

Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Printing date 09/25/2020

Reviewed on 08/13/2020

1 Identification

- **Product identifier**
- **Trade name:** p-Menthene-8-thiol 1% in d'limonene Natural
- **Product number:** 1444
- **CAS Number:** 71159-90-5/5989-27-5
- **EINECS Number:** 275-233-1/227-813-5
- **Application of the substance / the mixture** Flavoring Ingredients

- **Details of the supplier of the safety data sheet**

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- **Manufacturer/Supplier:**

Advanced Biotech
10 Taft Road
Totowa, NJ 07512 USA

- **Information department:**

Product Safety Department
productsafety@adv-bio.com

- **Emergency telephone number:**

Infotrac: 1-800-535-5053 (Domestic) & 1-352-323-3500 (International)
Email: responders@infotrac.net & During normal business hours: 1-973-339-6242

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

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Trade name: p-Menthene-8-thiol 1% in d'limonene Natural

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- **Signal word** Warning
- **Hazard-determining components of labeling:**
Limonene
- **Hazard statements**
H226 Flammable liquid and vapor.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**

 - Health = 1
 - Fire = 2
 - Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**

| | |
|------------|---|
| HEALTH | 1 |
| FIRE | 2 |
| REACTIVITY | 0 |

 - Health = 1
 - Fire = 2
 - Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

| | | |
|-------------------|--|-------|
| CAS: 5989-27-5 | Limonene | 99.0% |
| EINECS: 227-813-5 | Flam. Liq. 3, H226; Skin Irrit. 2, H315; Skin Sens. 1B, H317 | |
| CAS: 71159-90-5 | 1-p-Menthene-8-thiol | 1.0% |
| EINECS: 275-223-1 | Flam. Liq. 4, H227 | |

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air and be sure to call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.

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- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
 No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
 No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.
- **Additional information**
 Cool endangered receptacles with water spray.
 Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose contaminated material as waste according to item 13.
 Ensure adequate ventilation.
- **Reference to other sections**
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

| | | |
|-----------------|----------|---------|
| · PAC-1: | | |
| CAS: 5989-27-5 | Limonene | 15 ppm |
| · PAC-2: | | |
| CAS: 5989-27-5 | Limonene | 67 ppm |
| · PAC-3: | | |
| CAS: 5989-27-5 | Limonene | 170 ppm |

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 Ensure good ventilation/exhaustion at the workplace.
 Prevent formation of aerosols.

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- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
No special requirements.
Please refer to product specification for product storage requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as a basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
- **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:



Tightly sealed goggles

9 Physical and chemical properties

· Information on basic physical and chemical properties

| | |
|--|--|
| · General Information | Molecular Weight: 136.24 g/mol |
| · Appearance: | |
| Form: | Liquid |
| Color: | According to product specification |
| · Odor: | According to product specification |
| · Odor threshold: | Not determined. |
| · pH-value: | Not determined. |
| · Change in condition | |
| Melting point/Melting range: | -74.3 °C (-101.7 °F) |
| Boiling point/Boiling range: | Undetermined. |
| · Flash point: | 53.1 °C (127.6 °F) |
| · Flammability (solid, gaseous): | Not applicable. |
| · Ignition temperature: | 255 °C (491 °F) |
| · Decomposition temperature: | Not determined. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product is not explosive. However, formation of explosive air/vapor mixtures are possible. |
| · Explosion limits: | |
| Lower: | 0.7 Vol % |
| Upper: | 6.1 Vol % |
| · Vapor pressure at 20 °C (68 °F): | 2.3 hPa (1.7 mm Hg) |
| · Density at 20 °C (68 °F): | 0.83-0.86 g/cm ³ (6.92635-7.1767 lbs/gal) |
| · Specific Gravity | 0.830 - 0.860 @ 20 °C (33.5 - 33.5 @ 68 °F) |
| · Relative density | Not determined. |
| · Vapor density | Not determined. |
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Not miscible or difficult to mix. |
| · Partition coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| Dynamic: | Not determined. |
| Kinematic: | Not determined. |

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- **Solvent content:**
 - Organic solvents:** 99.0 %
 - VOC content:** 99.00 %
 - 821.7-851.4 g/l / 6.86-7.11 lb/gal
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
 No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

ATE (Acute Toxicity Estimate)

| | | |
|------|------|-------------------|
| Oral | LD50 | 4,444 mg/kg (rat) |
|------|------|-------------------|

CAS: 5989-27-5 Limonene

| | | |
|------|------|-------------------|
| Oral | LD50 | 4,400 mg/kg (rat) |
|------|------|-------------------|

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
 Irritant

- **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

| | | |
|----------------|----------|---|
| CAS: 5989-27-5 | Limonene | 3 |
|----------------|----------|---|

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (Self-assessment): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number | UN2052 |
| · DOT, ADR, IMDG, IATA | UN2052 |
| · UN proper shipping name | Dipentene mixture |
| · DOT | 2052 DIPENTENE mixture, ENVIRONMENTALLY HAZARDOUS |
| · ADR | DIPENTENE mixture, MARINE POLLUTANT |
| · IMDG | DIPENTENE mixture, MARINE POLLUTANT |
| · IATA | DIPENTENE mixture |
| · Transport hazard class(es) | |
| · DOT | |
|   | |
| · Class | 3 Flammable liquids |

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| | |
|---|--|
| · Label | 3 |
| · ADR | |
| | |
| · Class | 3 (F1) Flammable liquids |
| · Label | 3 |
| · IMDG | |
| | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · IATA | |
| | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | III |
| · DOT, ADR, IMDG, IATA | III |
| · Environmental hazards: | Product contains environmentally hazardous substances: Limonene |
| · Marine pollutant: | Yes Symbol (fish and tree) |
| · Special marking (ADR): | Symbol (fish and tree) |
| · Special precautions for user | Warning: Flammable liquids |
| · Hazard identification number (Kemler code): | 30 |
| · EMS Number: | F-E,S-E |
| · Stowage Category | A |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · DOT | |
| · Quantity limitations | On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L |
| · Remarks: | Special marking with the symbol (fish and tree). |
| · ADR | |
| · Excepted quantities (EQ) | Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |

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| | |
|-----------------------------------|--|
| · IMDG | 5L |
| · Limited quantities (LQ) | Code: E1 |
| · Excepted quantities (EQ) | Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · UN "Model Regulation": | UN 2052 DIPENTENE MIXTURE, 3, III, ENVIRONMENTALLY HAZARDOUS |

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

WARNING! This product contains chemicals known to the state of California to cause cancer: Myrcene

Myrcene CAS-no. 123-35-3 (1.5-2.0% by weight)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible.

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The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**

Limonene

· **Hazard statements**

H226 Flammable liquid and vapor.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P403+P235 Store in a well-ventilated place. Keep cool.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

H226 Flammable liquid and vapor.

H227 Combustible liquid.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

· **Department issuing SDS:** Product Safety Department

· **Contact:**

Product Safety Department

productsafety@adv-bio.com

· **Date of preparation / last revision** 09/25/2020 / -

· **Abbreviations and acronyms:**

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 3: Flammable liquids – Category 3
Flam. Liq. 4: Flammable liquids – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1B: Skin sensitisation – Category 1B

US

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