1 Identification

- **Product identifier**
- **Trade name:** Furfuryl Mercaptan 1% EtOH natural
- **Product number:** 1268
- **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
    sarfa@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
  - Flam. Liq. 2 H225 Highly flammable liquid and vapor.

- **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 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/sparks/open flames/hot surfaces. - No smoking.
  - P241 Use explosion-proof electrical/ventilating/lighting/equipment.
  - P280 Wear protective gloves / eye protection / face protection.
  - P303+P361+P353 IF ON SKIN (or hair): Remove/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.

(Continued on page 2)
Trade name: Furfuryl Mercaptan 1% EtOH natural

- Classification system:
  - NFPA ratings (scale 0 - 4)
    - Health = 1
    - Fire = 4
    - Reactivity = 0
  - HMIS-ratings (scale 0 - 4)
    - Health = 1
    - Fire = 4
    - Reactivity = 0
- Other hazards
- Results of PBT and vPvB assessment
  - PBT: Not applicable.
  - vPvB: Not applicable.

### 3 Composition/information on ingredients
- Description: Mixture of the substances listed below with nonhazardous additions.

#### Dangerous components:
- 64-17-5 ethanol

### 4 First-aid measures
- Description of first aid measures
  - After inhalation: Supply fresh air; consult doctor in case of complaints.
  - After skin contact: Generally the product does not irritate the skin.
  - After eye contact:
    - Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
  - After swallowing:
  - 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, sand, extinguishing powder. Do not use water.
  - 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).
  Ensure adequate ventilation.
  Do not flush with water or aqueous cleansing agents
- 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
- Handling:
  - 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.
- 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:
<table>
<thead>
<tr>
<th>Substance</th>
<th>PEL Long-term value</th>
<th>REL Long-term value</th>
<th>TLV Short-term value</th>
</tr>
</thead>
<tbody>
<tr>
<td>64-17-5 ethanol</td>
<td>1900 mg/m³, 1000 ppm</td>
<td>1900 mg/m³, 1000 ppm</td>
<td>1880 mg/m³, 1000 ppm</td>
</tr>
</tbody>
</table>
- Additional information: The lists that were valid during the creation were used as a basis.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.

- **Breathing equipment:** Not required.
- **Protection of hands:**
  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**
    - **Appearance:**
      - **Form:** Liquid
      - **Color:** Light yellow
      - **Odor:** Alcoholic coffee
      - **Odour threshold:** Not determined.
    - **pH-value:** Not determined.

  - **Change in condition**
    - **Melting point/Melting range:** -114.5 °C (-174 °F)
    - **Boiling point/Boiling range:** 78 °C (172 °F)

  - **Flash point:** 17 °C (63 °F)

  - **Flammability (solid, gaseous):** Not applicable.

  - **Ignition temperature:** 425 °C (797 °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:** 3.5 Vol %

(Continued on page 5)
10 Stability and reactivity

- Reactivity
- 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:
  - Primary irritant effect:
    - on the skin: No irritant effect.
    - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
  - 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)
    64-17-5 ethanol
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
- DOT, ADR, IMDG, IATA: UN1170
- UN proper shipping name
  - DOT: Ethanol solutions
  - ADR: 1170 Ethanol solutions
  - IMDG: ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
  - IATA: ETHANOL SOLUTION
### Transport hazard class(es)

- **DOT**
  - Class: 3
  - Label: Flammable liquids

- **ADR**
  - Class: 3 (F1)
  - Label: Flammable liquids

- **IMDG, IATA**
  - Class: 3
  - Label: Flammable liquids

### Packing group

- **DOT, ADR, IMDG, IATA**: II

### Environmental hazards:

- **Marine pollutant**: No

### Special precautions for user

- **Warning**: Flammable liquids
- **Danger code (Kemler)**: 30
- **EMS Number**: F-E,S-E

### 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
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 ingredients are listed.
    - Proposition 65
      - Chemicals known to cause cancer:
        None of the ingredients is listed.
      - 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:
        64-17-5 ethanol

- Carcinogenic categories
  - EPA (Environmental Protection Agency)
    None of the ingredients is listed.
  - TLV (Threshold Limit Value established by ACGIH)
    64-17-5 ethanol A3
  - NIOSH-Ca (National Institute for Occupational Safety and Health)
    None of the ingredients is listed.

- GHS label elements
  - The product is classified and labeled according to the Globally Harmonized System (GHS).
  - Hazard pictograms
    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.

GHS02

- Signal word Danger
Trade name: Furfuryl Mercaptan 1% EtOH natural

- **Hazard statements**
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  P303+P361+P353 IF ON SKIN (or hair): Remove/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.

### 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**
  H225 Highly flammable liquid and vapor.

- **Department issuing SDS:** Product safety department
- **Contact:** Sidney Arfa
- **Date of preparation / last revision** 06/25/2015 / -
- **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)
  Flam. Liq. 2: Flammable liquids, Hazard Category 2