Safety data sheet
according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Auto Duft Speed Citrone 8 g
Art.: 1661

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture:
Air-Freshener
Sector of use [SU]:
SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
SU21 - Consumer uses: Private households (=general public = consumers)
SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
Chemical product category [PC]:
PC 3 - Air care products
PC28 - Perfumes, fragrances
Process category [PROC]:
PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
Article Categories [AC]:
AC99 - Not required.
Environmental Release Category [ERC]:
ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)
ERC 7 - Use of functional fluid at industrial site
ERC 8a - Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
ERC 8d - Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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, Germany
Phone:(+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:

Telephone number of the company in case of emergencies:
+49 (0) 700 / 24 112 112 (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
Flam. Liq.	3	H226-Flammable liquid and vapour.

Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Irrit.	2	H315-Causes skin irritation.
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

H226-Flammable liquid and vapour. H319-Causes serious eye irritation. H315-Causes skin irritation. 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.
P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261-Avoid breathing vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves / eye protection / face protection.
P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P314-Get medical advice / attention if you feel unwell.
P501-Dispose of contents / container to an approved waste disposal facility.

(R)-p-mentha-1,8-diene
Citral
Geraniol
Linalool
Geranyl acetate
2-methylundecanal
(-)-pin-2(3)-ene
pin-2(10)-ene
Nerol
(Z)-3,4,5,6,6-pentamethylhept-3-en-2-one
p-mentha-1,4(8)-diene
Caryophyllene

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 %).

SECTION 3: Composition/information on ingredients

3.1 Substance
n.a.
3.2 Mixture

(R)-p-mentha-1,8-diene	
Registration number (REACH)	01-2119529223-47-XXXX

Index	601-029-00-7
EINECS, ELINCS, NLP	227-813-5
CAS	5989-27-5
content %	10-<25
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Linalool	
Registration number (REACH)	01-2119474016-42-XXXX
Index	603-235-00-2
EINECS, ELINCS, NLP	201-134-4
CAS	78-70-6
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317

Citral	
Registration number (REACH)	01-2119462829-23-XXXX
Index	605-019-00-3
EINECS, ELINCS, NLP	226-394-6
CAS	5392-40-5
content %	2,5-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1, H317

3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl acetate	
Registration number (REACH)	01-2119488219-26-XXXX
Index	---
EINECS, ELINCS, NLP	259-367-2
CAS	54830-99-8
content %	2,5-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 3, H412

Geraniol	
Registration number (REACH)	01-2119552430-49-XXXX
Index	---
EINECS, ELINCS, NLP	203-377-1
CAS	106-24-1
content %	2,5-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

2-methyl-6-methyleneoct-7-en-2-ol, dihydro derivative	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	258-432-2
CAS	53219-21-9
content %	2,5-<5
Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319

Decanal	
Registration number (REACH)	01-2119967771-26-XXXX
Index	---
EINECS, ELINCS, NLP	203-957-4
CAS	112-31-2
content %	2,5-<5

Classification according to Regulation (EC) 1272/2008 (CLP)	Eye Irrit. 2, H319 Aquatic Chronic 3, H412

Geranyl acetate	
Registration number (REACH)	01-2119973480-35-XXXX
Index	---
EINECS, ELINCS, NLP	203-341-5
CAS	105-87-3
content %	1-<2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412

pin-2(10)-ene	
Registration number (REACH)	01-2119519230-54-XXX
Index	---
EINECS, ELINCS, NLP	204-872-5
CAS	127-91-3
content %	1-<2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Nerol	
Registration number (REACH)	01-2119983244-33-XXXX
Index	---
EINECS, ELINCS, NLP	203-378-7
CAS	106-25-2
content %	1-<2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	
Registration number (REACH)	01-2119488227-29-XXXX
Index	603-212-00-7
EINECS, ELINCS, NLP	214-946-9
CAS	1222-05-5
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

2,6-di-tert-butyl-p-cresol	
Registration number (REACH)	01-2119555270-46-XXXX
Index	---
EINECS, ELINCS, NLP	204-881-4
CAS	128-37-0
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Camphene	
Registration number (REACH)	01-2119446293-40-XXXX
Index	---
EINECS, ELINCS, NLP	201-234-8
CAS	79-92-5
content %	0,1-<1

Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Sol. 1, H228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

2-methylundecanal	
Registration number (REACH)	01-2119969443-29-XXXX
Index	---
EINECS, ELINCS, NLP	203-765-0
CAS	110-41-8
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

(-)-pin-2(3)-ene	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	232-077-3
CAS	7785-26-4
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

(Z)-3,4,5,6,6-pentamethylhept-3-en-2-one	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	279-822-9
CAS	81786-73-4
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1B, H317 Aquatic Chronic 2, H411

p-mentha-1,4(8)-diene	
Registration number (REACH)	01-2119982325-32-XXXX
Index	---
EINECS, ELINCS, NLP	209-578-0
CAS	586-62-9
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304 Skin Sens. 1B, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

Caryophyllene	
Registration number (REACH)	01-2120745237-53-XXXX
Index	---
EINECS, ELINCS, NLP	201-746-1
CAS	87-44-5
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Asp. Tox. 1, H304 Skin Sens. 1B, H317 Aquatic Chronic 4, H413

7-methyl-3-methyleneocta-1,6-diene	
Registration number (REACH)	01-2119514321-56-XXXX
Index	---
EINECS, ELINCS, NLP	204-622-5

CAS	123-35-3
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1) Skin Irrit. 2, H315 Eye Irrit. 2, H319

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.

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
Typically no exposure pathway.
Call doctor immediately - have Data Sheet available.
Do not induce vomiting.

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.

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
Adapt to the nature and extent of fire.
Water jet spray/foam/CO2/dry extinguisher

Unsuitable extinguishing media
None known

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

5.3 Advice for firefighters
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.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure sufficient supply of air.
Remove possible causes of ignition - do not smoke.
Avoid contact with eyes or skin.

6.2 Environmental precautions
Prevent surface and ground-water infiltration, as well as ground penetration.
Prevent from entering drainage system.

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
Ensure good ventilation.
Remove possible causes of ignition - do not smoke.
Avoid contact with eyes or skin.
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.
Observe special storage conditions.
Do not store with flammable or self-igniting materials.
Protect from direct sunlight and warming.
Store in a well ventilated place.
Store cool.

7.3 Specific end use(s)
No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

GB Chemical Name	2,6-di-tert-butyl-p-cresol	Content %:0,1-<1
WEL-TWA: 10 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	---	
BMGV: ---	Other information: ---	

(R)-p-mentha-1,8-diene

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	5,4	µg/l	
	Environment - marine		PNEC	0,54	µg/l	

	Environment - sewage treatment plant		PNEC	1,8	mg/l	
	Environment - sediment, freshwater		PNEC	1,32	mg/kg dw	
	Environment - sediment, marine		PNEC	0,13	mg/kg dw	
	Environment - soil		PNEC	0,262	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	8,33	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	4,76	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	33,3	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	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	

3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note

	Environment - freshwater		PNEC	0,0158	mg/l	
	Environment - sediment, freshwater		PNEC	0,72	mg/kg	
	Environment - sediment, marine		PNEC	0,072	mg/kg	
	Environment - soil		PNEC	0,197	mg/kg	
	Environment - marine		PNEC	0,00158	mg/l	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	11,75	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	3,33	mg/kg body weight/day	

Geraniol

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Consumer	Human - dermal	Long term, systemic effects	DNEL	7,5	mg/kg bw/d	
Consumer	Human - oral	Long term, systemic effects	DNEL	13,75	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	47,8	mg/m3	
Consumer	Human - dermal	Long term, local effects	DNEL	11,8	mg/cm2	
Workers / employees	Human - dermal	Long term, local effects	DNEL	11,8	mg/cm2	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	12,6	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	161	mg/m3	

Decanal

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,00117	mg/l	
	Environment - marine		PNEC	0,000117	mg/l	
	Environment - sewage treatment plant		PNEC	3,16	mg/l	
	Environment - sporadic (intermittent) release		PNEC	0,0117	mg/l	
	Environment - sediment, freshwater		PNEC	0,0046	mg/kg	
	Environment - sediment, marine		PNEC	0,00046	mg/kg	
	Environment - soil		PNEC	0,0147	mg/kg	
	Environment - oral (animal feed)		PNEC	313	mg/kg	
	Human - dermal	Long term, local effects	DNEL	17,62	mg/cm2	
Consumer	Human - dermal	Short term, systemic effects	DNEL	7,05	mg/kg bw/d	
Consumer	Human - dermal	Short term, local effects	DNEL	17,62	mg/cm2	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	6,1	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	3,5	mg/kg bw/d	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	12,26	mg/m3	

Consumer	Human - inhalation	Long term, local effects	DNEL	15,32	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	30,65	mg/m3	
Workers / employees	Human - dermal	Long term, local effects	DNEL	17,62	mg/cm2	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	24,9	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	7	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	49,71	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	62,14	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	124,3	mg/m3	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	14,1	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, local effects	DNEL	8,81	mg/cm2	
Workers / employees	Human - dermal	Short term, local effects	DNEL	35,24	mg/cm2	

Geranyl acetate

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	3,72	mg/l	
	Environment - marine		PNEC	0,372	mg/l	
	Environment - periodic release		PNEC	37,2	mg/l	
	Environment - sewage treatment plant		PNEC	8	mg/l	
	Environment - sediment, freshwater		PNEC	0,442	mg/kg	
	Environment - sediment, marine		PNEC	0,0442	mg/kg	
	Environment - soil		PNEC	0,0859	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	15,4	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	17,75	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	8,9	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	62,59	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	35,5	mg/kg	

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	4,4	µg/l	
	Environment - marine		PNEC	0,44	µg/l	
	Environment - water, sporadic (intermittent) release		PNEC	47	µg/l	
	Environment - sewage treatment plant		PNEC	1	mg/l	
	Environment - sediment, freshwater		PNEC	2	mg/kg	
	Environment - sediment, marine		PNEC	0,394	mg/kg	
	Environment - soil		PNEC	0,31	mg/kg	

	Environment - oral (animal feed)		PNEC	3,3	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,3	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	14,43	mg/kg bw/d	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,75	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5,29	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	28,85	mg/kg bw/d	

2,6-di-tert-butyl-p-cresol

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - soil		PNEC	1,04	mg/kg wwt	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment		PNEC	1,29	mg/kg wwt	
	Environment - marine		PNEC	0,4	µg/l	
	Environment - periodic release		PNEC	4	µg/l	
	Environment - freshwater		PNEC	4	µg/l	
	Environment - oral (animal feed)		PNEC	16,7	mg/kg	
	Environment - soil		PNEC	1,23	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,74	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	5,8	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	8,3	mg/kg bw/day	

2-methylundecanal

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,18	µg/l	
	Environment - marine		PNEC	0,018	µg/l	
	Environment - sporadic (intermittent) release		PNEC	1,8	µg/l	
	Environment - sewage treatment plant		PNEC	10	mg/m3	
	Environment - sediment, freshwater		PNEC	0,072	mg/kg dw	
	Environment - sediment, marine		PNEC	0,00722	mg/kg dw	
	Environment - soil		PNEC	0,014	mg/kg dw	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	3,1	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	3,5	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,5	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	25,2	mg/m3	

Workers / employees	Human - dermal	Long term, systemic effects	DNEL	7	mg/kg bw/day	

Oxydipropanol						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
	Environment - freshwater		PNEC	0,1	mg/l	
	Environment - marine		PNEC	0,01	mg/l	
	Environment - sporadic (intermittent) release		PNEC	1	mg/l	
	Environment - sewage treatment plant		PNEC	1000	mg/l	
	Environment - sediment, freshwater		PNEC	0,238	mg/kg	
	Environment - marine		PNEC	0,0238	mg/kg	
	Environment - soil		PNEC	0,0253	mg/kg	
	Environment - oral (animal feed)		PNEC	313	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	51	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	70	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	24	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	84	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	238	mg/m3	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).
(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

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. BS EN 14042.
BS 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.
Protective hand cream recommended.
With long-term contact:
If applicable
Protective nitrile gloves (EN 374).
Minimum layer thickness in mm:
0,4
Permeation time (penetration time) in minutes:
> 480
The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.

Skin protection - Other:
Usual protective working garments

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:	Light yellow
Odour:	Lemon
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	49 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	52 Pa (20°C)
Vapour density (air = 1):	Not determined
Density:	935 kg/m3
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	202 °C
Decomposition temperature:	Not determined
Viscosity:	11,28 mm2/s (40°C)
Explosive properties:	Not determined
Oxidising properties:	Not determined

9.2 Other information

Miscibility:	Not determined

Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

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
See also section 7.
Heating, open flame, ignition sources

10.5 Incompatible materials
Avoid contact with strong oxidizing agents.
Avoid contact with strong alkalis.
Avoid contact with strong acids.

10.6 Hazardous decomposition products
See also section 5.2
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Possibly more information on health effects, see Section 2.1 (classification).

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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.

(R)-p-mentha-1,8-diene

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)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	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)	Yes (skin contact)
Germ cell mutagenicity:						Negative
Reproductive toxicity:						Negative
Symptoms:						diarrhoea, rash, itching, gastrointestinal disturbances, mucous membrane irritation, nausea and vomiting.

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)	Irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:						Yes (skin contact)
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative

Citral

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3450	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	2250	mg/kg	Rabbit		
Skin corrosion/irritation:						Irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Yes (skin contact)
Symptoms:						respiratory distress, drowsiness, coughing, headaches, gastrointestinal disturbances, mucous membrane irritation, nausea

3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2750	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	5000	mg/kg	Rabbit		
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)

Geraniol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	3600	mg/kg	Rat		
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 Dam. 1
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						respiratory distress, coughing, mucous membrane irritation

2-methyl-6-methyleneoct-7-en-2-ol, dihydro derivative

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Skin corrosion/irritation:						Classification according to Directive 67/548/EEC, Irritant
Serious eye damage/irritation:						Classification according to Regulation (EC) 1272/2008 (CLP), Irritant

Decanal

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>33320	mg/kg	Rat		
Acute toxicity, by oral route:	LD50	3730	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	4173	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	5040	mg/kg	Rabbit		
Skin corrosion/irritation:						Eye Irrit. 2
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Reproductive toxicity:				Rat		Negative
Symptoms:						drowsiness, headaches, mucous membrane irritation, dizziness
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	LD50	20000	mg/kg	Rabbit		

Geranyl acetate

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	6330	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	5460	mg/kg	Rabbit		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Yes (skin contact)

Symptoms:						mucous membrane irritation

pin-2(10)-ene						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	4700	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Aspiration hazard:						Yes
Symptoms:						diarrhoea, vomiting, disturbed heart rhythm, headaches, mucous membrane irritation, dizziness

Nerol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	4500	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	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 Corr. 1B

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	> 4640	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	> 6500	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Reproductive toxicity:					OECD 426 (Developmental Neurotoxicity Study)	No indications of such an effect.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	150	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	

2,6-di-tert-butyl-p-cresol						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Acute toxicity, by oral route:	LD50	>2930	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	

Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:						Slightly irritant
Serious eye damage/irritation:				Rabbit	(Draize-Test)	Slightly irritant
Respiratory or skin sensitisation:				Human being		Not sensitizising
Germ cell mutagenicity:					(Ames-Test)	Negative
Reproductive toxicity:	NOAEL	100	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOEL	25	mg/kg	Rat		(28 d)
Symptoms:						mucous membrane irritation

Camphene

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2500	mg/kg	Rabbit		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:					(Patch-Test)	No (skin contact)
Germ cell mutagenicity:						Negative
Germ cell mutagenicity:					bacterial	Negative
Symptoms:						breathing difficulties, respiratory distress, coughing, cramps, gastrointestinal disturbances, mucous membrane irritation, mental confusion

2-methylundecanal

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	>10000	mg/kg	Rabbit		
Skin corrosion/irritation:				Guinea pig		Skin Irrit. 2
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Skin Sens. 1B

Caryophyllene

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Aspiration hazard:						Yes

SECTION 12: Ecological information

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

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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. Other adverse effects:							n.d.a.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.
Other information:	AOX		0	%			

(R)-p-mentha-1,8-diene

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.1. Toxicity to fish:	LC50	96h	0,70	mg/l	Pimephales promelas	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,307	mg/l	Daphnia magna STRAUS	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,32	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	92	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
12.2. Persistence and degradability:		28d	80	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		4,23				
Toxicity to bacteria:	EC50	3h	209	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

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	88,3	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		2,9				A notable biological accumulation potential is not to be expected (LogPow 1-3)., Low 20°C

Citral							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	6,78	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	6,8	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	103,8	mg/l	Desmodesmus subspicatus		
Toxicity to bacteria:	EC50	30min	~160	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

3a,4,5,6,7,7a-hexahydro-4,7-methano-1H-indenyl acetate							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	15,8	mg/l	Brachydanio rerio	Regulation (EC) 440/2008 C.1 (ACUTE TOXICITY FOR FISH)	
12.1. Toxicity to daphnia:	EC50	48h	25	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	25	mg/l	Desmodesmus subspicatus	Regulation (EC) 440/2008 C.3 (FRESHWATER ALGAE AND CYANOBACTERIA, GROWTH INHIBITION TEST)	
12.2. Persistence and degradability:		28d	10	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily biodegradable

Geraniol							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	22	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	NOEC/NOEL	96h	10	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	7,75	mg/l			
12.1. Toxicity to algae:	EC50	72h	13,1	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	100	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Readily biodegradable

12.3. Bioaccumulative potential:	Log Pow		2,6				Low
Toxicity to bacteria:	EC50		144	mg/l		OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Decanal

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	14d	3,19	mg/l	Poecilia reticulata		
12.1. Toxicity to fish:	LC50	96h	2,1	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	96h	1,75	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	1,17	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	48h	0,588	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	4,5	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,759	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	82	%	activated sludge	OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		3,76				Low
Toxicity to bacteria:	EC50	3h	~70	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Toxicity to bacteria:	NOEC/NOEL	3h	31,6	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

Geranyl acetate

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	68,12	mg/l	Leuciscus idus	DIN 38412 T.15	
12.1. Toxicity to fish:	NOEC/NOEL	96h	10	mg/l	Leuciscus idus	DIN 38412 T.15	

12.1. Toxicity to daphnia:	EC50	48h	14,1	mg/l	Daphnia magna	Regulation (EC) 440/2008 C.2 (DAPHNIA SP. ACUTE IMMOBILISATION TEST)	
12.1. Toxicity to algae:	EC50	72h	3,72	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,585	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	73	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		4,04				High

pin-2(10)-ene

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	0,68	mg/l			
12.1. Toxicity to daphnia:	EC50	48h	0,86	mg/l			
12.1. Toxicity to algae:	EC50	72h	0,7	mg/l			
12.2. Persistence and degradability:		28d	1	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		4,425				
12.3. Bioaccumulative potential:	BCF		1163				

Nerol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	20,3	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	32,4	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErC50	72h	9,54	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	90	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
Toxicity to bacteria:	EC50	3h	209	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes

12.1. Toxicity to fish:	LC50	21d	0,452	mg/l	Lepomis macrochirus	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to fish:	NOEC/NOEL	21d	0,093	mg/l	Lepomis macrochirus	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	Clinical signs
12.1. Toxicity to fish:	NOEC/NOEL	21d	0,182	mg/l	Lepomis macrochirus	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to fish:	LC50	96h	1,36	mg/l	Lepomis macrochirus	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	calculated value
12.1. Toxicity to daphnia:	EC50	48h	0,47	mg/l	Acartia tonsa	ISO 14669	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	111	µg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,9	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	calculated value
12.1. Toxicity to algae:	EC50	72h	> 0,854	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	~ 2	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	BCF		1584-2507		Lepomis macrochirus	OECD 305 (Bioconcentration - Flow-Through Fish Test)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

2,6-di-tert-butyl-p-cresol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>0,57	mg/l		QSAR	
12.1. Toxicity to fish:	NOEC/NOEL	42d	0,053	mg/l	Oryzias latipes	OECD 210 (Fish, Early-Life Stage Toxicity Test)	
12.1. Toxicity to daphnia:	LC50	48h	0,61	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	0,07	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,5	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	1	mg/l		OECD 201 (Alga, Growth Inhibition Test)	

12.2. Persistence and degradability:		28d	4,5	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	Not readily biodegradable
12.3. Bioaccumulative potential:			230-2500		Cyprinus caprio	OECD 305 (Bioconcentration - Flow-Through Fish Test)	56d
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge		
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Water solubility:			0,00076	g/l			

Camphene							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	0,72	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	0,72	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	320-580	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	IC50	72h	>1000	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.3. Bioaccumulative potential:	Log Pow		4,22				A notable biological accumulation potential has to be expected (LogPow > 3).
Toxicity to bacteria:	EC50	3h	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Water solubility:			4,2	mg/l			20°C

2-methylundecanal							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	0,35	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	96h	0,11	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	48h	0,053	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	

12.1. Toxicity to daphnia:	EC50	48h	0,21	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	0,18	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	0,089	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	68	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		4,9			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	High

Caryophyllene							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.2. Persistence and degradability:		28d	70	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable

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)
07 07 99 wastes not otherwise specified
16 03 05 organic wastes containing hazardous substances
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.
Recycling
15 01 01 paper and cardboard packaging
15 01 02 plastic packaging

SECTION 14: Transport information

General statements
14.1. UN number: 1993
Transport by road/by rail (ADR/RID)
14.2. UN proper shipping name:
UN 1993 FLAMMABLE LIQUID, N.O.S. (D-LIMONENE,PINENES)
14.3. Transport hazard class(es): 3

14.4. Packing group:	III
Classification code:	F1
LQ:	5 L
14.5. Environmental hazards:	environmentally hazardous
Tunnel restriction code:	D/E

Transport by sea (IMDG-code)

14.2. UN proper shipping name:
FLAMMABLE LIQUID, N.O.S. (D-LIMONENE,PINENES)

14.3. Transport hazard class(es):	3
14.4. Packing group:	III
EmS:	F-E, S-E
Marine Pollutant:	Yes
14.5. Environmental hazards:	environmentally hazardous

Transport by air (IATA)

14.2. UN proper shipping name:
Flammable liquid, n.o.s. (D-LIMONENE,PINENES)

14.3. Transport hazard class(es):	3
14.4. Packing group:	III
14.5. Environmental hazards:	Not applicable

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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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 national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
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
P5c		5000	50000
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): 40 %

Observe incident regulations.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 15
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
Flam. Liq. 3, H226	Classification based on test data.
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
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 (specified in Section 2 and 3).
H226 Flammable liquid and vapour.
H228 Flammable solid.
H317 May cause an allergic skin reaction.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
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.
H413 May cause long lasting harmful effects to aquatic life.

Flam. Liq. — Flammable liquid
Eye Irrit. — Eye irritation
Skin Irrit. — Skin irritation
Skin Sens. — Skin sensitization
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Aquatic Acute — Hazardous to the aquatic environment - acute
Eye Dam. — Serious eye damage
Asp. Tox. — Aspiration hazard
Flam. Sol. — Flammable solid

Any abbreviations and acronyms used in this document:

AC Article Categories
acc., acc. to according, according to
ACGIH American Conference of Governmental Industrial Hygienists
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOEL Acceptable Operator Exposure Level
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)
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
BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)
BHT Butylhydroxytoluol (= 2,6-Di-t-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)
BOD Biochemical oxygen demand
BSEF Bromine Science and Environmental Forum
bw body weight
CAS Chemical Abstracts Service
CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids
CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques
CIPAC Collaborative International Pesticides Analytical Council
CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
COD Chemical oxygen demand
CTFA Cosmetic, Toiletry, and Fragrance Association
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
DT50 Dwell Time - 50% reduction of start concentration
DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)
dw dry weight
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EC European Community
ECHA European Chemicals Agency
EEA European Economic Area
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)
ERC Environmental Release Categories
ES Exposure scenario
etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform ChemicaL Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)

NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
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. 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)
SADT Self-Accelerating Decomposition Temperature
SAR Structure Activity Relationship
SU Sector of use
SVHC Substances of Very High Concern
Tel. Telephone
ThOD Theoretical oxygen demand
TOC Total organic carbon
TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative
WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).
WHO World Health Organization
wwt wet weight

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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