1 Identification

- Product identifier
- Trade name: Sodium Sulfide Hydrate Neat
- Part number: N-1278
- CAS Number: 27610-45-3
- EC number: 215-211-5
- Index number: 016-009-00-8
- Application of the substance / the mixture: Laboratory chemicals

Details of the supplier of the safety data sheet

- Manufacturer/Supplier: ULTRA Scientific, Inc.
  250 Smith Street
  North Kingstown, RI 02852
  USA

- Information department:
  Telephone: (401) 294-9400
  Fax: (401) 295-2300
  E-mail: regulatory@ultrasci.com

- Emergency telephone number:
  US: (800) 424-9300
  Outside US: (703) 527-3887

2 Hazard(s) identification

- Classification of the substance or mixture

  ![GHS06 Skull and crossbones]
  Acute Tox. 3 H301 Toxic if swallowed.

  ![GHS05 Corrosion]
  Met. Corr. 1 H290 May be corrosive to metals.
  Skin Corr. 1B H314 Causes severe skin burns and eye damage.

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

  ![GHS05](GHS05.png) ![GHS06](GHS06.png)

- Signal word: Danger
- Hazard-determining components of labeling:
  sodium sulfide hydrate

(Contd. on page 2)
Hazard statements
May be corrosive to metals.
Toxic if swallowed.
Causes severe skin burns and eye damage.

Precautionary statements
Keep only in original container.
Do not breathe dusts or mists.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Absorb spillage to prevent material damage.
Store locked up.
Store in corrosive resistant container with a resistant inner liner.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)

Health = 3
Fire = 0
Reactivity = 0

HMIS-ratings (scale 0 - 4)

Health = 4
Fire = 0
Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

Chemical characterization: Substances
CAS No. Description
27610-45-3 sodium sulfide hydrate

Identification number(s)
EC number: 215-211-5
Index number: 016-009-00-8
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. Then consult a doctor.
- After swallowing:
  Do not induce vomiting; immediately call for medical help.
  Drink copious amounts of water and provide fresh air. Immediately call a 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: Use fire fighting measures that suit the environment.
- 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.

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures
  Mount respiratory protective device.
  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:
  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.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.
- Protective Action Criteria for Chemicals

  PAC-1:
  Substance is not listed.

  PAC-2:
  Substance is not listed.

  PAC-3:
  Substance is not listed.
7 Handling and storage

- Handling:
  - Precautions for safe handling
    Thorough dedusting.
    Ensure good ventilation/exhaustion at the workplace.
  - Information about protection against explosions and fires: 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 following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
    The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
    At this time, the remaining constituent has no known exposure limits.
    At this time, the other constituents have no known exposure limits.
  - Additional information: The lists that were valid during the creation were used as 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 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 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.
        - Penetration time of glove material
          The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
### 9 Physical and chemical properties

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

<table>
<thead>
<tr>
<th>· General Information</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>· Appearance:</td>
<td></td>
</tr>
<tr>
<td>Form: Crystalline</td>
<td></td>
</tr>
<tr>
<td>Color: Colorless</td>
<td></td>
</tr>
<tr>
<td>· Odor: Characteristic</td>
<td></td>
</tr>
<tr>
<td>· Odor threshold:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· pH-value:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Change in condition</td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range: Un</td>
<td>determined.</td>
</tr>
<tr>
<td>Boiling point/Boiling range: Und</td>
<td>etermined.</td>
</tr>
<tr>
<td>· Flash point:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Flammability (solid, gaseous): Product is not flammable.</td>
<td></td>
</tr>
<tr>
<td>· Ignition temperature:</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature: Not</td>
<td>determined.</td>
</tr>
<tr>
<td>Auto igniting:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Danger of explosion:</td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td>· Explosion limits:</td>
<td></td>
</tr>
<tr>
<td>Lower: Not determined.</td>
<td></td>
</tr>
<tr>
<td>Upper: Not determined.</td>
<td></td>
</tr>
<tr>
<td>· Vapor pressure:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Density:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Relative density:</td>
<td>Not determined.</td>
</tr>
<tr>
<td>· Vapor density</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Evaporation rate:</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>· Solubility in / Miscibility with Water: Insoluble.</td>
<td></td>
</tr>
<tr>
<td>· Partition coefficient (n-octanol/water): Not determined.</td>
<td></td>
</tr>
<tr>
<td>· Viscosity:</td>
<td></td>
</tr>
<tr>
<td>Dynamic: Not applicable.</td>
<td></td>
</tr>
<tr>
<td>Kinematic: Not applicable.</td>
<td></td>
</tr>
<tr>
<td>VOC content: 0.00 %</td>
<td></td>
</tr>
<tr>
<td>0.0 g/l / 0.00 lb/gl</td>
<td></td>
</tr>
<tr>
<td>· Other information:</td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>
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
- **Primary irritant effect**:
  - **on the skin**: Caustic effect on skin and mucous membranes.
  - **on the eye**: Strong caustic effect.
  - **Sensitization**: No sensitizing effects known.
- **Additional toxicological information**:
  - Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.
- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - Substance is not listed.
  - **NTP (National Toxicology Program)**
    - Substance is not listed.
  - **OSHA-Ca (Occupational Safety & Health Administration)**
    - 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 (Self-assessment): extremely hazardous for water
    - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
    - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
    - Danger to drinking water if even extremely small quantities leak into the ground.
  - **Results of PBT and vPvB assessment**
  - **PBT**: Not applicable.
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

<table>
<thead>
<tr>
<th>UN-Number</th>
<th>DOT, IMDG, IATA</th>
<th>UN1849</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN proper shipping name</td>
<td>DOT</td>
<td>Sodium sulfide, hydrated</td>
</tr>
<tr>
<td></td>
<td>IMDG</td>
<td>SODIUM SULPHIDE, HYDRATED, MARINE POLLUTANT</td>
</tr>
<tr>
<td></td>
<td>IATA</td>
<td>SODIUM SULPHIDE, HYDRATED</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>DOT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Class</td>
<td>8 Corrosive substances</td>
</tr>
<tr>
<td></td>
<td>Label</td>
<td>8</td>
</tr>
<tr>
<td>IMDG</td>
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<td></td>
<td>Class</td>
<td>8 Corrosive substances</td>
</tr>
<tr>
<td></td>
<td>Label</td>
<td>8</td>
</tr>
<tr>
<td>Packing group</td>
<td>DOT, IMDG, IATA</td>
<td>II</td>
</tr>
<tr>
<td>Environmental hazards:</td>
<td>Marine pollutant:</td>
<td>Symbol (fish and tree)</td>
</tr>
</tbody>
</table>
Safety Data Sheet
acc. to OSHA HCS

Trade name: Sodium Sulfide Hydrate Neat

- Special precautions for user
  - Warning: Corrosive substances

- Danger code (Kemler):
  - 80

- EMS Number:
  - F-A,S-B

- Segregation groups
  - Alkalis

- Stowage Category
  - A

- Segregation Code
  - SG35 Stow "separated from" acids.

- 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: 15 kg
      - On cargo aircraft only: 50 kg

  - IMDG
    - Limited quantities (LQ)
      - 1 kg
    - Excepted quantities (EQ)
      - Code: E2
      - Maximum net quantity per inner packaging: 30 g
      - Maximum net quantity per outer packaging: 500 g

- UN "Model Regulation":
  - UN 1849 SODIUM SULFIDE, HYDRATED, 8, II, ENVIRONMENTALLY HAZARDOUS

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 not 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
- The substance is classified and labeled according to the Globally Harmonized System (GHS).

GHS pictograms

- GHS05
- GHS06

Signal word
- Danger

Hazard-determining components of labeling:
- Sodium sulfide hydrate

Hazard statements
- May be corrosive to metals.
- Toxic if swallowed.
- Causes severe skin burns and eye damage.

Precautionary statements
- Keep only in original container.
- Do not breathe dusts or mists.
- Wash thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Wear protective gloves/protective clothing/eye protection/face protection.
- IF SWALLOWED: Immediately call a POISON CENTER/doctor.
- If swallowed: Rinse mouth. Do NOT induce vomiting.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If INHALED: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Specific treatment (see on this label).
- Wash contaminated clothing before reuse.
- Absorb spillage to prevent material damage.
- Store locked up.
- Store in corrosive resistant container with a resistant inner liner.
- 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.

Date of preparation / last revision 09/13/2017 / -

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
Trade name: Sodium Sulfide Hydrate Neat

(Cntl)