SAFETY DATA SHEET
Sodium Hydrogen Sulfide (hydrate)

Section 1. Identification of the Substance/Mixture and of the Company/Undertaking

1.1 Product Code: 10012555
Product Name: Sodium Hydrogen Sulfide (hydrate)
Synonyms: sodium sulfide, hydrate; NaHS; NSC 158264; Sodium Hydrosulfide;

1.2 Relevant identified uses of the substance or mixture and uses advised against:
Relevant identified uses: For research use only, not for human or veterinary use.

1.3 Details of the Supplier of the Safety Data Sheet:
Company Name: Cayman Chemical Company
1180 E. Ellsworth Rd.
Ann Arbor, MI 48108
Web site address: www.caymanchem.com
Information: Cayman Chemical Company +1 (734)971-3335

1.4 Emergency telephone number:
Emergency Contact: CHEMTREC Within USA and Canada: +1 (800)424-9300
CHEMTREC Outside USA and Canada: +1 (703)527-3887

Section 2. Hazards Identification

2.1 Classification of the Substance or Mixture:
Skin Corrosion/Irritation, Category 1B
Serious Eye Damage/Eye Irritation, Category 1

2.2 Label Elements:

GHS Signal Word: Danger

GHS Hazard Phrases:
H314: Causes severe skin burns and eye damage.
H318: Causes serious eye damage.

GHS Precaution Phrases:
P260: Do not breathe (dust/fume/gas/mist/vapors/spray).
P264: Wash (hands) thoroughly after handling.
P280: Wear (protective gloves/protective clothing/eye protection/face protection).

GHS Response Phrases:
P301+330+331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: 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 or doctor/physician.
P363: Wash contaminated clothing before reuse.

GHS Storage and Disposal Phrases:
Please refer to Section 7 for Storage and Section 13 for Disposal information.
2.3 Adverse Human Health Effects and Symptoms: Causes severe skin burns and serious eye damage. Material may be irritating to the mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. May cause eye, skin, or respiratory system irritation. To the best of our knowledge, the toxicological properties have not been thoroughly investigated.

Section 3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>CAS # / RTECS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Concentration</th>
<th>EC No./ EC Index No.</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>207683-19-0 NA</td>
<td>Sodium hydrosulfide hydrate</td>
<td>100.0 %</td>
<td>683-666-0 NA</td>
<td>Skin Corr. 1B: H314 Eye Damage 1: H318</td>
</tr>
</tbody>
</table>

Section 4. First Aid Measures

4.1 Description of First Aid Measures:
   In Case of Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get immediate medical attention.
   In Case of Skin Contact: Immediately wash skin with soap and plenty of water for at least 20 minutes. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.
   In Case of Eye Contact: Hold eyelids apart and flush eyes with plenty of water for at least 20 minutes. Have eyes examined and tested by medical personnel.
   In Case of Ingestion: Wash out mouth with water provided person is conscious. Never give anything by mouth to an unconscious person. Get medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

4.2 Important Symptoms and Effects, Both Acute and Delayed: May cause: burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

Section 5. Fire Fighting Measures

5.1 Suitable Extinguishing Media: Use alcohol-resistant foam, carbon dioxide, water, or dry chemical spray. Use water spray to cool fire-exposed containers.
   Unsuitable Extinguishing Media: A solid water stream may be inefficient.

5.2 Flammable Properties and Hazards: Not flammable or combustible. No data available.
   Flash Pt: No data.
   Explosive Limits: LEL: No data. UEL: No data.
   Autoignition Pt: No data.

5.3 Fire Fighting Instructions: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.
Section 6. Accidental Release Measures

6.1 Protective Precautions, Equipment and Emergency Procedures:
- Avoid raising and breathing dust, and provide adequate ventilation.
- As conditions warrant, wear a NIOSH approved self-contained breathing apparatus, or respirator, and appropriate personal protection (rubber boots, safety goggles, and heavy rubber gloves).

6.2 Environmental Precautions:
- Take steps to avoid release into the environment, if safe to do so.

6.3 Methods and Material For Containment and Cleaning:
- Contain spill and collect, as appropriate.
- Transfer to a chemical waste container for disposal in accordance with local regulations.

Section 7. Handling and Storage

7.1 Precautions To Be Taken in Handling:
- Avoid breathing dust/fume/gas/mist/vapours/spray.
- Avoid prolonged or repeated exposure.

7.2 Precautions To Be Taken in Storing:
- Keep container tightly closed.
- Store in accordance with information listed on the product insert.
- HYGROSCOPIC.
- Store away from acids.
- Store in well-ventilated place.
- Store under inert gas.

Section 8. Exposure Controls/Personal Protection

8.1 Exposure Parameters:

8.2 Exposure Controls:

8.2.1 Engineering Controls (Ventilation etc.): Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

8.2.2 Personal protection equipment:
- Eye Protection: Safety glasses and face shield
- Protective Gloves: Compatible chemical-resistant gloves
- Other Protective Clothing: Full protective clothing or suit
- Respiratory Equipment: NIOSH approved respirator, as conditions warrant.

(Specify Type):

Work/Hygienic/Maintenance Practices:
- Do not take internally.
- Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
- Wash thoroughly after handling.
- No data available.
Section 9. Physical and Chemical Properties

9.1 Information on Basic Physical and Chemical Properties

Physical States: [ ] Gas [ ] Liquid [X] Solid
Appearance and Odor: A crystalline solid.
pH: No data.
Melting Point: 53.00 C - 56.00 C
Boiling Point: No data.
Flash Pt: No data.
Evaporation Rate: No data.
Flammability (solid, gas): No data available.
Explosive Limits: LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg): No data.
Vapor Density (vs. Air = 1): No data.
Specific Gravity (Water = 1): No data.
Solubility in Water: No data.
Solubility Notes: ~10 mg/ml in PBS (pH 7.2); ~3 mg/ml in EtOH, DMSO & DMF;
Octanol/Water Partition Coefficient:
Autoignition Pt: No data.
Decomposition Temperature: No data.
Viscosity: No data.

9.2 Other Information

Percent Volatile: No data.
Molecular Formula & Weight: HNaS · XH2O 56.1

Section 10. Stability and Reactivity

10.1 Reactivity: No data available.
10.2 Stability: [X] Stable
10.3 Stability Note(s): Stable if stored in accordance with information listed on the product insert.
Polymerization: [X] Will not occur
10.4 Conditions To Avoid: No data available.
10.5 Incompatibility - Materials
Acids: aluminium, copper, copper alloys, strong oxidizing agents, zinc

10.6 Hazardous
Decomposition or Byproducts: sodium oxides, sulfur oxides
SAFETY DATA SHEET
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Section 11. Toxicological Information

11.1 Information on Toxicological Effects:
The toxicological effects of this product have not been thoroughly studied.

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>NTP</th>
<th>IARC</th>
<th>ACGIH</th>
<th>OSHA</th>
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<tbody>
<tr>
<td>207683-19-0</td>
<td>Sodium hydrosulfide hydrate</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
</tr>
</tbody>
</table>

Section 12. Ecological Information

12.1 Toxicity: Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

12.2 Persistence and Degradability: No data available.

12.3 Bioaccumulative Potential: No data available.

12.4 Mobility in Soil: No data available.

12.5 Results of PBT and vPvB assessment: No data available.

12.6 Other adverse effects: No data available.

Section 13. Disposal Considerations

13.1 Waste Disposal Method: Dispose in accordance with local, state, and federal regulations.

Section 14. Transport Information

14.1 LAND TRANSPORT (US DOT):
DOT Proper Shipping Name: Sodium hydrosulfide hydrate
DOT Hazard Class: 8 - CORROSIVE
UN/NA Number: UN2949 Packing Group: II

14.1 LAND TRANSPORT (European ADR/RID):
ADR/RID Shipping Name: Sodium hydrosulfide hydrate
UN Number: 2949 Packing Group: II
Hazard Class: 8 - CORROSIVE

14.3 AIR TRANSPORT (ICAO/IATA):
ICAO/IATA Shipping Name: Sodium hydrosulfide hydrate
UN Number: 2949 Packing Group: II
Hazard Class: 8 - CORROSIVE IATA Classification: 8

Additional Transport Information:
Transport in accordance with local, state, and federal regulations.
When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10.
Therefore packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.
**Section 15. Regulatory Information**

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>S. 302 (EHS)</th>
<th>S. 304 RQ</th>
<th>S. 313 (TRI)</th>
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</thead>
<tbody>
<tr>
<td>207683-19-0</td>
<td>Sodium hydrosulfide hydrate</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Hazardous Components (Chemical Name)</th>
<th>Other US EPA or State Lists</th>
</tr>
</thead>
<tbody>
<tr>
<td>207683-19-0</td>
<td>Sodium hydrosulfide hydrate</td>
<td>CAA HAP,ODC: No; CWA NPDES: No; TSCA: No; CA PROP.65: No</td>
</tr>
</tbody>
</table>

**Regulatory Information**

- This SDS was prepared in accordance with 29 CFR 1910.1200 and Regulation (EC) No. 1272/2008.

**Statement:**

No. 1272/2008.

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**Section 16. Other Information**

- **Revision Date:** 01/23/2019
- **Additional Information About This Product:** No data available.
- **Company Policy or Disclaimer:**

  DISCLAIMER: This information is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.