

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

LINARI ANGELO DI FUIME

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

Relevant identified uses of the substance or mixture:

Aromatics

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

(GB)

LINARI GmbH, Jaffestrasse 12, 21109 Hamburg, Germany
 Phone: +49 040 758522, Fax: +49 040 7534505
 info@linari.com, www.linari.com

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

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 040 758522

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Hazard class	Hazard category	Hazard statement
Flam. Liq.	2	H225-Highly flammable liquid and vapour.
Eye Irrit.	2	H319-Causes serious eye irritation.
Aquatic Chronic	2	H411-Toxic to aquatic life with long lasting effects.

2.1.2 Classification according to Directives 67/548/EEC and 1999/45/EC (including amendments)

F, Highly flammable, R11

N, Dangerous for the environment, R51/53

2.2 Label elements

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



Danger

H225-Highly flammable liquid and vapour. H319-Causes serious eye irritation. 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. P273-Avoid release to the environment. P280-Wear eye 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. P337+P313-If eye irritation persists: Get medical advice/attention.
 P501-Dispose of contents/container safely.

EUH208-Contains Alpha hexyl cinnamic aldehyde, (R)-p-mentha-1,8-diene. May produce an allergic reaction.

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.

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006.

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Ethanol	
Registration number (REACH)	--
Index	603-002-00-5
EINECS, ELINCS, NLP	200-578-6
CAS	64-17-5
content %	50-80
Classification according to Directive 67/548/EEC	Highly flammable, F, R11
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Eye Irrit. 2, H319

Propan-2-ol	
Registration number (REACH)	--
Index	603-117-00-0
EINECS, ELINCS, NLP	200-661-7
CAS	67-63-0
content %	1-10
Classification according to Directive 67/548/EEC	Highly flammable, F, R11 Irritant, Xi, R36 R67
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-on	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	259-174-3
CAS	54464-57-2
content %	0,1-<5
Classification according to Directive 67/548/EEC	Dangerous for the environment, N, R51 Dangerous for the environment, R53
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 2, H411

alpha,beta,2,2,3-pentamethylcyclopent-3-ene-1-butanol	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	265-453-0
CAS	65113-99-7
content %	0,1-<5
Classification according to Directive 67/548/EEC	Dangerous for the environment, N, R51 Dangerous for the environment, R53

Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 2, H411
Cyclohexadecenon isomers	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	448-300-4
CAS	---
content %	1-<3
Classification according to Directive 67/548/EEC	Irritant, Xi, R38
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Irrit. 2, H315
1,3,4,6,7,8-Hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	
Registration number (REACH)	--
Index	603-212-00-7
EINECS, ELINCS, NLP	214-946-9
CAS	1222-05-5
content %	0,25-<2,5
Classification according to Directive 67/548/EEC	Dangerous for the environment, N, R50 Dangerous for the environment, R53
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)
Benzyl benzoate	
Registration number (REACH)	--
Index	607-085-00-9
EINECS, ELINCS, NLP	204-402-9
CAS	120-51-4
content %	0,1-<2,5
Classification according to Directive 67/548/EEC	Harmful, Xn, R22 Dangerous for the environment, N, R51 Dangerous for the environment, R53
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 Aquatic Chronic 2, H411
Alpha hexyl cinnamic aldehyde	
Registration number (REACH)	--
Index	---
EINECS, ELINCS, NLP	202-983-3
CAS	101-86-0
content %	0,1-<1
Classification according to Directive 67/548/EEC	Sensitising, R43
Classification according to Regulation (EC) 1272/2008 (CLP)	Skin Sens. 1, H317
(R)-p-mentha-1,8-diene	
Registration number (REACH)	--
Index	601-029-00-7
EINECS, ELINCS, NLP	227-813-5
CAS	5989-27-5
content %	0,1-<1
Classification according to Directive 67/548/EEC	Flammable, R10 Irritant, Xi, R38 Sensitising, R43 Dangerous for the environment, N, R50 Dangerous for the environment, R53 Harmful, Xn, R65
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)

For the text of the R-phrases / 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 3.1/3.2 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

Inhalation

Remove person from danger area.

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

If the person is unconscious, place in a stable side position and consult a doctor.

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.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

CO₂

Extinction powder

Water jet spray

Large fire:

Water jet spray / alcohol resistant foam

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

Toxic gases

Explosive vapour/air mixture

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

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

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

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

If accidental entry into drainage system occurs, inform responsible authorities.

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6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13. Flush residue using copious water.

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.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Use explosion-proof equipment.

Avoid contact with eyes or 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.

Do not store with flammable or self-igniting materials.

Solvent resistant floor

Observe special storage conditions (in Germany, e.g., in accordance with the regulations in the "Betriebssicherheitsverordnung").

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

Chemical Name	Ethanol	Content %:50-80
WEL-TWA: 1000 ppm (1920 mg/m3)	WEL-STEL: ---	---
BMGV: ---	Other information: ---	

Chemical Name	Propan-2-ol	Content %:1-10
WEL-TWA: 400 ppm (999 mg/m3)	WEL-STEL: 500 ppm (1250 mg/m3)	---
BMGV: ---	Other information: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

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

Workers / employees	Human - inhalation	Short term, local effects	DNEL	1900	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	950	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	343	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	950	mg/m3	
Consumer	Human - dermal	Short term, local effects	DNEL	950	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	114	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	206	mg/kg bw/d	
	Environment - freshwater		PNEC	0,96	mg/l	
	Environment - marine		PNEC	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	2,75	mg/l	
	Environment - sewage treatment plant		PNEC	580	mg/l	
	Environment - sediment, freshwater		PNEC	3,6	mg/kg dry weight	
	Environment - soil		PNEC	0,63	mg/kg dry weight	
	Environment - oral (animal feed)		PNEC	0,72	mg/kg feed	
	Environment - sediment, marine		PNEC	2,9	mg/kg dry weight	

Propan-2-ol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
Workers / employees	Human - dermal	Long term	DNEL	888	mg/kg	(1 d)
Workers / employees	Human - inhalation	Long term	DNEL	500	mg/m3	
Consumer	Human - dermal	Long term	DNEL	319	mg/kg	(1 d)
Consumer	Human - inhalation	Long term	DNEL	89	mg/m3	
Consumer	Human - oral	Long term	DNEL	26	mg/kg	(1 d)
	Environment - freshwater		PNEC	140,9	mg/l	
	Environment - marine		PNEC	140,9	mg/l	
	Environment - sediment, freshwater		PNEC	552	mg/kg	
	Environment - sediment, marine		PNEC	552	mg/kg	
	Environment - soil		PNEC	28	mg/kg	
	Environment - sewage treatment plant		PNEC	2251	mg/l	

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.

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:

With danger of contact with eyes.

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

If applicable

Safety gloves made of butyl (EN 374)

Protective nitrile gloves (EN 374)

Minimum layer thickness in mm:

0,5

Permeation time (penetration time) in minutes:

480

The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments)

Respiratory protection:

Normally not necessary.

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

Observe wearing time limitations for respiratory protection equipment.

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:	Liquid
Colour:	Colourless
Odour:	Perfumed
Odour threshold:	Not determined
pH-value:	n.a.
Melting point/freezing point:	-114 °C (Ethanol)
Initial boiling point and boiling range:	78 °C (Ethanol)
Flash point:	20 °C (ISO 2592 (Cleveland, open cup))
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	3,5 Vol-% (Ethanol)
Upper explosive limit:	15 Vol-% (Ethanol)
Vapour pressure:	57 mbar (20°C, Ethanol)
Vapour density (air = 1):	Not determined
Density:	Not determined
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	425 °C (Ignition temperature Ethanol)
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Possible build up of explosive/highly flammable vapour/air mixture.

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**

Possible build up of explosive/highly flammable vapour/air mixture.

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

Hazardous reactions will not occur during storage and handling under normal conditions.

10.4 Conditions to avoid

See also section 7.

Heating, open flame, ignition sources

Electrostatic charge

10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

Alkali metals

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

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:	ATE	> 2000	mg/kg			calculated value
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.
Other information:						Classification according to calculation procedure.

Ethanol

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10470	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	

Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	117-125	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitising
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:	NOAEL	>3000	mg/kg	Rat	OECD 451 (Carcinogenicity Studies)	24 mon
Reproductive toxicity:	NOAEL	5200	mg/kg bw/d	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Aspiration hazard:				Human being		No indications of such an effect.
Symptoms:						respiratory distress, drowsiness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea
Experiences in humans:						Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders)., There is no sign that this syndrome is also caused by dermal or inhalative absorption.

Propan-2-ol						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	13900	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	30	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit		Eye Irrit. 2
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):						Target organ(s): liver
Symptoms:						breathing difficulties, unconsciousness, vomiting, headaches, fatigue, dizziness, nausea

1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-on						
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		

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.

Benzyl benzoate						
Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1900	mg/kg	Rat		

Acute toxicity, by dermal route:	LD50	4000	mg/kg	Rabbit		
Skin corrosion/irritation:						Mild irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizing
Respiratory or skin sensitisation:				Human being		Not sensitizing
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						ataxia, breathing difficulties, diarrhoea, heart/circulatory disorders, headaches, cramps, gastrointestinal disturbances, dizziness, nausea and vomiting.

Alpha hexyl cinnamic aldehyde

Toxicity/effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	2450-3750	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>3000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	>5	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit		Mild irritant
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						respiratory distress, coughing

(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 oral route:	LD50	4400	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit		
Symptoms:						diarrhoea, rash, itching, gastrointestinal disturbances, mucous membrane irritation, nausea and vomiting.

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
Toxicity to fish:							n.d.a.
Toxicity to daphnia:							n.d.a.
Toxicity to algae:							n.d.a.
Persistence and degradability:							n.d.a.
Bioaccumulative potential:							n.d.a.
Mobility in soil:							n.d.a.
Results of PBT and vPvB assessment							n.d.a.
Other adverse effects:							n.d.a.

Other information:							Classification according to calculation procedure.
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Ethanol							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	13000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
Toxicity to daphnia:	LC50	48h	12340	mg/l	Daphnia magna		
Toxicity to algae:	EC50	48h	12900	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
Toxicity to algae:	EC50	72h	275	mg/l	Chlorella vulgaris	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
Bioaccumulative potential:	BCF		0,66 - 3,2				
Bioaccumulative potential:	Log Pow		-0,32				Bioaccumulation is unlikely (LogPow < 1).
Mobility in soil:	H (Henry)		0,000138				
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:	AOX		0	%			Does not contain any organically bound halogens which can contribute to the AOX value in waste water.
Water solubility:							Mixable

Propan-2-ol							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	9640	mg/l	Pimephales promelas		
Toxicity to daphnia:	EC50	48h	13299	mg/l	Daphnia magna		References
Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus		
Toxicity to algae:	EC50	72h	>1000	mg/l	Desmodesmus subspicatus		
Persistence and degradability:		21d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	
Bioaccumulative potential:	Log Pow		0,05			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
Mobility in soil:	Koc		1,1				expert judgement
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		>1000	mg/l	activated sludge		
Toxicity to bacteria:	EC10	18h	5175	mg/l	Pseudomonas putida	DIN 38412 T.8	
Other information:	BOD5		53	%			
Other information:	COD		96	%			References
Other information:	ThOD		2,4	g/g			
Water solubility:							Soluble

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
Toxicity to fish:	LC50	96h	1,36	mg/l	Lepomis macrochirus	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	calculated value
Toxicity to fish:	LC50	21d	0,452	mg/l		OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
Toxicity to daphnia:	EC50	48h	> 0,9	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	calculated value
Toxicity to daphnia:	EC50	48h	0,47	mg/l	Acartia tonsa	ISO 14669	
Toxicity to algae:	EC80	72h	> 0,854	mg/l	Pseudokirchneria subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
Persistence and degradability:		28d	~ 2	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Not readily biodegradable
Bioaccumulative potential:	BCF		1584		Lepomis macrochirus	OECD 305 (Bioconcentration - Flow-Through Fish Test)	
Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Benzyl benzoate							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	2,32	mg/l	Brachydanio rerio		
Persistence and degradability:		28d	94	%			
Bioaccumulative potential:	Log Pow		4,0				
Toxicity to bacteria:	EC50	3h	>10000	mg/l	activated sludge		

(R)-p-mentha-1,8-diene							
Toxicity/effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to fish:	LC50	96h	0,70	mg/l	Pimephales promelas		
Toxicity to daphnia:	EC50	48h	0,42	mg/l	Daphnia magna		
Toxicity to algae:	NOEC/NOEL	96h	4	mg/l			
Persistence and degradability:		28d	92	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	

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. (2001/118/EC, 2001/119/EC, 2001/573/EC)

07 07 04 other organic solvents, washing liquids and mother liquors

16 05 08 discarded organic chemicals consisting of or containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations

E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations

Empty container completely.

Untampered packaging can be recycled.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Residues may present a risk of explosion.

Recommended cleaner:

Water

SECTION 14: Transport information

General statements

UN number: 1266

Transport by road/by rail (ADR/RID)

UN proper shipping name:

UN 1266 PERFUMERY PRODUCTS

Transport hazard class(es):

3

Packing group:

II

Classification code:

F1

LQ (ADR 2015):

5 L

LQ (ADR 2009):

6

Environmental hazards:

environmentally hazardous

Tunnel restriction code:

D/E



Transport by sea (IMDG-code)

UN proper shipping name:

PERFUMERY PRODUCTS(1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRANE,P-MENTHA-1,4(8)-DIENE)

Transport hazard class(es):

3

Packing group:

II

EmS:

F-E, S-D

Marine Pollutant:

Yes

Environmental hazards:

environmentally hazardous



Transport by air (IATA)

UN proper shipping name:

Perfumery products

Transport hazard class(es):

3

Packing group:

II

Environmental hazards:

Not applicable



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.

Transport in bulk according to Annex II of MARPOL 73/78 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

For classification and labelling see Section 2.

Observe restrictions:

Comply with trade association/occupational health regulations.

Observe youth employment law (German regulation).

Directive 2010/75/EU (VOC):

< 87 %

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

These details refer to the product as it is delivered.

Revised sections:

1 - 16

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. 2, H225	Classification based on test data.
Eye Irrit. 2, H319	Classification according to calculation procedure.
Aquatic Chronic 2, H411	Classification according to calculation procedure.

The following phrases represent the posted R phrases / H phrases, Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

10 Flammable.

11 Highly flammable.

22 Harmful if swallowed.

36 Irritating to eyes.

38 Irritating to skin.

43 May cause sensitization by skin contact.

50 Very toxic to aquatic organisms.

51 Toxic to aquatic organisms.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

53 May cause long-term adverse effects in the aquatic environment.

65 Harmful: may cause lung damage if swallowed.

67 Vapours may cause drowsiness and dizziness.

H225 Highly flammable liquid and vapour.

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Flam. Liq. — Flammable liquid

Eye Irrit. — Eye irritation

Aquatic Chronic — Hazardous to the aquatic environment - chronic

STOT SE — Specific target organ toxicity - single exposure - narcotic effects

Skin Irrit. — Skin irritation

Aquatic Acute — Hazardous to the aquatic environment - acute

Acute Tox. — Acute toxicity - oral

Skin Sens. — Skin sensitization

Asp. Tox. — Aspiration hazard

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- <i>t</i> -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
EWG	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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