

# Safety Data Sheet

according to UN GHS (ST/SG/AC.10/11/Rev.9)

## NATURAL PRENYL MERCAPTAN 1% IN D-LIMONENE

Revision date: 12.07.2023

Product code: 389680WW

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

#### 1.1. Product identifier

NATURAL PRENYL MERCAPTAN 1% IN D-LIMONENE

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

##### Use of the substance/mixture

Manufacturing of: - Air care products - Perfumes, fragrances - Pharmaceuticals - Cosmetics, personal care products - Flavouring Substances - Other

#### 1.3. Details of the supplier of the safety data sheet

Company name:	Axxence Aromatic GmbH	
Street:	Tackenweide 28	
Place:	D-46446 Emmerich am Rhein	
Telephone:	+ 49 2822 68561 0	Telefax: + 49 2822 68561 39
e-mail:	info@axxence.com	
Contact person:	Andreas Goertz	Telephone: + 49 2822 68561 37
e-mail:	andreas.goertz@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	QM - Regulatory Affairs	

#### 1.4. Emergency telephone number:

+49 2822 68561 99

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### UN GHS (ST/SG/AC.10/11/Rev.9)

Flammable liquid: Flam. Liq. 3  
 Aspiration hazard: Asp. Tox. 1  
 Skin corrosion/irritation: Skin Irrit. 2  
 Respiratory or skin sensitisation: Skin Sens. 1  
 Hazardous to the aquatic environment: Aquatic Acute 1  
 Hazardous to the aquatic environment: Aquatic Chronic 1

#### 2.2. Label elements

##### UN GHS (ST/SG/AC.10/11/Rev.9)

##### Hazard components for labelling

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

Signal word: Danger

##### Pictograms:



##### Hazard statements

H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H410	Very toxic to aquatic life with long lasting effects.

##### Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.

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P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P331	Do NOT induce vomiting.
P302+P352	IF ON SKIN: Wash with plenty of Water and soap.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P333+P317	If skin irritation or rash occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to .

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Hazardous components

CAS No	Chemical name	Quantity
	Classification (UN GHS (ST/SG/AC.10/11/Rev.9))	
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	98,5% - 99,0%
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H304 H400 H410	
5287-45-6	NATURAL PRENYL MERCAPTAN	1,0% - 1,5%
	Flam. Liq. 3, Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H226 H315 H319 H335	

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

#### After ingestion

Observe risk of aspiration if vomiting occurs. If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

No information available.

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

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Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Carbon dioxide (CO<sub>2</sub>), Foam, Extinguishing powder.

##### Unsuitable extinguishing media

Water.

#### 5.2. Special hazards arising from the substance or mixture

Flammable. Vapours can form explosive mixtures with air.

#### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

#### Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### General advice

Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

#### 6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment. Explosion risk.

#### 6.3. Methods and material for containment and cleaning up

##### For cleaning up

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

#### 6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

##### Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

##### Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Vapours can form explosive mixtures with air.

##### Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

#### 7.2. Conditions for safe storage, including any incompatibilities

##### Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool, well-ventilated place. Keep

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away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

### Hints on joint storage

Do not store together with: Oxidizing agent. Pyrophoric or self-heating substances.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

### 8.2. Exposure controls



### Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection

Wear eye/face protection.

#### Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Use of protective clothing.

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:		
Odour:	Sulphurous	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		<176 °C
Flammability:		not determined
Lower explosion limits:		0,7 vol. %
Upper explosion limits:		6,1 vol. %
Flash point:		<51 °C
Auto-ignition temperature:		not determined
Decomposition temperature:		not determined
pH-Value:		not determined
Water solubility:	The study does not need to be conducted because the substance is known to be insoluble in water.	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined

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Vapour pressure: >2,04 hPa  
(at 20 °C)  
Vapour pressure: 11,1 hPa  
(at 50 °C)  
Density: not determined  
Relative vapour density: not determined

### 9.2. Other information

#### Information with regard to physical hazard classes

Explosive properties

The product is not: Explosive.

Oxidizing properties

The product is not: oxidising.

#### Other safety characteristics

Evaporation rate: not determined

Solvent content: 0%

Solid content: 0%

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable.

### 10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

### 10.4. Conditions to avoid

Keep away from sources of heat (e.g. hot surfaces), sparks and open flames. Vapours can form explosive mixtures with air.

### 10.5. Incompatible materials

No information available.

### 10.6. Hazardous decomposition products

No known hazardous decomposition products.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity

Based on available data, the classification criteria are not met.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene				
	oral	LD50 mg/kg	5300	Rat	IFA GESTIS
	dermal	LD50 mg/kg	>5000	Rabbit	REACH registration OECD 402

#### Irritation and corrosivity

Causes skin irritation.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

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### Sensitising effects

May cause an allergic skin reaction. ((R)-p-mentha-1,8-diene, d-limonene)

### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

### STOT-single exposure

Based on available data, the classification criteria are not met.

### STOT-repeated exposure

Based on available data, the classification criteria are not met.

### Aspiration hazard

May be fatal if swallowed and enters airways.

### 11.2. Information on other hazards

#### Endocrine disrupting properties

No information available.

### Further information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

## SECTION 12: Ecological information

### 12.1. Toxicity

Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene					
	Acute fish toxicity	LC50 0,72 mg/l	96 h	Pimephales promelas (fathead minnow)	REACH registration	OECD 203
	Acute algae toxicity	ErC50 0,32 mg/l	72 h	Pseudokirchneriella subcapitata	REACH registration	OECD 201
	Acute crustacea toxicity	EC50 0,307 mg/l	48 h	Daphnia magna (Big water flea)	REACH registration	OECD 202
	Fish toxicity	NOEC 0,37 mg/l	8 d	Pimephales promelas (fathead minnow)	REACH Registration	OECD 212
	Acute bacteria toxicity	(EC50 209 mg/l)	3 h	Activated sludge	REACH registration	OECD 209

### 12.2. Persistence and degradability

The product has not been tested.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene			
	OECD 301D	80%	28	REACH Registration
	Readily biodegradable (according to OECD criteria).			
	OECD 301D	71%	14	REACH Registration
	Readily biodegradable (according to OECD criteria).			
	OECD 301D	41%	7	REACH Registration
	Readily biodegradable (according to OECD criteria).			

### 12.3. Bioaccumulative potential

The product has not been tested.

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### Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	4,5
5287-45-6	NATURAL PRENYL MERCAPTAN	2,528

### BCF

CAS No	Chemical name	BCF	Species	Source
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	690,1	aquatic species	REACH registration

### 12.4. Mobility in soil

The product has not been tested.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. Other adverse effects

No information available.

### Further information

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

#### Contaminated packaging

Hazardous waste according to Directive 2008/98/EC (waste framework directive). Handle contaminated packages in the same way as the substance itself.

## SECTION 14: Transport information

### Marine transport (IMDG)

#### 14.1. UN number or ID number:

UN 1993

#### 14.2. UN proper shipping name:

FLAMMABLE LIQUID, N.O.S.

#### 14.3. Transport hazard class(es):

3

#### 14.4. Packing group:

III

Hazard label:

3



Special Provisions:

223 274 955

Limited quantity:

5 L

Excepted quantity:

E1

EmS:

F-E, S-E

### Air transport (ICAO-TI/IATA-DGR)

#### 14.1. UN number or ID number:

UN 1993

#### 14.2. UN proper shipping name:

FLAMMABLE LIQUID, N.O.S.

#### 14.3. Transport hazard class(es):

3

#### 14.4. Packing group:

III

Hazard label:

3

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Special Provisions:	A3	
Limited quantity Passenger:	10 L	
Passenger LQ:	Y344	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		355
IATA-max. quantity - Passenger:		60 L
IATA-packing instructions - Cargo:		366
IATA-max. quantity - Cargo:		220 L

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes



Danger releasing substance: D-LIMONENE

### 14.6. Special precautions for user

Warning: Combustible liquid.

### 14.7. Maritime transport in bulk according to IMO instruments

not applicable

## SECTION 15: Regulatory information

### National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.

## SECTION 16: Other information

### Abbreviations and acronyms

CLP: Classification, labelling and Packaging  
 REACH: Registration, Evaluation and Authorization of Chemicals  
 GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals  
 UN: United Nations  
 CAS: Chemical Abstracts Service  
 DNEL: Derived No Effect Level  
 DMEL: Derived Minimal Effect Level  
 PNEC: Predicted No Effect Concentration  
 ATE: Acute toxicity estimate  
 LC50: Lethal concentration, 50%  
 LD50: Lethal dose, 50%  
 LL50: Lethal loading, 50%  
 EL50: Effect loading, 50%  
 EC50: Effective Concentration 50%  
 ErC50: Effective Concentration 50%, growth rate  
 NOEC: No Observed Effect Concentration  
 BCF: Bio-concentration factor  
 PBT: persistent, bioaccumulative, toxic  
 vPvB: very persistent, very bioaccumulative  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route  
 (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Regulations concerning the international carriage of dangerous goods by rail



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ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways  
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation  
intérieures)

IMDG: International Maritime Code for Dangerous Goods

EmS: Emergency Schedules

MFAG: Medical First Aid Guide

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

MARPOL: International Convention for the Prevention of Marine Pollution from Ships

IBC: Intermediate Bulk Container

VOC: Volatile Organic Compounds

SVHC: Substance of Very High Concern

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety  
assessment, chapter R.20 (Table of terms and abbreviations).

#### Further Information

The information is based on the present level of our knowledge. It does not, however, give assurance of  
product properties and establishes no contract legal rights. The receiver of our product is singularly responsible  
for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety  
data sheet.)*