

# Safety Data Sheet

acc. to OSHA HCS (29 CFR § 1910.1200)

Date of issue: 01/24/2025

Reviewed on 01/24/2025

## 1 Identification

· **Product identifier**

· **Trade name: Methyl Mercaptan 5% in Triethyl Citrate Natural**

· **Other means of identification**

· **Product number: 1815**

· **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

Flammable liquids 2 H225 Highly flammable liquid and vapor.

· **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

· **Signal word** Danger

· **Hazard statements**

H225 Highly flammable liquid and vapor.

· **Precautionary statements**

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

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- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- 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].
- P403+P235 Store in a well-ventilated place. Keep cool.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Information pertaining to particular dangers for man and environment:**
- **Classification system:**
- **NFPA ratings (scale 0 - 4)**



Health = 0  
Fire = 3  
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



HEALTH 0 Health = 0  
FIRE 3 Fire = 3  
REACTIVITY 0 Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Classification according to (d)(1)(ii) of § 1910.1200**

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

- **Hazards not otherwise classified**

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

### 3 Composition/information on ingredients

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

- **Dangerous components:**

|                   |              |                             |         |
|-------------------|--------------|-----------------------------|---------|
| CAS: 74-93-1      | Methanethiol | ⚠ Flammable liquids 1, H224 | 2.5-10% |
| EINECS: 200-822-1 |              |                             |         |

### 4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately rinse with water.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.

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- **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.
- **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:**  
 Dilute with plenty of water.  
 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 section 13.  
 Ensure adequate ventilation.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

|              |              |           |
|--------------|--------------|-----------|
| CAS: 74-93-1 | Methanethiol | 0.005 ppm |
|--------------|--------------|-----------|

· **PAC-2:**

|              |              |        |
|--------------|--------------|--------|
| CAS: 74-93-1 | Methanethiol | 23 ppm |
|--------------|--------------|--------|

· **PAC-3:**

|              |              |        |
|--------------|--------------|--------|
| CAS: 74-93-1 | Methanethiol | 68 ppm |
|--------------|--------------|--------|

· **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.

**7 Handling and storage**

- **Precautions for safe handling** No special precautions are necessary if used correctly.
- **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:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**  
 Keep receptacle tightly sealed.  
 Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 74-93-1 Methanethiol**

|     |   |
|-----|---|
| PEL | Ceiling limit value: 20 mg/m <sup>3</sup> , 10 ppm              |
| REL | Ceiling limit value: 1* mg/m <sup>3</sup> , 0.5* ppm<br>*15-min |
| TLV | Long-term value: 0.5 ppm  |

- **Additional information:** The lists that were valid during the creation were used as a basis.

· **Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.

· **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:** Suitable respiratory protective device recommended.

· **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.

· **Eye protection:**



Tightly sealed goggles

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**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

- **General Information** Molecular Weight: 276.29 g/mol
- **Physical state** Liquid
- **Color:** According to product specification
- **Odor:** According to product specification
- **Odor threshold:** Not determined.
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** Undetermined.
- **Flammability:** Highly flammable.
- **Explosion limits:**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** -16.8 °C (1.8 °F)
- **Decomposition temperature:** Not determined.
- **pH-value:** Not determined.
- **Viscosity:**
- **Kinematic:** Not determined.
- **Dynamic:** Not determined.
- **Solubility in / Miscibility with**
- **Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not determined.
- **Vapor pressure:** Not determined.
- **Density:** Not determined.
- **Relative density** Not determined.
- **Refractive Index**
- **Vapor density** Not determined.
- **Particle characteristics** Not applicable.

· **Other information**

- **Appearance:**
- **Form:** Liquid
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not selfigniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Solvent content:**
- **Organic solvents:** 5.0 %
- **VOC content:** 5.00 %  
50.0 g/l / 0.42 lb/gal
- **Solids content:** 0.0 %
- **Change in condition**
- **Evaporation rate** Not determined.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.

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- **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:**
- |   |
|---|
| · <b>LD/LC50 values that are relevant for classification:</b> |
| <b>ATE (Acute Toxicity Estimate)</b>                          |
| Inhalative   LC50/4 h   60 mg/l                               |
- **Primary irritant effect:**
  - **on the skin:** No irritant effect.
  - **on the eye:** No irritating effect.
  - **Sensitization:** No sensitizing effects known.
  - **Additional toxicological information:**
  - **Interactive effects** No interactive effects between components are known.

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

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

None of the ingredients is listed.

- **Alternative sources for toxicological information**

No non-standard sources for toxicological information where used.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**

Water hazard class 3 (Self-assessment): extremely hazardous for water  
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.

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Danger to drinking water if even extremely small quantities leak into the ground.

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**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.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

**14 Transport information**

|  |   |
|--|---|
| <ul style="list-style-type: none"> <li>· UN-Number</li> <li>· DOT, IMDG, IATA</li> </ul>                                   | <p>UN3336</p>   |
| <ul style="list-style-type: none"> <li>· UN proper shipping name</li> <li>· DOT</li> <li>· IMDG</li> <li>· IATA</li> </ul> | <p>Mercaptans, liquid, flammable, n.o.s. (Methyl mercaptan)<br/>         MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. (METHYL MERCAPTAN), MARINE POLLUTANT<br/>         MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. (METHYL MERCAPTAN)</p> |
| <ul style="list-style-type: none"> <li>· Transport hazard class(es)</li> <li>· DOT</li> </ul>                              | <p></p>  |
| <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>   | <p>3 Flammable liquids<br/>         3</p>   |
| <ul style="list-style-type: none"> <li>· IMDG</li> </ul>   | <p> </p>  |
| <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>   | <p>3 Flammable liquids<br/>         3</p>   |
| <ul style="list-style-type: none"> <li>· IATA</li> </ul>   | <p></p>  |
| <ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>   | <p>3 Flammable liquids<br/>         3</p>   |

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|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>· <b>Packing group</b></li> <li>· <b>DOT, IMDG, IATA</b></li> </ul>  | <p>II</p>  |
| <ul style="list-style-type: none"> <li>· <b>Environmental hazards:</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (ADR):</b></li> </ul>  | <p>Symbol (fish and tree)<br/>         Symbol (fish and tree)</p>  |
| <ul style="list-style-type: none"> <li>· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b></li> </ul>  | <p>Not applicable.</p>   |
| <ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> <li>· <b>DOT</b></li> <li>· <b>Quantity limitations</b></li> </ul>   | <p>On passenger aircraft/rail: 5 L<br/>         On cargo aircraft only: 60 L</p>   |
| <ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>  | <p>1L<br/>         Code: E2<br/>         Maximum net quantity per inner packaging: 30 ml<br/>         Maximum net quantity per outer packaging: 500 ml</p>   |
| <ul style="list-style-type: none"> <li>· <b>Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Segregation Code</b></li> </ul> | <p>Warning: Flammable liquids<br/>         33<br/>         F-E,S-D<br/>         B<br/>         SG50 Segregation from foodstuffs as in 7.3.4.2.1, 7.6.3.1.2 or 7.7.3.6.<br/>         SG57 Stow "separated from" odour-absorbing cargoes</p> |
| <ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>   | <p>UN 3336 MERCAPTANS, LIQUID, FLAMMABLE, N.O.S. (METHYL MERCAPTAN), 3, II, ENVIRONMENTALLY HAZARDOUS</p>  |

**15 Regulatory information**

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

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

CAS: 74-93-1 | Methanethiol

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

CAS: 74-93-1 | Methanethiol

· **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.

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· **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)**

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.

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

· **Hazard pictograms**



GHS02

· **Signal word** Danger

· **Hazard statements**

H225 Highly flammable liquid and vapor.

· **Precautionary statements**

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

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

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].

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**

H224 Extremely flammable liquid and vapor.

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

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· **Contact:**

Product Safety Department  
productsafety@adv-bio.com

· **Date of previous version** 01/16/2024

· **Date of preparation** 01/24/2025

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international 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

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

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

Flammable liquids 1: Flammable liquids – Category 1

Flammable liquids 2: Flammable liquids – Category 2

US