Tork Constant Air Freshener Breeze

Version	Revision Date:	SDS Number:	Date of last issue: 30.07.2025
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : Tork Constant Air Freshener Breeze

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

Use of the Substance/Mixture : Fragrances

Recommended restrictions on use : Not applicable

1.3 Details of the supplier of the safety data sheet

Distributor and authorization holder
ESSITY UK LTD
Southfields Road, LU6 3EJ, Dunstable, United Kingdom
'+44 1582 677570
Phone number for emergencies: 999 or 112. The numbers are available 24/7.
info@essity.com

Manufacturer (according to REGULATION (EU) 2023/988 article 3 (8))
Essity Hygiene and Health AB
Mölndals Bro 2, 431 31, Mölndal, Sweden
+46 (0)31 746 00 00

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 sensitisation, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 2	H361d: Suspected of damaging the unborn child.
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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :

Signal word : Warning

Hazard statements :

H317	May cause an allergic skin reaction.
H361d	Suspected of damaging the unborn child.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements :

Prevention:

P201	Obtain special instructions before use.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P333 + P313	If skin irritation or rash occurs: Get medical advice/ attention.
P391	Collect spillage.

Hazardous components which must be listed on the label:

Methyl benzoate
p-tert-Butylcyclohexyl Acetate
Dimethyl octadienol
Linalyl acetate
Undec-10-enal
4-Allyl-2- methoxyphenol
Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde
3,7-Dimethyl 2,6-octadienal
2-Methyldecan-1-al
Undecenal
Cineole
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one
Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-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. Registration number	Classification	Concentration (% w/w)
Methyl benzoate	93-58-3 202-259-7 01-2119969268-21	Acute Tox. 4; H302 Repr. 2; H361d	>= 3 - < 10
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
Allyl (cyclohexyloxy)acetate	68901-15-5 272-657-3 01-2120770514-54	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 ——————— M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 1 - < 2.5
Ionone, methyl-	1335-46-2 215-635-0 01-2119471851-35	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 2; H411	>= 1 - < 2.5
p-tert-Butylcyclohexyl Acetate	32210-23-4 250-954-9 01-2119976286-24	Skin Sens. 1B; H317	>= 1 - < 10
Dihexyl fumarate	19139-31-2 242-833-4	Aquatic Chronic 1; H410 ——————— M-Factor (Chronic aquatic toxicity): 1	>= 0.25 - < 1
Linalyl acetate	115-95-7 204-116-4 01-2119454789-19	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317	>= 0.1 - < 1
Dimethyl octadienol	78-70-6 201-134-4 603-235-00-2 01-2119474016-42	Skin Irrit. 2; H315 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	>= 0.25 - < 1
Reaction mass of 3,5-dimethylcyclohex-3-ene-1-	68039-49-6	Skin Irrit. 2; H315 Skin Sens. 1B;	>= 0.25 - < 1

carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde	605-043-00-4	H317 Aquatic Chronic 2; H411	
4-Allyl-2- methoxyphenol	97-53-0 202-589-1 01-2119971802-33	Eye Irrit. 2; H319 Skin Sens. 1B; H317	>= 0.1 - < 1
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	>= 0.1 - < 1
2-Methyldecan-1-al	19009-56-4 242-745-6	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.25 - < 1
Undecenal	Not Assigned 01-2120065933-50	Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.1 - < 0.25
Cineole	470-82-6 207-431-5 01-2119967772-24	Flam. Liq. 3; H226 Skin Sens. 1B; H317	>= 0.1 - < 1
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one	24720-09-0 246-430-4 01-2120105799-47	Acute Tox. 4; H302 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 _____ M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0.1 - < 0.25
Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one	56973-85-4 01-2120739840-52	Skin Sens. 1B; H317 Aquatic Chronic 2; H411	>= 0.1 - < 0.25

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.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water. Remove 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. Rinse mouth thoroughly with water.

4.2 Most important symptoms and effects, both acute and delayed

Risks	:	May cause an allergic skin reaction. Suspected of damaging the unborn child.

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 Nitrogen oxides (NOx)

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. 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. Store locked up. 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
Methyl benzoate	Workers	Inhalation	Long-term systemic effects	14.8 mg/m3
	Workers	Skin contact	Long-term systemic effects	4.2 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.61 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	1.5 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
Ionone, methyl-	Workers	Inhalation	Long-term systemic effects	29.4 mg/m3
	Workers	Skin contact	Long-term systemic effects	8.33 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	8.7 mg/m3
	Consumers	Skin contact	Long-term systemic effects	5 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	2.5 mg/kg bw/day
Hexyl acetate	Workers	Inhalation	Long-term systemic effects	48 mg/m3
	Workers	Skin contact	Long-term systemic effects	14 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	12 mg/m3
	Consumers	Skin contact	Long-term systemic effects	6.9 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	6.9 mg/kg bw/day

Exo-1,7,7-trimethylbicy-clo[2.2.1]hept-2-yl acetate	Workers	Inhalation	Long-term systemic effects	13.22 mg/m3
	Workers	Inhalation	Acute systemic effects	26.45 mg/m3
	Workers	Skin contact	Long-term systemic effects	1.15 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	0.3 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	13.04 mg/m3
	Consumers	Inhalation	Acute systemic effects	13.04 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.075 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	0.15 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.075 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	0.152 mg/kg bw/day
3,7-Dimethyloct-6-enenitrile	Workers	Inhalation	Long-term systemic effects	17.6 mg/m3
	Workers	Skin contact	Long-term systemic effects	5 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
1-Phenylethyl acetate	Workers	Inhalation	Long-term systemic effects	5.29 mg/m3
	Workers	Inhalation	Acute systemic effects	10.58 mg/m3
	Workers	Inhalation	Long-term local effects	13.22 mg/m3
	Workers	Inhalation	Acute local effects	26.45 mg/m3
	Workers	Skin contact	Long-term systemic effects	1.5 mg/kg bw/day
	Workers	Skin contact	Acute systemic effects	3 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	3.75 mg/kg bw/day
	Workers	Skin contact	Acute local effects	7.5 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	1.3 mg/m3
	Consumers	Inhalation	Acute systemic effects	2.61 mg/m3
	Consumers	Inhalation	Long-term local ef-	3.26 mg/m3

			fects	
	Consumers	Inhalation	Acute local effects	6.52 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.75 mg/kg bw/day
	Consumers	Skin contact	Acute systemic effects	1.5 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	1.88 mg/kg bw/day
	Consumers	Skin contact	Acute local effects	3.75 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.75 mg/kg bw/day
	Consumers	Ingestion	Acute systemic effects	1.5 mg/kg bw/day
Undec-10-enal	Workers	Inhalation	Long-term systemic effects	16.4 mg/m3
	Workers	Skin contact	Long-term systemic effects	4.67 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	2.47 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.67 mg/kg bw/day
	Consumers	Oral	Long-term systemic effects	1.67 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
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
Linalyl acetate	Workers	Inhalation	Long-term systemic effects	2.75 mg/m3
	Workers	Skin contact	Long-term systemic effects	2.5 mg/kg bw/day

	Workers	Skin contact	Long-term local effects	0.2362 mg/cm2
	Workers	Skin contact	Acute local effects	0.2362 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	0.68 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.25 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0.2362 mg/cm2
	Consumers	Skin contact	Acute local effects	0.2362 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	0.2 mg/kg bw/day
Dimethyl octadienol	Workers	Inhalation	Long-term systemic effects	24.58 mg/m3
	Workers	Skin contact	Long-term systemic effects	3.5 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	3 mg/cm2
	Workers	Skin contact	Acute local effects	3 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	4.33 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.25 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	1.5 mg/cm2
	Consumers	Skin contact	Acute local effects	1.5 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	2.49 mg/kg bw/day
Undecenal	Workers	Inhalation	Long-term systemic effects	3.82 mg/m3
	Workers	Inhalation	Acute systemic effects	3.82 mg/m3
	Workers	Skin contact	Long-term systemic effects	1.08 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.942 mg/m3
	Consumers	Inhalation	Acute systemic effects	0.942 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.542 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.542 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
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one	Workers	Inhalation	Long-term systemic effects	2.74 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.78 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0.67 mg/m3
	Consumers	Skin contact	Long-term systemic effects	0.39 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0.39 mg/kg bw/day
Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one	Workers	Inhalation	Long-term systemic effects	6.2 mg/m3
	Workers	Skin contact	Long-term systemic effects	1.75 mg/kg bw/day
	Workers	Skin contact	Long-term local effects	0.232 mg/cm2
	Consumers	Inhalation	Long-term systemic effects	1.83 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1.05 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0.116 mg/cm2
	Consumers	Ingestion	Long-term systemic effects	1.05 mg/kg bw/day

Predicted No Effect Concentration (PNEC)

Substance name	Environmental Compartment	Value
Methyl benzoate	Fresh water	0.023 mg/l
	Freshwater - intermittent	0.23 mg/l
	Marine water	0.0023 mg/l
	Sewage treatment plant	8.15 mg/l
	Fresh water sediment	0.492 mg/kg dry weight (d.w.)
	Marine sediment	0.0492 mg/kg dry weight (d.w.)
	Soil	0.085 mg/kg dry weight (d.w.)
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
Ionone, methyl-	Fresh water	0.0023 mg/l
	Marine water	0.00023 mg/l
	Intermittent use/release	0.023 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.246 mg/kg
	Marine sediment	0.0246 mg/kg
	Soil	0.0477 mg/kg
p-tert-Butylcyclohexyl Acetate	Fresh water	0.0053 mg/l
	Marine water	0.00053 mg/l
	Freshwater - intermittent	0.053 mg/l
	Sewage treatment plant	12.2 mg/l
	Fresh water sediment	2.01 mg/kg dry weight (d.w.)
	Marine sediment	0.21 mg/kg dry weight (d.w.)
	Soil	0.42 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	66.67 mg/kg food
Hexyl acetate	Fresh water	0.0044 mg/l
	Freshwater - intermittent	0.044 mg/l
	Marine water	0.00044 mg/l
	Sewage treatment plant	1 mg/l
	Fresh water sediment	0.144 mg/kg dry weight (d.w.)
	Marine sediment	0.014 mg/kg dry weight (d.w.)
	Soil	0.026 mg/kg dry weight (d.w.)
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl acetate	Fresh water	1.31 µg/l
	Marine water	0.131 µg/l
	Sewage treatment plant	2 mg/l
	Fresh water sediment	13070 mg/kg
	Marine sediment	1307 mg/kg
	Soil	5770 mg/kg
3,7-Dimethyloct-6-enenitrile	Fresh water	0.011 mg/l
	Freshwater - intermittent	0.114 mg/l
	Marine water	0.001 mg/l
	Sewage treatment plant	100 mg/l
	Fresh water sediment	2.22 mg/kg dry weight (d.w.)
	Marine sediment	0.222 mg/kg dry weight (d.w.)
	Soil	0.435 mg/kg dry weight (d.w.)

1-Phenylethyl acetate	Fresh water	0.0183 mg/l
	Marine water	0.00183 mg/l
	Freshwater - intermittent	0.183 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.536 mg/kg dry weight (d.w.)
	Marine sediment	0.0536 mg/kg dry weight (d.w.)
	Soil	0.097 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	16.67 mg/kg food
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.)
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
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.)
Linalyl acetate	Fresh water	0.011 mg/l
	Freshwater - intermittent	0.11 mg/l
	Marine water	0.0011 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.609 mg/kg dry weight (d.w.)
	Marine sediment	0.0609 mg/kg dry weight (d.w.)
	Soil	0.115 mg/kg dry weight (d.w.)
Dimethyl octadienol	Fresh water	0.2 mg/l
	Freshwater - intermittent	2 mg/l
	Marine water	0.02 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	2.22 mg/kg dry weight (d.w.)

	Marine sediment	0.222 mg/kg dry weight (d.w.)
	Soil	0.327 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	7.8 mg/kg food
2-Methyldecan-1-al	Fresh water	0.001819 mg/l
	Freshwater - intermittent	0.01819 mg/l
	Marine water	0.000181 mg/l
	Marine water - intermittent	0.01819 mg/l
	Sewage treatment plant	15.9 mg/l
	Fresh water sediment	1.45 mg/kg dry weight (d.w.)
	Marine sediment	0.145 mg/kg dry weight (d.w.)
	Soil	0.288 mg/kg dry weight (d.w.)
Undecenal	Fresh water	0.001 mg/l
	Freshwater - intermittent	0.011 mg/l
	Marine water	110 ng/l
	Marine water - intermittent	0.011 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0.256 mg/kg dry weight (d.w.)
	Marine sediment	0.043 mg/kg dry weight (d.w.)
	Soil	0.074 mg/kg dry weight (d.w.)
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
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one	Fresh water	0.658 µg/l
	Freshwater - intermittent	6.58 µg/l
	Marine water	0.066 µg/l
	Sewage treatment plant	3.2 mg/l
	Fresh water sediment	0.064 mg/kg dry weight (d.w.)
	Marine sediment	0.006 mg/kg dry weight (d.w.)
	Soil	0.012 mg/kg dry weight (d.w.)
	Oral (Secondary Poisoning)	6.67 mg/kg food
Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one	Fresh water	4.2 µg/l

	Marine water	0.42 µg/l
	Sewage treatment plant	4.6 mg/l
	Fresh water sediment	1.2 mg/kg dry weight (d.w.)
	Marine sediment	0.12 mg/kg dry weight (d.w.)
	Soil	0.24 mg/kg dry weight (d.w.)

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
Guideline : 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.
Filter 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
Odour	:	fruity
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	:	64 °C Method: closed cup
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	0.5261 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.9413 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

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.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method

Components:

Methyl benzoate:

Acute oral toxicity	:	LD50 (Rat): 1,625 mg/kg Method: OECD Test Guideline 401

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

Allyl (cyclohexyloxy)acetate:

Acute oral toxicity	:	LD50 (Rat): 620 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg

Ionone, methyl-:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 423 Assessment: The substance or mixture has no acute oral toxicity
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

p-tert-Butylcyclohexyl Acetate:

Acute oral toxicity	:	LD50 (Rat): 3,323 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 4,680 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Dihexyl fumarate:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: The test was conducted equivalent or similar to guideline
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402 Remarks: The test was conducted equivalent or similar to guideline

Linalyl acetate:

Acute oral toxicity	:	LD50 (Rat): > 9,000 mg/kg
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg

Dimethyl octadienol:

Acute oral toxicity	:	LD50 (Rat): 2,790 mg/kg Method: OECD Test Guideline 401 Remarks: The test was conducted equivalent or similar to guideline
Acute inhalation toxicity	:	LC50 (Mouse): > 3.2 mg/l Exposure time: 90 min Test atmosphere: vapour Remarks: No test guideline followed
Acute dermal toxicity	:	LD50 (Rabbit): 5,610 mg/kg Method: OECD Test Guideline 402 Remarks: The test was conducted equivalent or similar to guideline

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

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

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

2-Methyldecan-1-al:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 420

Undecenal:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	:	LC50 (Rat): > 1 - 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Remarks: Based on data from similar materials

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Acute oral toxicity	:	LD50 (Rat, female): 1,500 mg/kg
Acute dermal toxicity	:	LD50 (Rat, female): 2,150 - 2,780 mg/kg

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Acute oral toxicity	:	LD50 (Rat): > 2,000 mg/kg Method: OECD Test Guideline 401
Acute dermal toxicity	:	LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Not classified based on available information.

Components:

Methyl benzoate:

Species	:	Rabbit
Method	:	OECD Test Guideline 404

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

Allyl (cyclohexyloxy)acetate:

Species : Rabbit
Result : No skin irritation

Ionone, methyl-:

Species : Rabbit
Result : Skin irritation

p-tert-Butylcyclohexyl Acetate:

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

Result : No skin irritation

Dihexyl fumarate:

Species : Tissue Culture
Method : OECD Test Guideline 439
Remarks : The test was conducted according to guideline

Result : No skin irritation

Linalyl acetate:

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

Dimethyl octadienol:

Species : Rabbit
Method : OECD Test Guideline 404
Result : Skin irritation
Remarks : The test was conducted according to guideline

Undec-10-enal:

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation
Remarks	:	Based on data from similar materials

4-Allyl-2- methoxyphenol:

Species	:	Rabbit
Result	:	Mild skin irritation

3,7-Dimethyl 2,6-octadienal:

Species	:	Rabbit
Result	:	Skin irritation

2-Methyldecan-1-al:

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

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

Result	:	Skin irritation

Undecenal:

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

Cineole:

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

Result	:	No skin irritation

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Species	:	Rabbit
Result	:	No skin irritation

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Methyl benzoate:

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

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

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

Allyl (cyclohexyloxy)acetate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

Ionone, methyl-:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 7 days
Remarks	:	Based on data from similar materials

p-tert-Butylcyclohexyl Acetate:

Species	:	Rabbit
Result	:	No eye irritation

Dihexyl fumarate:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Remarks	:	The test was conducted according to guideline
Result	:	No eye irritation

Linalyl acetate:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	Based on data from similar materials

Dimethyl octadienol:

Species	:	Rabbit
Method	:	OECD Test Guideline 405
Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	The test was conducted equivalent or similar to guideline

Undec-10-enal:

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

4-Allyl-2- methoxyphenol:

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

3,7-Dimethyl 2,6-octadienal:

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

2-Methyldecan-1-al:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

Undecenal:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Remarks	:	Based on data from similar materials

Cineole:

Species	:	Bovine cornea
Method	:	OECD Test Guideline 437
Result	:	No eye irritation

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Species	:	Rabbit
Result	:	No eye irritation

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

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

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

Not classified based on available information.

Components:

Methyl benzoate:

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

Allyl (cyclohexyloxy)acetate:

Exposure routes	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Ionone, methyl-:

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

p-tert-Butylcyclohexyl Acetate:

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

Dihexyl fumarate:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact

Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	negative
Remarks	:	The test was conducted according to guideline

Linalyl acetate:

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

Dimethyl octadienol:

Test Type	:	Local lymph node assay (LLNA)
Exposure routes	:	Skin contact
Species	:	Mouse
Method	:	OECD Test Guideline 429
Result	:	positive
Remarks	:	The test was conducted according to guideline
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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

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

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

2-Methyldecan-1-al:

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

Undecenal:

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

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-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 low to moderate skin sensitisation rate in humans

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-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

Germ cell mutagenicity

Not classified based on available information.

Components:

Methyl benzoate:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 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

Allyl (cyclohexyloxy)acetate:

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

Ionone, methyl-:

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

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

p-tert-Butylcyclohexyl Acetate:

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 Method: OECD Test Guideline 476 Result: negative Remarks: Based on data from similar materials Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: negative Remarks: Based on data from similar materials

Dihexyl fumarate:

Genotoxicity in vitro	:	Test Type: Bacterial reverse mutation assay (AMES) Method: OECD Test Guideline 471 Result: negative Remarks: The test was conducted according to guideline Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 490 Result: negative Remarks: The test was conducted according to guideline Test Type: Chromosome aberration test in vitro Method: OECD Test Guideline 473 Result: positive Remarks: The test was conducted according to guideline
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 Remarks: The test was conducted according to guideline Based on data from similar materials

Linalyl acetate:

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
Result: negative
Remarks: Based on data from similar materials

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

Dimethyl octadienol:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: The test was conducted equivalent or similar to guideline

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: The test was conducted equivalent or similar to guideline

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: The test was conducted equivalent or similar to guideline

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
Remarks: The test was conducted according to guideline

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

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.

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

2-Methyldecan-1-al:

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: in vitro micronucleus test Method: OECD Test Guideline 487 Result: negative Remarks: Based on data from similar materials

Undecenal:

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: in vitro micronucleus test Method: OECD Test Guideline 487

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-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
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 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-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 490
Result: negative

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

Carcinogenicity

Not classified based on available information.

Components:

4-Allyl-2- methoxyphenol:

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

3,7-Dimethyl 2,6-octadienal:

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

Reproductive toxicity

Suspected of damaging the unborn child.

Components:

Methyl benzoate:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Method: OECD Test Guideline 414 Result: positive Remarks: The test was conducted according to guideline
Reproductive toxicity - Assessment	:	Some evidence of adverse effects on development, based on animal experiments.

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

Allyl (cyclohexyloxy)acetate:

Effects on fertility	:	Test Type: One-generation reproduction toxicity study Species: Rat Application Route: Ingestion Method: OECD Test Guideline 415 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

Ionone, methyl-:

Effects on fertility	:	Test Type: Two-generation reproduction toxicity study Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials
Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative Remarks: Based on data from similar materials

p-tert-Butylcyclohexyl Acetate:

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

Dihexyl fumarate:

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: The test was conducted according to guideline
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 Remarks: The test was conducted according to guideline

Linalyl acetate:

Effects on fertility	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat Application Route: Ingestion 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

Dimethyl octadienol:

Effects on foetal development	:	Test Type: Embryo-foetal development Species: Rat Application Route: Ingestion Result: negative Remarks: No test guideline followed

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

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

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

2-Methyldecan-1-al:

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: 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

Undecenal:

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

Cineole:

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

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

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

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

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.

Components:

Linalyl acetate:

Assessment	:	No significant health effects observed in animals at concentrations of 100 mg/kg bw or less.
Remarks	:	Based on data from similar materials

Repeated dose toxicity

Components:

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

Allyl (cyclohexyloxy)acetate:

Species	:	Rat

NOAEL	:	> 214 mg/kg
Application Route	:	Ingestion
Exposure time	:	1 yr
Remarks	:	Based on data from similar materials

Ionone, methyl-:

Species	:	Rat
NOAEL	:	50 mg/m3
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	90 Days

p-tert-Butylcyclohexyl Acetate:

Species	:	Rat
NOAEL	:	> 300 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days
Method	:	OECD Test Guideline 407
Remarks	:	Based on data from similar materials

Dihexyl fumarate:

Species	:	Rat
NOAEL	:	>= 1,000 mg/kg
Application Route	:	Ingestion
Exposure time	:	35 - 56 Days
Method	:	OECD Test Guideline 422
Remarks	:	The test was conducted according to guideline

Linalyl acetate:

Species	:	Rat
NOAEL	:	> 30 - 300 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 Days
Remarks	:	Based on data from similar materials

Species	:	Rat
NOAEL	:	> 100 mg/kg
Application Route	:	Skin contact
Exposure time	:	91 Days
Remarks	:	Based on data from similar materials

Dimethyl octadienol:

Species	:	Rat, male
NOAEL	:	>= 497.9 mg/kg
Application Route	:	Ingestion
Exposure time	:	96 Days
Method	:	OECD Test Guideline 408
Remarks	:	The test was conducted according to guideline

Species	:	Rat

NOAEL	:	250 mg/kg
Application Route	:	Skin contact
Exposure time	:	91 Days
Method	:	OECD Test Guideline 411
Remarks	:	The test was conducted equivalent or similar to guideline

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

4-Allyl-2- methoxyphenol:

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

3,7-Dimethyl 2,6-octadienal:

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

2-Methyldecan-1-al:

Species	:	Rat
	:	>= 1000 mg/kg
Application Route	:	Ingestion
Exposure time	:	28 - 48 Days
Method	:	OECD Test Guideline 422
Remarks	:	Based on data from similar materials

Undecenal:

Species	:	Rat
NOAEL	:	>= 1,000 mg/kg
Application Route	:	Ingestion

Exposure time	:	63 Days
Method	:	OECD Test Guideline 422

Cineole:

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

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

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Species	:	Rat
NOAEL	:	42 mg/kg
LOAEL	:	137 mg/kg
Application Route	:	Ingestion
Exposure time	:	> 90 Days

Aspiration toxicity

Not classified based on available information.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Methyl benzoate:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 23 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1. Remarks: The test was conducted according to guideline
Toxicity to algae/aquatic plants	:	EC50 (Scenedesmus capricornutum (fresh water algae)): 111.9 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. Remarks: The test was conducted according to guideline EC10 (Selenastrum capricornutum (fresh water algae)): 62.4 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3.

		Remarks: The test was conducted according to guideline
Toxicity to microorganisms	:	EC50 (activated sludge): 815 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: The test was conducted according to guideline

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

Allyl (cyclohexyloxy)acetate:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 0.205 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 6.09 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 69.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 EC10 (Pseudokirchneriella subcapitata (green algae)): 30.2 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 3.2 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	1

Ionone, methyl-:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 2.3 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.42 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 9.42 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Desmodesmus subspicatus (green algae)): > 9.42 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC50 (Pseudomonas putida): 10,000 mg/l Exposure time: 16 h

p-tert-Butylcyclohexyl Acetate:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 8.6 mg/l Exposure time: 96 h Method: Directive 67/548/EEC, Annex V, C.1.
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 5.3 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 22 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3. EC10 (Desmodesmus subspicatus (green algae)): 11 mg/l Exposure time: 72 h Method: Directive 67/548/EEC, Annex V, C.3.
Toxicity to microorganisms	:	EC10 : 122 mg/l Exposure time: 3 h

Dihexyl fumarate:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): > 0.027 mg/l Exposure time: 96 h

		Method: OECD Test Guideline 203 Remarks: The test was conducted according to guideline
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 0.0062 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: The test was conducted according to guideline
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): > 0.0064 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: The test was conducted according to guideline EC10 (Raphidocelis subcapitata (freshwater green alga)): 0.0061 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: The test was conducted according to guideline
Toxicity to microorganisms	:	NOEC (activated sludge): 1,000 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: The test was conducted according to guideline
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10: 2 µg/l Exposure time: 21 d Species: Daphnia magna (Water flea) Method: OECD Test Guideline 211 Remarks: The test was conducted according to guideline
M-Factor (Chronic aquatic toxicity)	:	1

Linalyl acetate:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 11 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l Exposure time: 72 h Remarks: Based on data from similar materials EC10 (Desmodesmus subspicatus (green algae)): > 1 mg/l Exposure time: 72 h Remarks: Based on data from similar materials

Toxicity to microorganisms	:	EC50 : > 1,000 mg/l Exposure time: 30 min Method: ISO 8192

Dimethyl octadienol:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 27.8 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: The test was conducted according to guideline
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 59 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: The test was conducted according to guideline
Toxicity to algae/aquatic plants	:	ErC50 (Desmodesmus subspicatus (green algae)): 156.7 mg/l Exposure time: 96 h EC10 (Desmodesmus subspicatus (green algae)): 54.3 mg/l Exposure time: 96 h
Toxicity to microorganisms	:	EC10 (activated sludge): > 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: The test was conducted according to guideline

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

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

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

2-Methyldecan-1-al:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 31.8 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC10 (Pseudokirchneriella subcapitata (green algae)): 6.15 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 ErC50 (Pseudokirchneriella subcapitata (green algae)): 30.5 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EC10 : 15.9 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

Undecenal:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): > 1 - 10 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 1.3 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to microorganisms	:	EC10 (activated sludge): 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Toxicity to fish	:	LC50 (Oryzias latipes (Japanese medaka)): 0.628 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 2.37 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	ErC50 (Raphidocelis subcapitata (freshwater green alga)): 4.56 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 NOEC (Raphidocelis subcapitata (freshwater green alga)): 0.768 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	1
M-Factor (Chronic aquatic toxicity)	:	1

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Toxicity to fish	:	LC50 (Cyprinus carpio (Carp)): 5 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)): 4.2 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)): 6.5 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	:	EC10 (activated sludge): 25 mg/l Exposure time: 3 h Method: OECD Test Guideline 209

12.2 Persistence and degradability

Components:

Methyl benzoate:

Biodegradability	:	Result: Readily biodegradable. Biodegradation: 62 % Exposure time: 29 d Method: Directive 67/548/EEC Annex V, C.4.C.

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

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

Allyl (cyclohexyloxy)acetate:

Biodegradability	:	Result: Not readily biodegradable. Biodegradation: 27.98 % Exposure time: 28 d Method: OECD Test Guideline 301D

Ionone, methyl-:

Biodegradability	:	Result: Readily biodegradable.

Biodegradation: 76 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

p-tert-Butylcyclohexyl Acetate:

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

Dihexyl fumarate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 88 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: The test was conducted according to guideline

Linalyl acetate:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
Remarks: The test was conducted according to guideline

Dimethyl octadienol:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 64.2 %
Exposure time: 28 d
Method: OECD Test Guideline 301D
Remarks: The test was conducted according to guideline

Undec-10-enal:

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 3 %
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

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.

2-Methyldecan-1-al:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 77 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Undecenal:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Cineole:

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 56 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 32.8 %
Exposure time: 28 d
Method: OECD Test Guideline 310

12.3 Bioaccumulative potential

Components:

Methyl benzoate:

Partition coefficient: n-octanol/water : log Pow: 2.12

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

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

Allyl (cyclohexyloxy)acetate:

Partition coefficient: n-octanol/water	:	log Pow: 2.8 Method: OECD Test Guideline 117

Ionone, methyl-:

Partition coefficient: n-octanol/water	:	log Pow: > 4.5 - < 5

p-tert-Butylcyclohexyl Acetate:

Bioaccumulation	:	Bioconcentration factor (BCF): < 500
Partition coefficient: n-octanol/water	:	log Pow: 4.8

Dihexyl fumarate:

Partition coefficient: n-octanol/water	:	log Pow: > 6 (35 °C) Method: OECD Test Guideline 117 Remarks: The test was conducted according to guideline

Linalyl acetate:

Partition coefficient: n-octanol/water	:	log Pow: 3.9 Method: OECD Test Guideline 107

Dimethyl octadienol:

Partition coefficient: n-octanol/water	:	log Pow: 2.84 Method: OECD Test Guideline 107 Remarks: The test was conducted equivalent or similar to guideline

Undec-10-enal:

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

Reaction mass of 3,5-dimethylcyclohex-3-ene-1-carbaldehyde and 2,4-dimethylcyclohex-3-ene-1-carbaldehyde:

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

4-Allyl-2- methoxyphenol:

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

3,7-Dimethyl 2,6-octadienal:

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

2-Methyldecan-1-al:

Partition coefficient: n-octanol/water	:	log Pow: 4.5 Method: OECD Test Guideline 117

Undecenal:

Partition coefficient: n-octanol/water	:	log Pow: > 4 Remarks: Expert judgement

Cineole:

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

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 8.4 - 20 Method: OECD Test Guideline 305
Partition coefficient: n-octanol/water	:	log Pow: 3.66 Method: OECD Test Guideline 123

Reaction mass of 1-(3,3-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one and 1-(5,5-dimethylcyclohex-1-en-1-yl)pent-4-en-1-one:

Bioaccumulation	:	Species: Cyprinus carpio (Carp) Bioconcentration factor (BCF): 117
Partition coefficient: n-octanol/water	:	log Pow: 4.5

12.4 Mobility in soil

Components:

Dihexyl fumarate:

Distribution among environmental compartments	:	log Koc: 4.8 Method: OECD Test Guideline 121 Remarks: The test was conducted according to guideline

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) at levels of 0.1% or higher.

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

14.2 UN proper shipping name

ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl (cyclohexyloxy)acetate, Dihexyl fumarate)
ADR	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl (cyclohexyloxy)acetate, Dihexyl fumarate)
RID	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl (cyclohexyloxy)acetate, Dihexyl fumarate)

IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Allyl (cyclohexyloxy)acetate, Dihexyl fumarate)
IATA	:	Environmentally hazardous substance, liquid, n.o.s. (Allyl (cyclohexyloxy)acetate, Dihexyl fumarate)

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	9	
ADR	:	9	
RID	:	9	
IMDG	:	9	
IATA	:	9	

14.4 Packing group

ADN		
Packing group	:	III
Classification Code	:	M6
Hazard Identification Number	:	90
Labels	:	9
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 aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous
IATA (Passenger)		
Packing instruction (passenger aircraft)	:	964
Packing instruction (LQ)	:	Y964
Packing group	:	III

Labels : Miscellaneous

14.5 Environmental hazards

ADN
Environmentally hazardous : yes

ADR
Environmentally hazardous : yes

RID
Environmentally hazardous : yes

IMDG
Marine pollutant : yes

IATA (Passenger)
Environmentally hazardous : 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 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 Bri-	:	Not applicable

tain)
Regulation (EU) No 2024/590 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)

		Quantity 1	Quantity 2
E2	ENVIRONMENTAL HAZARDS	200 t	500 t

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 75.24 %

Other regulations:

Take note of The Management of Health and Safety at Work Regulations 1999 (requirements relating to new and expectant mothers at work contained in Regulation 16 to 18) and of the Pregnant Workers Directive 92/85/EEC.

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.
H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.
H317	:	May cause an allergic skin reaction.
H319	:	Causes serious eye irritation.
H332	:	Harmful if inhaled.
H336	:	May cause drowsiness or dizziness.
H361d	:	Suspected of damaging 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
Eye Irrit.	:	Eye irritation
Flam. Liq.	:	Flammable liquids
Repr.	:	Reproductive toxicity
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 - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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 Sens. 1	H317	Calculation method
Repr. 2	H361d	Calculation method
Aquatic Chronic 2	H411	Calculation method

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

GB / EN