SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Sodium Sulfide, Nonahydrate

Manufacturer/Supplier Trade name: 

Manufacturer/Supplier Article number: S25570

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:
   AquaPhoenix Scientific
   9 Barnhart Drive, Hanover, PA 17331

Supplier Details:
   Fisher Science Education
   15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:
   Fisher Science Education    Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

- **Irritant**
  Acute toxicity (oral, dermal, inhalation), category 4

- **Toxic**
  Acute toxicity (oral, dermal, inhalation), category 3

- **Corrosive**
  Skin corrosion, category 1B
  Serious eye damage, category 1

- **Environmentally Damaging**
  Acute hazards to the aquatic environment, category 1
  Chronic hazards to the aquatic environment, category 1

Hazard Not Otherwise Classified - Combustible Dust
   Acute Oral Tox. 4
   Acute Dermal Tox. 3
   Skin Corr. 1B
   Eye corr. 1
   Aquatic Acute 1
   Aquatic Chronic 1

Signal word: Danger

Hazard statements:
   Causes severe skin burns and eye damage
   Toxic in contact with skin
   Harmful if swallowed
   Very toxic to aquatic life with long lasting effects
Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapours/spray
Wash skin thoroughly after handling
Avoid release to the environment
Wear protective gloves/protective clothing/eye protection/face protection
Protect from moisture
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Collect spillage
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
Specific measures (see supplemental first aid instructions on this label)
Remove/Take off immediately all contaminated clothing
Wash contaminated clothing before reuse
Store locked up
Protect from sunlight
Dispose of contents and container to an approved waste disposal plant

Combustible Dust Hazard: :
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

SECTION 3 : Composition/information on ingredients

Ingredients:
Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date: 10.24.2014

Sodium Sulfide, Nonahydrate

<table>
<thead>
<tr>
<th>CAS 1313-84-4</th>
<th>Sodium Sulfide, Nonahydrate</th>
<th>100 %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Percentages are by weight</td>
</tr>
</tbody>
</table>

SECTION 4: First aid measures

Description of first aid measures

After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen.

After skin contact: Wash affected area with soap and water. Immediately Rinse/flush exposed skin gently using water for 15-20 minutes. Remove all contaminated clothing and shoes. Seek immediate medical attention.

After eye contact: Protect unexposed eye. Immediately flush eyes with water for at least 15 minutes. Remove contact lens(es) if able to do so during rinsing. Seek immediate medical attention.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek immediate medical attention.

Most important symptoms and effects, both acute and delayed:

Irritation, Nausea, Headache, Shortness of breath;

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents: If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Sulphur oxides, Sodium oxides.

Advice for firefighters:

Protective equipment: Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions): Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:


Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Discharge into the environment must be avoided.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Collect solids in powder form using vacuum with (HEPA filter)

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:
Minimize dust generation and accumulation. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Dry powders can build static electricity charges when subjected to the friction of transfer and mixing operations. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing. Wash hands after handling. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).

Conditions for safe storage, including any incompatibilities:
Refrigerate upon arrival below 4°C/39°F. Product is sensitive to light and moisture. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed. Store with like hazards.

SECTION 8 : Exposure controls/personal protection

Control Parameters: 
, , OSHA PEL TWA (Total Dust) 15 mg/m3 (50 mppcf*)
, , ACGIH TLV TWA (inhalable particles) 10 mg/m3

Appropriate Engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Normal ventilation is adequate.

Respiratory protection:
Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin:
The glove material has to be impermeable and resistant to the product/the substance/the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection:
Safety glasses with side shields or goggles.
General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9 : Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state,color)</td>
<td>Solid</td>
</tr>
<tr>
<td>Explosion limit lower</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Explosion limit upper</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor</td>
<td>Rotten Eggs</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not determined</td>
</tr>
<tr>
<td>Odor threshold</td>
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</tr>
<tr>
<td>Vapor density</td>
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</tr>
<tr>
<td>pH-value</td>
<td>~12.7 (100g/l) at 20°C</td>
</tr>
<tr>
<td>Relative density</td>
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</tr>
<tr>
<td>Melting/Freezing point</td>
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<tr>
<td>Solubilities</td>
<td></td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
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</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flash point (closed cup)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Flammability (solid,gaseous)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>a. Kinematic:Not determined</td>
</tr>
<tr>
<td>Density</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>b. Dynamic: Not determined</td>
</tr>
</tbody>
</table>

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: No decomposition if used and stored according to specifications.
Possible hazardous reactions: None under normal processing
Conditions to avoid: Incompatible Materials. Light. Exposure to air. Exposure to moist air or water.
Hazardous decomposition products: Carbon oxides (CO, CO2). Sulfur oxides. Hydrogen sulfide

SECTION 11 : Toxicological information

Acute Toxicity:
Oral: 1313-84-4 LD50 Rat: 254 mg/kg

Chronic Toxicity: No additional information.

Corrosion Irritation: No additional information.

Sensitization: No additional information.

Single Target Organ (STOT): No additional information.

Numerical Measures: No additional information.
Carcinogenicity: Not listed as a carcinogen (ACGIH, IARC, NTP): 1313-84-4
Mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

SECTION 12 : Ecological information

Ecotoxicity
1313-84-4: EC50 - Daphnia magna (Water flea) - 2.1 mg/l - 48 h
1313-84-4: LC50 - Guppy (lebistes reticulatus) - 15 mg/l - 96 h

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:
Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14 : Transport information

UN-Number
1849
UN proper shipping name
Sodium sulfide, hydrated
Transport hazard class(es)
Class: 8 Corrosive substances
Packing group: II
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)
SARA Section 311/312 (Specific toxic chemical listings):
Acute, Chronic
SARA Section 313 (Specific toxic chemical listings):
None of the ingredients is listed
RCRA (hazardous waste code):
None of the ingredients is listed

**TSCA (Toxic Substances Control Act):**
All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**
None of the ingredients is listed

**Proposition 65 (California):**

- **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

**Canada**

- **Canadian Domestic Substances List (DSL):**
  All ingredients are listed.

- **Canadian NPRI Ingredient Disclosure list (limit 0.1%):**
  None of the ingredients is listed

- **Canadian NPRI Ingredient Disclosure list (limit 1%):**
  None of the ingredients is listed

### SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:**

**Abbreviations and acronyms:**

- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- NFPA: National Fire Protection Association (USA)
- HMIS: Hazardous Materials Identification System (USA)
- WHMIS: Workplace Hazardous Materials Information System (Canada)
- DNEL: Derived No-Effect Level (REACH)
- PNEC: Predicted No-Effect Concentration (REACH)