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

EC10 (Desmodesmus subspicatus (green algae)): > 1 - 10 mg/l
Exposure time: 72 h
Remarks: Based on data from similar materials

l-p-Mentha-1(6),8-dien-2-one:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 6.1 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 38 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 19 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

NOEC (Pseudokirchneriella subcapitata (green algae)): 4.3 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 3.2 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.4 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 8.6 mg/l

Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

EC10 (Raphidocelis subcapitata (freshwater green alga)): 2.4 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

4-Allyl-2- methoxyphenol:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 13 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.05 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 24 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC10 (Desmodesmus subspicatus (green algae)): 23 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Undec-10-enal:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 1.77 - 2.66 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 5.2 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): 1.1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.18 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): 60 mg/l

Exposure time: 3 h
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 1.64 mg/l
Exposure time: 30 d
Species: Danio rerio (zebra fish)
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)
Method: OECD Test Guideline 211

Dodecanal:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 2.6 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0.27 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 0.048 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

EC10 (Raphidocelis subcapitata (freshwater green alga)): > 0.048 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to microorganisms : NOEC (Pseudomonas putida): >= 16 mg/l
Exposure time: 16 h
Method: DIN 38 412 Part 8

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1.09 mg/l
Exposure time: 96 h

Toxicity to microorganisms : EC10 (activated sludge): 93.9 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209

12.2 Persistence and degradability

Components:

Benzyl acetate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 28 d

2,2-Dimethyl 7-octen-2-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 72 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

3,7-dimethyloct-6-en-3-ol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 64 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

Cineole:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

3,7-Dimethyl 2,6-octadienal:

Biodegradability : Result: Readily biodegradable.
Biodegradation: > 90 %
Exposure time: 28 d
Method: Directive 67/548/EEC Annex V, C.4.D.

Ethyl enantate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 73 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Biodegradability : Result: Not readily biodegradable.

Biodegradation: 3 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

2,6-Dimethylhept-5-enal:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 75 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

l-p-Mentha-1(6),8-dien-2-one:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 22 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

4-Allyl-2- methoxyphenol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 28 d
Method: Regulation (EC) No. 440/2008, Annex, C.4-E

Undec-10-enal:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 82 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Dodecanal:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 73 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 65 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

12.3 Bioaccumulative potential

Components:

Benzyl acetate:

Partition coefficient: n-octanol/water : log Pow: 1.96

2,2-Dimethyl 7-octen-2-ol:

Partition coefficient: n-octanol/water : log Pow: 3.25
Method: OECD Test Guideline 117

3,7-dimethyloct-6-en-3-ol:

Partition coefficient: n-octanol/water : log Pow: 2.9

Cineole:

Partition coefficient: n-octanol/water : log Pow: 3.4

3,7-Dimethyl 2,6-octadienal:

Partition coefficient: n-octanol/water : log Pow: 2.76

Ethyl enantate:

Partition coefficient: n-octanol/water : log Pow: 3.98
Method: OECD Test Guideline 117

Reaction mass of Benzenepropanal, 4-ethyl-α,α-dimethyl- and 3-(2-ethylphenyl)-2,2-dimethylpropanal:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): < 132

Partition coefficient: n-octanol/water : log Pow: 4.1

3-Cyclohexene-1-carboxaldehyde, 2,4-dimethyl-:

Partition coefficient: n-octanol/water : log Pow: 2.85
Remarks: Calculation

2,6-Dimethylhept-5-enal:

Partition coefficient: n-octanol/water : log Pow: 3.4
Method: OECD Test Guideline 117

l-p-Mentha-1(6),8-dien-2-one:

Partition coefficient: n- : log Pow: 2.71 - 2.74

octanol/water

Reaction mass of rel-{(1R,2S)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol and rel-{(1S,2R)-1-methyl-2-[(2R)-5-methylhex-4-en-2-yl]cyclopropyl}methanol**:**

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 33
Method: OECD Test Guideline 305

Partition coefficient: n-octanol/water : log Pow: 3.5
Method: OECD Test Guideline 117

4-Allyl-2- methoxyphenol:

Partition coefficient: n-octanol/water : log Pow: 1.83

Undec-10-enal:

Partition coefficient: n-octanol/water : log Pow: 4.672
Method: OECD Test Guideline 117

Dodecanal:

Partition coefficient: n-octanol/water : log Pow: 4.9
Method: OECD Test Guideline 117

(E)-1-(2,6,6-trimethyl-1,3-cyclohexadien-1-yl)-2-buten-1-one:

Bioaccumulation : Species: Cyprinus carpio (Carp)
Bioconcentration factor (BCF): 14 - 56

Partition coefficient: n-octanol/water : log Pow: 3.4
Method: OECD Test Guideline 123

12.4 Mobility in soil

No data available

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.

12.6 Other adverse effects

Product:

Endocrine disrupting potential : This substance/mixture does not contain components considered to have endocrine disrupting properties for environment according to UK REACH Article 57(f).

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Dispose of in accordance with local regulations.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.
Do not dispose of waste into sewer.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

IATA : Not regulated as a dangerous good

14.4 Packing group

ADN	:	Not regulated as a dangerous good
ADR	:	Not regulated as a dangerous good
RID	:	Not regulated as a dangerous good
IMDG	:	Not regulated as a dangerous good
IATA (Cargo)	:	Not regulated as a dangerous good
IATA (Passenger)	:	Not regulated as a dangerous good

14.5 Environmental hazards

Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

UK REACH List of restrictions (Annex 17)	:	Conditions of restriction for the following entries should be considered: Number on list 3 Substance(s) or mixture(s) are listed here according to their appearance in the regulation, irrespective of their use/purpose or the conditions of the restriction. Please refer to the conditions in corresponding Regulation to determine whether an entry is applicable to the placing on the market or not.
UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation	:	Not applicable
The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain)	:	Not applicable
Regulation (EC) on substances that deplete the ozone layer	:	Not applicable
UK REACH List of substances subject to authorisation (Annex XIV)	:	Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation	:	Not applicable

Control of Major Accident Hazards Regulations 2015 (COMAH)
Not applicable

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 83.14 %

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to protection of young people at work contained in Regulation 19) and of Directive 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Other information : Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Full text of H-Statements

H226	:	Flammable liquid and vapour.
H312	:	Harmful in contact with skin.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H400	:	Very toxic to aquatic life.
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
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure

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 - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergen-

cy 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; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

Sources of key data used to compile the Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/

Classification of the mixture:		**Classification procedure:**
Skin Irrit. 2	H315	Calculation method
Skin Sens. 1	H317	Calculation method

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