1 Identification

- **Product identifier**
- **Trade name**: Ammonium Sulfide 15% in Water natural
- **Product number**: 1543
- **CAS Number**: 12135-76-1 / 7732-18-5
- **EINECS Number**: 235-223-4 / 231-7912
- **Application of the substance / the mixture**: Food flavorings
- **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
  productssafty@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 Classification(s) identification

- **Classification of the substance or mixture**

  - [GHS02 Flame](#)
    - Flam. Liq. 3  H226 Flammable liquid and vapor.

  - [GHS05 Corrosion](#)
    - Skin Corr. 1B  H314 Causes severe skin burns and eye damage.
    - Eye Dam. 1  H318 Causes serious eye damage.

- **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).

(Continued on page 2)
Hazard pictograms

GHS02  GHS05

Signal word Danger

Hazard-determining components of labeling:
ammonium sulphide

Hazard statements
H226 Flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.

Precautionary statements
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P260 Do not breathe/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.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a poison center/doctor.
P321 Specific treatment (see on this label).
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:
NFPA ratings (scale 0 - 4)

Health = 3  
Fire = 2  
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = *3  
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.
Trade name: Ammonium Sulfide 15% in Water natural

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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. Then consult a doctor.
- After swallowing: If symptoms persist consult doctor.

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
  - During heating or in case of fire poisonous gases are produced.
- Advice for firefighters
- Protective equipment: Mouth respiratory protective device.
- 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
  - Mount respiratory protective device.
  - 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).
  - Use neutralizing agent.
  - Dispose contaminated material as waste according to item 13.
  - Ensure adequate ventilation.
- Reference to other sections
  - See Section 7 for information on safe handling.
Safety Data Sheet
acc. to OSHA HCS

Trade name: Ammonium Sulfide 15% in Water natural

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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.
    Keep respiratory protective device available.

- **Conditions for safe storage, including any incompatibilities**
  - **Storage:**
    - **Requirements to be met by storerooms and receptacles:** No special 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:**
      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.
· 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

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information
   · Appearance:
     Form: Liquid
     Color: According to product specification
   · Odor:
     Odor threshold: Not determined.
   · pH-value:
     Not determined.
· Change in condition
   · Melting point/Melting range: Undetermined.
   · Boiling point/Boiling range: Undetermined.
· Flash point:
   60 °C (140 °F)
· Flammability (solid, gaseous):
  Not applicable.
· Decomposition temperature:
  Not determined.
47.0.11

· Auto igniting: Product is not selfigniting.
· Danger of explosion: Not determined.

· Explosion limits:
  Lower: 4 Vol %
  Upper: 46 Vol %
· Vapor pressure at 20 °C (68 °F): 23 hPa (17.3 mm Hg)
· Density: Not determined.
· Relative density: Not determined.
· Vapor density: Not determined.
· Evaporation rate: Not determined.
· Solubility in / Miscibility with Water: Fully miscible.
· Partition coefficient (n-octanol/water): Not determined.
· Viscosity:
  Dynamic: Not determined.
  Kinematic: Not determined.
· Solvent content:
  Water: 85.0 %
  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:
    · Primary irritant effect:
      · on the skin: No irritant effect.
      · on the eye: Strong irritant with the danger of severe eye injury.
    · Sensitization: No sensitizing effects known.
47.0.11

· 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)
    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.

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 2 (Self-assessment): hazardous for water.
    Do not allow product to reach ground water, water course or sewage system.
    Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    Danger to drinking water if even 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

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<td><strong>Environmental hazards:</strong></td>
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Trade name: Ammonium Sulfide 15% in Water natural

- **Special precautions for user**: Warning: Corrosive substances
- **Danger code (Kemler)**: 368
- **EMS Number**: F-E,S-C
- **Segregation groups**: Ammonium compounds
- **Stowage Category**: B
- **Stowage Code**: SW1 Protected from sources of heat.
- **Handling Code**: H2 Keep as cool as reasonably practicable
- **Segregation Code**: SG35 Stow "separated from" acids.
  - SG68 If flashpoint 60°C c.c. or below, segregation as for class 3, but "away from" class 4.1.

- **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: 1 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 2683 AMMONIUM SULFIDE SOLUTION, 3 (6.1+8), 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)**: 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.
Trade name: Ammonium Sulfide 15% in Water natural

· 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:
    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.
  The product is classified and labeled according to the Globally Harmonized System (GHS).
  · Hazard pictograms
    GHS02  GHS05

· Signal word Danger

· Hazard-determining components of labeling:
  ammonium sulphide

· Hazard statements
  H226 Flammable liquid and vapor.
  H314 Causes severe skin burns and eye damage.

· Precautionary statements
  P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
  P260 Do not breathe/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.
  P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  P310 Immediately call a poison center/doctor.
  P321 Specific treatment (see on this label).

(Continued on page 11)
Trade name: Ammonium Sulfide 15% in Water natural

(Continuation of page 10)

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.

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

H225 Highly flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Department issuing SDS: Product Safety Department

Contact:
Product Safety Department
productsafety@adv-bio.com

Date of preparation / last revision 08/29/2018 / -

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)
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
Flam. Liq. 3: Flammable liquids – Category 3
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1