

according to Regulation (EC) No 1907/2006

NATURAL 1-PARA-MENTHENE-8-THIOL 0,1% IN D-LIMONENE

Revision date: 24.02.2025

Product code: 370032

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

JWS1-T247-610U-N5H3

1.1. Product identifier

NATURAL 1-PARA-MENTHENE-8-THIOL 0,1% IN D-LIMONENE

UFI:

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:	Safety Team	Telephone: + 49 2822 68561 0
E-mail:	safety-documentation@axxence.com	
Internet:	www.axxence.de	
Responsible Department:	Safety Management	
1.4. Emergency telephone	+49 2822 68561 99	

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number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

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

Signal word:

Pictograms:



Hazard statements

H226	Flammable liquid and vapour.
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.



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P240	Ground and bond container and receiving equipment.	
P273	Avoid release to the environment.	
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.	
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.	
P370+P378	In case of fire: Use sand, earth, extinguishing powder or foam to extinguish.	
P391	Collect spillage.	
P403+P235	Store in a well-ventilated place. Keep cool.	

2.3. Other hazards

This substance is not listed as Substance of Very High Concern (SVHC) in the Candidate List according to REACH, Article 59.

This substance is not identifed as SVHC (substance of very high concern) and is not subject to autorisation according to Annex XIV of REACH.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Relevant ingredients

CAS No	Chemical name					
	EC No	No Index No REACH No				
	Classification (Regulation (EC) No	1272/2008)				
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene					
	227-813-5	601-029-00-7				
	Flam. Liq. 3, Skin Irrit. 2, Skin Sens. 1, Asp. Tox. 1, Aquatic Acute 1, Aquatic Chronic 1; H226 H315 H317 H304 H400 H410					
71159-90-5	-5 NATURAL 1-PARA-MENTHENE-8-THIOL					
	275-223-1					
		•	•			

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name			
	Specific Conc. L	imits, M-factors and ATE			
5989-27-5	227-813-5	27-813-5 (R)-p-mentha-1,8-diene, d-limonene			
	dermal: LD50 =	: >5000 mg/kg; oral: LD50 = 5300 mg/kg			
71159-90-5	275-223-1 NATURAL 1-PARA-MENTHENE-8-THIOL				
	oral: LD50 = >6	000 mg/kg			

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

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

Rinse mouth immediately and drink 1 glass of of water.



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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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO2), 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. Provide adequate ventilation. 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.

Other information

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

No special measures are necessary.

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.



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Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff. Take off contaminated clothing. Wash hands before breaks and after work. When using do not eat or drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep in a cool, well-ventilated place. Keep 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.

7.3. Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Name of agent						
DNEL type		Exposure route	Effect	Value			
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene						
Worker DNEL,	Worker DNEL, long-term inhalation systemic 66,7 mg/m³						
Worker DNEL, long-term dermal			systemic	9,5 mg/kg bw/day			
Consumer DNE	EL, long-term	inhalation	systemic	16,6 mg/m³			
Consumer DNE	EL, long-term	dermal	local	4,8 mg/cm ²			
Consumer DNEL, long-term		oral	systemic	4,8 mg/kg bw/day			

PNEC values

CAS No	Name of agent				
Environmental	compartment	Value			
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene				
Freshwater		0,014 mg/l			
Marine water 0,0014 mg/l					
Freshwater sediment 3,85 mg/kg					
Marine sediment 0,385 mg/kg					
Secondary poisoning 133 mg/kg					
Micro-organisms in sewage treatment plants (STP) 1,8 mg/l					
Soil		0,763 mg/l			

8.2. Exposure controls







Individual protection measures, such as personal protective equipment

Eye/face protection

Wear eye protection/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four



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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:	•	
Melting point/freezing point:	not determined	
Boiling point or initial boiling point and	176 °C	
boiling range:		
Flammability:	not determined	
Lower explosion limits:	0,7 vol. %	
Upper explosion limits:	6,1 vol. %	
Flash point:	51 °C	
Auto-ignition temperature:	245 °C	
Decomposition temperature:	not determined	
pH-Value:	not determined	
Viscosity / kinematic:	not determined	
Water solubility:	No	
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:	not determined	
Vapour pressure:	2,04 hPa	
(at 20 °C)		
Vapour pressure:	11,1 hPa	
(at 50 °C)		
Density:	0,851488 g/cm ³	
Relative vapour density:	not determined	
Particle characteristics:	not applicable	
9.2. Other information		
Information with regard to physical ha	azard classes	
Explosive properties		
The product is not: Explosive. not explosive.	xplosive according to EU A.14	
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		

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable.

10.2. Chemical stability



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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 hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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			
71159-90-5	NATURAL 1-PARA-MENTHENE-8-THIOL								
	oral	LD50 mg/kg	>6000	Rat					

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.

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

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met. Carcinogenicity: Based on available data, the classification criteria are not met. Reproductive toxicity: 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

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

11.2. Information on other hazards

Other information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].



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SECTION 12: Ecological information

12.1. Toxicity

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, c	l-limonene						
	Acute fish toxicity	LC50 mg/l	0,72		Pimephales promelas (fathead minnow)	REACH registration	OECD 203	
	Acute algae toxicity	ErC50 mg/l	0,32		Pseudokirchneriella subcapitata	REACH registration	OECD 201	
	Acute crustacea toxicity	EC50 mg/l	0,307		Daphnia magna (Big water flea)	REACH registration	OECD 202	
	Fish toxicity	NOEC mg/l	0,37		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	a).					
	OECD 301D	71%	14	REACH Registration			
	Readily biodegradable (according to OECD criteria	a).	-	·			
	OECD 301D 41% 7 REACH Registrat						
	Readily biodegradable (according to OECD criteria).						

12.3. Bioaccumulative potential

The product has not been tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	
5989-27-5	(R)-p-mentha-1,8-diene, d-limonene	4,5
71159-90-5	NATURAL 1-PARA-MENTHENE-8-THIOL	4,2

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.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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



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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.

List of Wastes Code - residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 2052
14.2. UN proper shipping name:	DIPENTENE
14.3. Transport hazard class(es):	3
14.4. Packing group:	111
Hazard label:	3
	3
Classification code:	F1
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	30
Tunnel restriction code:	D/E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 2052
14.2. UN proper shipping name:	DIPENTENE
14.3. Transport hazard class(es):	3
14.4. Packing group:	111
Hazard label:	3
Classification code:	
Classification code:	F1



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Revision date: 24.02.2025		code: 370032		Page 9 of 12			
Limited quantity:	5 L						
Excepted quantity:	E1						
Marine transport (IMDG)	UN 2052						
<u>14.1. UN number or ID number:</u> 14.2. UN proper shipping name:	DIPENTENE						
14.3. Transport hazard class(es):	3						
14.4. Packing group:	III						
Hazard label:	3						
Marine pollutant: Special Provisions:	P -						
Limited quantity:	5 L						
Excepted quantity:	E1						
EmS:	F-E, S-E						
Air transport (ICAO-TI/IATA-DGR)	UN 2052						
<u>14.1. UN number or ID number:</u> 14.2. UN proper shipping name:	DIPENTENE						
14.3. Transport hazard class(es):	3						
14.4. Packing group:	III						
Hazard label:	3						
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		AL				
Danger releasing substance:	D-LIMONENE						
14.6. Special precautions for user Warning: Combustible liquid.							
14.7. Maritime transport in bulk according t	to IMO instruments						
not applicable							
SECTION 15: Regulatory information							
15.1. Safety, health and environmental regu	lations/legislation	specific for the subst	tance or mixture				
EU regulatory information							
Restrictions on use (REACH, annex XVII)	:						
Entry 3, Entry 40							
Directive 2010/75/EU on industrial	99 % (842 973 a/	D)					



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Directive 2004/42/EC on VOC in paints and varnishes:	99 % (842,973 g/l)				
Information according to Directive 2012/18/EU (SEVESO III):	E1 Hazardous to the Aquatic Environment				
Additional information:	P5c				
National regulatory information					
Employment restrictions:	Observe restrictions to employment for juveniles according to work protection guideline' (94/33/EC).	the 'juvenile			
Water hazard class (D):	2 - obviously hazardous to water				
Skin resorption/Sensitization:	Causes allergic hypersensitivity reactions.				
15.2. Chemical safety assessment					
Chemical safety assessments for substances in this mixture were not carried out.					

SECTION 16: Other information



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Abbreviations and acronyms

Flam. Liq: Flammable liquid Asp. Tox: Aspiration hazard Skin Irrit: Skin irritation Skin Sens: Skin sensitisation Aquatic Acute: Acute aquatic hazard Aquatic Chronic: Chronic aquatic hazard ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonized System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service LC50: Lethal concentration, 50% LD50: Lethal dose, 50% 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** EC/EEC: European Community/European Economic Community EU: European Union DNEL: Derived No Effect Level DMEL: Derived Minimal Effect Level PNEC: Predicted No Effect Concentration ATE: Acute toxicity estimate 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 M-factor: Multiplying factor RID: Regulations concerning the international carriage of dangerous goods by rail 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) EmS: Emergency Schedules MFAG: Medical First Aid Guide IATA: International Air Transport Association DGR: Dangerous Goods Regulations ICAO: International Civil Aviation Organization **TI: Technical Instructions** MARPOL: International Convention for the Prevention of Marine Pollution from Ships IBC: Intermediate Bulk Container 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). VOC: volatile organic compound



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Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data
Skin Irrit. 2; H315	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 1; H410	Calculation method

Relevant H and EUH statements (number and full text)

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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.

Identified uses

No	Short title	LCS	SU	PC	PROC	ERC	AC	TF	Specification
1		-	4	28	-	-	-	-	Flavour
LCS: Life cycle stages SU: Sectors of use									
PC: Product categories				F	PROC: Process categories				
ERC: Environmental release categories				A	AC: Article categories				
TF: Technical functions									

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