## Sodium Hydrosulfide (NaHS) Solution, 60%

### Nomenclature
- Sodium Hydrosulfide
- Sodium Hydrogen Sulfide

### Formula
- NaSH

### Product Identification Number
- UN 2922

### CAS Number
- 16721-80-5

### Molecular Weight
- 56.06

### Description
Sodium Hydrosulfide (NaHS) is an economical form of reactive sulfur that is typically a light-yellow colored solution with the accompanying odor of rotten eggs. Hydrogen Sulfide (H\textsubscript{2}S), a toxic gas, is evolved upon contact of NaHS with acids. NaHS is mildly corrosive to carbon steel and cast iron. Stainless steels are very resistant to corrosion. Copper and its alloys, aluminum and zinc are rapidly attacked. Polyvinyl chloride (PVC) storage systems are to be avoided.

### Available Grades
- Technical Grade

### Typical Composition
- **Parameter**
  - \( \text{NaHS} \) (%)
  - \( \text{Na}_2\text{S} \) (%)
  - \( \text{Na}_2\text{CO}_3 \) (%)
  - \( \text{Na}_2\text{SO}_3 \) and \( \text{Na}_2\text{S}_2\text{O}_3 \) (%)
- **Specification**
  - 58.0 – 60.0
  - 1.5 max.
  - 0.6 max.
  - 0.6 max.
- **Test Method**
  - QCL455
  - QCL455
  - QCL453
  - QCL456

### Typical Properties
- **Specific Gravity (80°C/15.6°C)**
  - 1.329 – 1.340
- **Density (lb./gal) at 80°C (176°F)**
  - 11.1 – 11.2
- **Freezing Point**
  - 40°C (104°F) - 41°C (106°F)
  - 6 ppm max.
- **Test Method**
  - QCL452

### Shipping Containers
- Tank Trailers (22 short tons net weight)
- ISO Tank Containers (22 to 25 short tons net weight)
- Rail Tank Cars (92 short tons net weight)

### Uses
- **Chemical**
  - In manufacture of thioc compounds such as thioamides, thiourea, thioglycolic acid, thio and dithiobenzoic acids, and sodium thiosulfate. As an agent to separate or remove heavy metals.
- **Dyes**
  - To apply sulfur dyes to cotton, leather and skins; as a process material in the manufacture of some dyes.
- **Leather Processing**
  - As a dehairing agent to produce fine leathers
- **Glass Making**
  - As a fining agent in flint glass
- **Metal Refining**
  - As a floatation aid; to precipitate metals for recovery
<table>
<thead>
<tr>
<th>Uses (continued)</th>
<th>Mining</th>
<th>For sulfidizing the ore and as a depressant in flotation circuits</th>
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</thead>
<tbody>
<tr>
<td>Plastics Manufacturing</td>
<td>As a process additive in the manufacture of heat resistant thermoplastics for the auto and electric and electronic industries</td>
<td></td>
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<tr>
<td>Paper Industry</td>
<td>In synthetic cooking liquor for kraft pulp mill start-ups or as a make up chemical for this process</td>
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<tr>
<td>Textiles</td>
<td>To desulfurize viscose rayon and regenerated viscose</td>
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</tbody>
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