Safety data sheet according to Regulation (EC) No 1907/2006, Annex II (last amended by Regulation (EU) 2020/878)

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

1.1 Product identifier

Air Freshener Tropical Shower

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

Relevant identified uses of the substance or mixture:
Air-Freshener

Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

GB

Landspitali- The National University Hospital of Iceland, tel. +354 543 2222 or 112 (valid only for Iceland)

Telephone number of the company in case of emergencies:
+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Skin Sens.	1	H317-May cause an allergic skin reaction.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)



Warning

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

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves.
P333+P313-If skin irritation or rash occurs: Get medical advice / attention.
P501-Dispose of contents / container to an approved waste disposal facility.

Linalyl acetate
Allyl 3-cyclohexylpropionate
Linalool
1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one
Ethyl 2,3-epoxy-3-phenylbutyrat
4-tert-butylcyclohexyl acetate
7-hydroxycitronellal
(E)-1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one
2,6-dimethylhept-5-enal
Reaction mass of 3-(o-ethylphenyl)-2,2-dimethylpropionaldehyde and 3-(p-ethylphenyl)-2,2-dimethylpropionaldehyde
3-(4-tert-butylphenyl)propionaldehyde
Methyl non-2-ynoate

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

2-tert-Butylcyclohexyl acetate	
Registration number (REACH)	01-2119970713-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	201-828-7
CAS	88-41-5
content %	10-<25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 2, H411

4-tert-butylcyclohexyl acetate	
Registration number (REACH)	01-2119976286-24-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	250-954-9
CAS	32210-23-4
content %	10-<25

Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1B, H317

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
Registration number (REACH)	01-2119456810-40-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	920-901-0
CAS	(90622-58-5)
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	EUH066 Asp. Tox. 1, H304

Ethyl 2,3-epoxy-3-phenylbutyrat	
Registration number (REACH)	01-2119967770-28-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	201-061-8
CAS	77-83-8
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1B, H317 Aquatic Chronic 2, H411

1,1-dimethyl-2-phenethyl butyrate	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	233-221-8
CAS	10094-34-5
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Aquatic Chronic 2, H411

Linalool	
Registration number (REACH)	01-2119474016-42-XXXX
Index	603-235-00-2
EINECS, ELINCS, NLP, REACH-IT List-No.	201-134-4
CAS	78-70-6
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317

7-hydroxycitronellal	
Registration number (REACH)	01-2119973482-31-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	203-518-7
CAS	107-75-5
content %	1-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Eye Irrit. 2, H319 Skin Sens. 1B, H317

Linalyl acetate	
Registration number (REACH)	01-2119454789-19-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	204-116-4
CAS	115-95-7
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317

Allyl 3-cyclohexylpropionate	
Registration number (REACH)	01-2119976355-27-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	220-292-5
CAS	2705-87-5
content %	0,1-<1

Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411
Specific Concentration Limits and ATE	ATE (oral): 500 mg/kg ATE (dermal): 1600 mg/kg

1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one	
Registration number (REACH)	01-2119535122-53-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	260-709-8
CAS	57378-68-4
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)
Specific Concentration Limits and ATE	ATE (oral): 1625 mg/kg

2,6-dimethylhept-5-enal	
Registration number (REACH)	01-2120270305-62-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	203-427-2
CAS	106-72-9
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Sens. 1B, H317

3-(4-tert-butylphenyl)propionaldehyde	
Registration number (REACH)	01-2119983533-30-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	242-016-2
CAS	18127-01-0
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT RE 2, H373 Aquatic Chronic 3, H412

(E)-1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one	
Registration number (REACH)	01-2120105799-47-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	246-430-4
CAS	24720-09-0
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Specific Concentration Limits and ATE	ATE (oral): 1670 mg/kg

Reaction mass of 3-(o-ethylphenyl)-2,2-dimethylpropionaldehyde and 3-(p-ethylphenyl)-2,2-dimethylpropionaldehyde	
Registration number (REACH)	01-2120758796-34-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	916-329-6
CAS	---
content %	0,1-<0,25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 2, H411

Allyl (cyclohexyloxy)acetate	

Registration number (REACH)	01-2120770514-54-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	272-657-3
CAS	68901-15-5
content %	0,1-<0,25
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)
Specific Concentration Limits and ATE	ATE (oral): 620 mg/kg

Methyl non-2-ynoate	
Registration number (REACH)	01-2120139912-55-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	203-909-2
CAS	111-80-8
content %	0,01-<0,1
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 3, H412

Impurities, test data and additional information may have been taken into account in classifying and labelling the product.
For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures
First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation
Supply person with fresh air and consult doctor according to symptoms.

Skin contact
Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact
Remove contact lenses.
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion
Rinse the mouth thoroughly with water.
Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed
If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.
reddening of the skin
Allergic reaction

4.3 Indication of any immediate medical attention and special treatment needed
Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Water jet spray / alcohol resistant foam / CO2 / dry extinguisher.

Unsuitable extinguishing media
High volume water jet

5.2 Special hazards arising from the substance or mixture
In case of fire the following can develop:
Oxides of carbon
Hydrocarbons
Toxic gases

5.3 Advice for firefighters
For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
6.1.1 For non-emergency personnel
In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Avoid contact with eyes or skin.

6.1.2 For emergency responders
See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions
Resolve leaks if this possible without risk.
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.
If accidental entry into drainage system occurs, inform responsible authorities.

6.3 Methods and material for containment and cleaning up
Pick up mechanically and dispose of according to Section 13.

6.4 Reference to other sections
For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling
7.1.1 General recommendations
Avoid contact with eyes.
Avoid long lasting or intensive contact with skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace
General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities
Keep out of access to unauthorised individuals.
Store product closed and only in original packing.
Not to be stored in gangways or stair wells.
Store at room temperature.
Store in a dry place.

7.3 Specific end use(s)

No information available at present.
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
1200 mg/m3

GB **Chemical Name**	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	
WEL-TWA: 1200 mg/m3 (>=C7 normal and branched chain alkanes)	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174)	
BMGV: ---		Other information: ---

2-tert-Butylcyclohexyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,011	mg/l	
	Environment - marine		PNEC	0,0011	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	1,5	mg/kg dw	
	Environment - sediment, marine		PNEC	0,15	mg/kg dw	
	Environment - soil		PNEC	0,293	mg/kg dw	

4-tert-butylcyclohexyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,0053	mg/l	
	Environment - marine		PNEC	0,00053	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	0,053	mg/l	
	Environment - sediment, freshwater		PNEC	2,01	mg/kg	
	Environment - sediment, marine		PNEC	0,21	mg/kg	
	Environment - soil		PNEC	0,42	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	62500	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,11	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	0,625	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	1,25	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	0,44	mg/m3	

Ethyl 2,3-epoxy-3-phenylbutyrat						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,008	mg/l	
	Environment - marine		PNEC	8,4	µg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	0,214	mg/kg dw	
	Environment - sediment, marine		PNEC	0,021	mg/kg dw	
	Environment - soil		PNEC	0,038	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	2,17	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1,25	mg/kg body weight/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	2,45	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg body weight/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	17,63	mg/m3	

Linalool						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,2	mg/l	
	Environment - marine		PNEC	0,02	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	2	mg/l	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	2,22	mg/kg	
	Environment - sediment, marine		PNEC	0,222	mg/kg	
	Environment - soil		PNEC	0,3	mg/kg	
Consumer	Human - dermal	Short term, local effects	DNEL	15	mg/cm2	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1,25	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,7	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,2	mg/kg bw/d	
Consumer	Human - dermal	Short term, systemic effects	DNEL	2,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	4,1	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	1,2	mg/kg bw/d	
Consumer	Human - dermal	Long term, local effects	DNEL	15	mg/kg bw/d	
Consumer	Human - dermal	Short term, systemic effects	DNEL	15	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg bw/d	

Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,8	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	5	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	16,5	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	15	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, local effects	DNEL	15	mg/kg bw/d	

Linalyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - water		PNEC	0,011	mg/l	
	Environment - marine		PNEC	0,0011	mg/l	
	Environment - sediment, marine		PNEC	0,0609	mg/kg	
	Environment - soil		PNEC	0,115	mg/kg	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - periodic release		PNEC	0,11	mg/l	
	Environment - sediment, freshwater		PNEC	0,609	mg/kg	
	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	0,68	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1,25	mg/kg	
Consumer	Human - dermal	Short term, local effects	DNEL	0,24	mg/m3	
Consumer	Human - dermal	Long term, local effects	DNEL	0,24	mg/cm2	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,2	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, local effects	DNEL	0,24	mg/cm2	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2,75	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2,5	mg/kg body weight/day	
Workers / employees	Human - dermal	Short term, local effects	DNEL	0,24	mg/cm2	

2,6-dimethylhept-5-enal

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,0023	mg/l	
	Environment - marine		PNEC	0,00023	mg/l	
	Environment - sediment, freshwater		PNEC	0,045	mg/kg dw	
	Environment - sediment, marine		PNEC	0,0045	mg/kg dw	
	Environment - sewage treatment plant		PNEC	10	mg/l	
	Environment - soil		PNEC	0,021	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,74	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	5,22	mg/m3	

Consumer	Human - inhalation	Long term, local effects	DNEL	4,35	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	13,04	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	1	mg/kg bw/d	
Consumer	Human - dermal	Short term, systemic effects	DNEL	85	mg/kg bw/d	
Consumer	Human - dermal	Long term, local effects	DNEL	70,83	mg/cm2	
Consumer	Human - dermal	Short term, local effects	DNEL	212,5	mg/cm2	
Consumer	Human - oral	Long term, systemic effects	DNEL	1	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	7,05	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	21,16	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	17,63	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	52,89	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	2	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	170	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, local effects	DNEL	141,7	mg/cm2	
Workers / employees	Human - dermal	Short term, local effects	DNEL	425	mg/cm2	

Allyl (cyclohexyloxy)acetate						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,00205	mg/l	
	Environment - marine		PNEC	0,000205	mg/l	
	Environment - sediment, freshwater		PNEC	0,0387	mg/kg dry weight	
	Environment - sediment, marine		PNEC	0,00387	mg/kg dry weight	
	Environment - sewage treatment plant		PNEC	0,3	mg/l	
	Environment - soil		PNEC	0,375	mg/kg dry weight	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (98/24/EC, 2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE), (15) = Substantial contribution to the total body burden via dermal exposure possible. |

8.2 Exposure controls
8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Normally not necessary.

Skin protection - Hand protection:
Normally not necessary.

Skin protection - Other:
Normally not necessary.

Respiratory protection:
Normally not necessary.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Solid. Active substance: liquid.
Colour:	Colourless, Light yellow
Odour:	Fruity
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	There is no information available on this parameter.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	80 °C
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	Insoluble

Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	<2 mmHg
Density and/or relative density:	0,9508-0,9708
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	There is no information available on this parameter.

9.2 Other information
No information available at present.

SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.
10.2 Chemical stability
Stable with proper storage and handling.
10.3 Possibility of hazardous reactions
No dangerous reactions are known.
10.4 Conditions to avoid
Heating, open flame, ignition sources
10.5 Incompatible materials
Avoid contact with strong alkalis.
Avoid contact with strong oxidizing agents.
Avoid contact with strong acids.
10.6 Hazardous decomposition products
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Possibly more information on health effects, see Section 2.1 (classification).

Air Freshener Tropical Shower						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

2-tert-Butylcyclohexyl acetate						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	4600	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		

4-tert-butylcyclohexyl acetate						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	3323	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	4680	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	

Skin corrosion/irritation:					OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	24h
Acute toxicity, by inhalation:	LC50	>5000	mg/m3/8h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizising
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Rat	OECD 478 (Genetic Toxicology - Rodent dominant Lethal Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):						Analogous conclusion, Negative
Aspiration hazard:						Yes
Symptoms:						headaches, dizziness

Ethyl 2,3-epoxy-3-phenylbutyrat

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Human being	Regulation (EC) 440/2008 B.46 (IN VITRO SKIN IRRITATION - RECONSTRUCTED HUMAN EPIDERMIS TEST METHOD)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig		Yes (skin contact)
Reproductive toxicity:	NOEL	1000	mg/kg bw/d	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	

1,1-dimethyl-2-phenethyl butyrate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		

Linalool

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2790	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	5610	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative

7-hydroxycitronellal

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>6400	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)

Linalyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>9000	mg/kg	Rat		BASF test
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Reproductive toxicity:	NOAEL	500	mg/kg bw/d	Rat	OECD 421 (Reproduction/Developmental Toxicity Screening Test)	
Reproductive toxicity:	NOEL	500	mg/kg bw/d	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	

Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	160	mg/kg bw/d	Rat	OECD 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	250	mg/kg bw/d	Rat	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	
Aspiration hazard:						No
Symptoms:						ataxia, drowsiness, headaches, stomach pain, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting.

Allyl 3-cyclohexylpropionate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	500	mg/kg			
Acute toxicity, by dermal route:	LD50	1600	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by dermal route:	ATE	1600	mg/kg			
Skin corrosion/irritation:					OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method)	Not irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Sensitising (skin contact)
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:	NOAEL	34	mg/kg bw/d	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	
Reproductive toxicity:	NOAEL	125	mg/kg bw/d	Rat	OECD 415 (One-Generation Reproduction Toxicity Study)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOEL	>214	mg/kg bw/d			

1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1625-1821	mg/kg	Mouse		
Acute toxicity, by oral route:	ATE	1625	mg/kg			
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)

2,6-dimethylhept-5-enal

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		

(E)-1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	1670	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	ATE	1670	mg/kg			
Acute toxicity, by dermal route:	LD50	2900	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:					OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)

Reaction mass of 3-(o-ethylphenyl)-2,2-dimethylpropionaldehyde and 3-(p-ethylphenyl)-2,2-dimethylpropionaldehyde						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Skin corrosion/irritation:					OECD 439 (In Vitro Skin Irritation - Reconstructed Human Epidermis Test Method)	Skin Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B

Allyl (cyclohexyloxy)acetate						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	620	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	ATE	620	mg/kg			

11.2. Information on other hazards

Air Freshener Tropical Shower						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Air Freshener Tropical Shower							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.

12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.
Other information:	DOC						DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.
Other information:	AOX						Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

2-tert-Butylcyclohexyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1,7	mg/l			
12.1. Toxicity to daphnia:	EC50	48h	17	mg/l			
12.1. Toxicity to algae:	EC50	72h	4,2	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:		28d	43	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable

4-tert-butylcyclohexyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	8,6	mg/l	Cyprinus caprio	Regulation (EC) 440/2008 C.1 (ACUTE TOXICITY FOR FISH)	
12.1. Toxicity to daphnia:	EC50	48h	5,3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	22	mg/l	Scenedesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERIA, GROWTH INHIBITION TEST)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	6,8	mg/l	Scenedesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERIA, GROWTH INHIBITION TEST)	

12.2. Persistence and degradability:	BOD5/COD	14d	88	%		Regulation (EC) 440/2008 C.4-C (DETERMINATION OF 'READY' BIODEGRADABILITY - CO2 EVOLUTION TEST)	Readily biodegradable
12.2. Persistence and degradability:		28d	75	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		334,6				Low calculated
12.3. Bioaccumulative potential:	Log Pow		4,8			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	Low
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50	3h	302	mg/l	activated sludge	Regulation (EC) 440/2008 C.11 (BIODEGRADATION - ACTIVATED SLUDGE RESPIRATION INHIBITION)	

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	21d	>1	mg/l	Daphnia magna		
12.1. Toxicity to algae:	ErL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOELR	72h	1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	31	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily but inherent biodegradable.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Water solubility:							Insoluble

Ethyl 2,3-epoxy-3-phenylbutyrat

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	4,2	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	

12.1. Toxicity to daphnia:	EC50	48h	52	mg/l		OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	36	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	9,3	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	53	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Koc		2,74			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	
12.4. Mobility in soil:	Log Koc		2,34-2,74			OECD 121 (Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using HPLC)	

1,1-dimethyl-2-phenethyl butyrate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:		28d	82	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	

Linalool

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	27,8	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	59	mg/l	Daphnia magna	DIN 38412 T.11	
12.1. Toxicity to algae:	EC50	96h	156,7	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:	BOD	28d	64,2	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,84			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Toxicity to bacteria:	EC50	3h	> 100	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

7-hydroxycitronellal							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	31,6	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	410	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	123,32	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		21d	80-90	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Biodegradable

Linalyl acetate							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	11	mg/l	Cyprinus carpio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	15	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	96h	88,3	mg/l	Desmodesmus subspicatus	DIN 38412 T.9	
12.2. Persistence and degradability:		28d	70-80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		3,9				
12.3. Bioaccumulative potential:	BCF		173,9				Low
Other information:	Koc		517,9				
Other information:	Log Koc		2,71				
Other information:	H (Henry)		176,31				

Allyl 3-cyclohexylpropionate							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	0,13	mg/l		OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	3,8	mg/l		OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	48h	0,86	mg/l		OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	3	mg/l		OECD 201 (Alga, Growth Inhibition Test)	

12.1. Toxicity to algae:	NOEC/NOEL	72h	0,74	mg/l		OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	86	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		861				High
12.3. Bioaccumulative potential:	Log Pow		4,28				High
Toxicity to bacteria:	NOEC/NOEL	24h	>2				

1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	0,977	mg/l			
12.1. Toxicity to daphnia:	EC50	48h	1,18	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.2. Persistence and degradability:		28d	16	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not biodegradable
12.3. Bioaccumulative potential:	Log Pow		4,2				High

(E)-1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-2-buten-1-one							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	1,09	mg/l	Oryzias latipes		
12.1. Toxicity to daphnia:	EC50	48h	2,37	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	

Allyl (cyclohexyloxy)acetate							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	0,205	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	11,3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	3,2	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	69,2	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
20 03 01 mixed municipal waste
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.
E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	3077
14.2. UN proper shipping name:	
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-tert-BUTYLCYCLOHEXYL ACETATE, ETHYL 2,3-EPOXY-3-PHENYLBUTYRAT)	
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
14.5. Environmental hazards:	environmentally hazardous
Tunnel restriction code:	-
Classification code:	M7
LQ:	5 kg
Transport category:	3



Transport by sea (IMDG-code)

14.1. UN number or ID number:	3077
14.2. UN proper shipping name:	
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2-tert-BUTYLCYCLOHEXYL ACETATE, ETHYL 2,3-EPOXY-3-PHENYLBUTYRAT)	
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
14.5. Environmental hazards:	environmentally hazardous
Marine Pollutant:	Yes
EmS:	F-A, S-F



Transport by air (IATA)

14.1. UN number or ID number:	3077
14.2. UN proper shipping name:	
UN 3077 Environmentally hazardous substance, solid, n.o.s. (2-tert-BUTYLCYCLOHEXYL ACETATE, ETHYL 2,3-EPOXY-3-PHENYLBUTYRAT)	
14.3. Transport hazard class(es):	9
14.4. Packing group:	III
14.5. Environmental hazards:	environmentally hazardous



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
E2		200	500

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 10,24 %

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: n.a.
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Skin Sens. 1, H317	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.
H317 May cause an allergic skin reaction.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.

Skin Sens. — Skin sensitization
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Asp. Tox. — Aspiration hazard
Skin Irrit. — Skin irritation
Eye Irrit. — Eye irritation
Acute Tox. — Acute toxicity - oral
Acute Tox. — Acute toxicity - dermal
Aquatic Acute — Hazardous to the aquatic environment - acute

STOT RE — Specific target organ toxicity - repeated exposure

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
CAS Chemical Abstracts Service
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database

IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
mg/kg bw mg/kg body weight
mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
mg/kg dw mg/kg dry weight
mg/kg wwt mg/kg wet weight
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.
These statements were made by:

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