# 1 Identification

- **Product identifier**
  - **Trade name:** Isopropyl Mercaptan synthetic
  - **Product number:** 4092
  - **CAS Number:** 75-33-2
  - **EC number:** 200-861-4

- **Application of the substance / the mixture** Food flavorings

- **Details of the supplier of the safety data sheet**
  - **Manufacturer/Supplier:** Advanced Biotech
    - 10 Taft Road
    - Totowa, NJ 07512 USA
  - **Information department:** Product Safety Department
    - productsafety@adv-bio.com
  - **Emergency telephone number:**
    - 1(800)535-5053 (Info Trac)
    - 1(352)323-3500 (International)
    - During normal business hours: 1(973)339-6242

# 2 Hazard(s) identification

- **Classification of the substance or mixture**
  - ![GHS02 Flame](image)
    - Flam. Liq. 2 H225 Highly flammable liquid and vapor.
  - ![GHS06 Skull and crossbones](image)
    - Acute Tox. 3 H301 Toxic if swallowed.
  - ![GHS07](image)
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2A H319 Causes serious eye irritation.
    - STOT SE 3 H335 May cause respiratory irritation.
· **Label elements**  Harmful in contact with skin or if inhaled.

· **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 substance is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

  ![Pictograms](image)

  GHS02  GHS06  GHS07

· **Signal word**  Danger

· **Hazard-determining components of labeling:**  
  propane-2-thiol

· **Hazard statements**  
  H225 Highly flammable liquid and vapor.  
  H301 Toxic if swallowed.  
  H315 Causes skin irritation.  
  H319 Causes serious eye irritation.  
  H335 May cause respiratory irritation.

· **Precautionary statements**  
  P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
  P301+P310 If swallowed: Immediately call a poison center/doctor.  
  P321 Specific treatment (see on this label).  
  P330 Rinse mouth.  
  P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
  P362+P364 Take off contaminated clothing and wash it before reuse.  
  P405 Store locked up.  
  P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**  
  · **NFPA ratings (scale 0 - 4)**

  ![NFPA Ratings](image)

  Health = 2  
  Fire = 3  
  Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

  ![HMIS Ratings](image)

  HEALTH  
  Health = 2  
  FIRE  
  Fire = 3  
  REACTIVITY  
  Reactivity = 0

· **Other hazards**  
  · **Results of PBT and vPvB assessment**

  · **PBT:** Not applicable.
Trade name: Isopropyl Mercaptan synthetic

- vPvB: Not applicable.

### 3 Composition/information on ingredients

- Chemical characterization: Substances
- CAS No. Description
  75-33-2 propane-2-thiol
- Identification number(s)
- EC number: 200-861-4

### 4 First-aid measures

- Description of first aid measures
- General information:
  Immediately remove any clothing soiled by the product.
  In case of irregular breathing or respiratory arrest provide artificial respiration.
- After inhalation:
  In case of unconsciousness place patient stably in side position for transportation.
- After skin contact:
  Immediately wash with water and soap and rinse thoroughly.
- After eye contact:
  Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing:
  Do not induce vomiting; immediately call for medical help.
- 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.
- 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 item 13.
  Ensure adequate ventilation.
Trade name: Isopropyl Mercaptan synthetic

<table>
<thead>
<tr>
<th>Reference to other sections</th>
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<tbody>
<tr>
<td>See Section 7 for information on safe handling.</td>
</tr>
<tr>
<td>See Section 8 for information on personal protection equipment.</td>
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<tr>
<td>See Section 13 for disposal information.</td>
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<table>
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<tr>
<th>Protective Action Criteria for Chemicals</th>
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<tbody>
<tr>
<td>PAC-1:</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>PAC-2:</td>
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<tr>
<td>Substance is not listed.</td>
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<tr>
<td>PAC-3:</td>
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<tr>
<td>Substance is not listed.</td>
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</table>

7 Handling and storage

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

| 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: Not required. |
| 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: |
| Keep away from foodstuffs, beverages and feed. |
| Immediately remove all soiled and contaminated clothing. |
| Wash hands before breaks and at the end of work. |
| Avoid contact with the eyes. |
| Avoid contact with the eyes and skin. |
| 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. |
Trade name: Isopropyl Mercaptan synthetic

9 Physical and chemical properties

- Information on basic physical and chemical properties
  - General Information
    - 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: -131 °C (-203.8 °F)
  - Boiling point/Boiling range: 57-60 °C (134.6-140 °F)
- Flash point: -34 °C (-29.2 °F)
- Flammability (solid, gaseous): Not applicable.
- Decomposition temperature: Not determined.
- Auto igniting: Not determined.
- Danger of explosion: Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- Explosion limits:
  - Lower: Not determined.
  - Upper: Not determined.
Trade name: Isopropyl Mercaptan synthetic

(Continuation of page 5)

- Vapor pressure: Not determined.

- Density at 20 °C (68 °F): 0.816 g/cm³ (6.80952 lbs/gal)
  - Relative density: Not determined.
  - Vapor density: Not determined.
  - Evaporation rate: Not determined.

- Solubility in / Miscibility with Water: Partly soluble.

- Partition coefficient (n-octanol/water): Not determined.

- Viscosity:
  - Dynamic: Not determined.
  - Kinematic: Not determined.
  - VOC content: 0.00 %
    - 0.0 g/l / 0.00 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 100 mg/kg |
    | CAS: 75-33-2 propane-2-thiol | Oral LD50 100 mg/kg (ATE) |

- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: Irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  - Carcinogenic categories
    - IARC (International Agency for Research on Cancer)
      - Substance is not listed.
### 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 3 (Assessment by list): extremely hazardous for water
      - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
      - Danger to drinking water if even extremely small quantities leak into the ground.
  - **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.
  - **Recommended cleansing agent**:
    - Water, if necessary with cleansing agents.

### 14 Transport information

- **UN-Number**
  - DOT, ADR, IMDG, IATA: UN2402
- **UN proper shipping name**
  - DOT: Propanethiols
  - ADR: 2402 PROPANETHIOLS
  - IMDG, IATA: PROPANETHIOLS
Trade name: Isopropyl Mercaptan synthetic

<table>
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<th>· Transport hazard class(es)</th>
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<tr>
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<td>![Flammable Liquid Icon]</td>
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<tr>
<td>· Class</td>
</tr>
<tr>
<td>· Label</td>
</tr>
<tr>
<td>3 Flammable liquids</td>
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<td>3</td>
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</tbody>
</table>

| · ADR                        |
| ![Flammable Liquid Icon]     |
| · Class                     |
| · Label                     |
| 3 (F1) Flammable liquids    |
| 3                           |

| · Packing group             |
| · DOT, ADR, IMDG, IATA      |
| II                          |

| · Environmental hazards:    |
| Not applicable.             |

| · Special precautions for user |
| Warning: Flammable liquids   |
| Danger code (Kemler):        |
| 33                          |
| EMS Number:                 |
| 3-07                        |
| Stowage Category            |
| E                           |
| Segregation Code            |
| SG50 Segregation from foodstuffs as in 7.3.4.2.1, 7.6.3.1.2 or 7.7.3.6. |
| SG57 Stow "separated from" odour-absorbing cargoes |

| · 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: 5 L                                      |
| On cargo aircraft only: 60 L                                        |

| · ADR                         |
| · Excepted quantities (EQ)   |
| Code: E2                     |
| Maximum net quantity per inner packaging: 30 ml                      |
| Maximum net quantity per outer packaging: 500 ml                     |

| · IMDG                        |
| · Limited quantities (LQ)    |
| 1L                           |
| · Excepted quantities (EQ)   |
| Code: E2                     |
| Maximum net quantity per inner packaging: 30 ml                      |
| Maximum net quantity per outer packaging: 500 ml                     |

| · UN "Model Regulation":    |
| UN 2402 PROPANETHIOLS, 3, II |

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### 15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
  - **Sara**
    - **Section 355 (extremely hazardous substances):** Substance is not listed.
    - **Section 313 (Specific toxic chemical listings):** Substance is not listed.
    - **TSCA (Toxic Substances Control Act):** Substance is listed.
  - **Proposition 65**
    - **Chemicals known to cause cancer:** Substance is not listed.
    - **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
    - **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
    - **Chemicals known to cause developmental toxicity:** Substance is not listed.
  - **Carcinogenic categories**
    - **EPA (Environmental Protection Agency)** Substance is not listed.
    - **TLV (Threshold Limit Value established by ACGIH)** Substance is not listed.
    - **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not 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 substance is classified and labeled according to the Globally Harmonized System (GHS).
    - **GHS pictograms**
      - GHS02, GHS06, GHS07
  - **Signal word** Danger
  - **Hazard-determining components of labeling:**
    - Propane-2-thiol
  - **Hazard statements**
    - H225 Highly flammable liquid and vapor.
    - H301 Toxic if swallowed.
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.

(Continued on page 10)
48.1.23

H335 May cause respiratory irritation.

**Precautionary statements**

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P301+P310 If swallowed: Immediately call a poison center/doctor.
- P321 Specific treatment (see on this label).
- P330 Rinse mouth.
- P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P362+P364 Take off contaminated clothing and wash it before reuse.
- P405 Store locked up.
- 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.

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**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.

- **Department issuing SDS:** Product Safety Department
- **Contact:**
  - Product Safety Department
  - product_safety@adv-bio.com
- **Date of preparation / last revision** 02/11/2019 / -
- **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
  - 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
  - Flam. Liq. 2: Flammable liquids – Category 2
  - Acute Tox. 3: Acute toxicity – Category 3
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3