



SODIUM SULFIDE

Material Safety Data Sheet

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Emergency Telephone Number
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Effective Date: 09-03-85

PRODUCT IDENTIFICATION:

Synonyms: Sodium sulfide nonhydrate; Sodium monosulfide

Formula CAS No.: 1313-84-4 (Hydrated)
TSCA CAS No.: 1313-82-2 (Anhydrous)

Molecular Weight: 240.18

Hazardous Ingredients:
None.

Chemical Formula: $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$

PRECAUTIONARY MEASURES

DANGER! MAY BE FATAL IF SWALLOWED OR INHALED.
CORROSIVE. CAUSES BURNS.

Do not get in eyes.
Avoid breathing gas.
Avoid contact with eyes, skin and clothing.
Keep container closed.
Use only with adequate ventilation.

EMERGENCY/FIRST AID

If swallowed, give several glasses of water or milk to drink. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.
SEE SECTION 5.

DOT Hazard Class: Not Regulated

Physical Data

SECTION 1

Appearance: White crystals.
Delequescent
Odor: Sulfide odor.
Solubility: 200 g in 100 g of water.
Boiling Point: Not applicable.

Vapor Density (Air=1): No information found.

Melting Point: ca 50°C (ca 122°F)

Vapor Pressure (mm Hg): No information found.

Density: 1.43

Evaporation Rate: No information found.

SECTION 2

Fire and Explosion Information

Fire: Not considered to be a fire hazard.

Explosion:

Not considered to be an explosion hazard.

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 3

Reactivity Data

Stability:

Darkens on exposure to air or light. Sodium hydroxide forms in aqueous solutions.

Hazardous Decomposition Products:

Hydrogen sulfide at room temperature, oxides of sulfur and sodium under fire conditions.

Hazardous Polymerization:

This substance does not polymerize.

Incompatibilities:

Acids, oxidants.

Leak/Spill Disposal Information

SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust.

Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust.

Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA approved hazardous waste facility.

Do not contact with acids. Do not handle with bare hands.

Ensure compliance with local, state and federal regulations.

Sodium sulfide

Health Hazard Information

A. Exposure/Health Effects

SECTION 3

Inhalation:

Hazard is highly toxic (50-100 ppm in air) hydrogen sulfide which may accumulate in confined spaces due to the decomposition of sodium sulfide or from its reaction with acids. Symptoms include painful conjunctivitis, headache, nausea, dizziness, coughing and, in extreme cases, pulmonary edema and possible death.

Ingestion:

Corrosive, toxic. Sodium sulfide is a strong base and can cause severe burns on the mucous membrane. Hydrolysis by gastric fluids releases toxic hydrogen sulfide. The symptoms and effects are similar to those under inhalation, above.

Skin Contact:

Irritant. Contact with skin can produce serious caustic burns with painful inflammation and possible destruction of tissue.

Eye Contact:

Irritant. Inflammation, tearing and pain may be expected. Severe contact can cause destruction of tissue.

Chronic Exposure:

No information found.

Aggravation of Pre-existing Conditions:

Persons with pre-existing skin disorders or eye problems, or impaired liver, kidney or respiratory function may be more susceptible to the effects of the substance.

B. FIRST AID

Inhalation:

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:

Give several glasses of water or milk, if available, to drink. Vomiting may occur spontaneously, but DO NOT INDUCE! Never give anything by mouth to an unconscious person. Get medical attention immediately.

Skin Exposure:

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately.

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (NTECS, 1982)

No LD50/LC50 information found relating to normal routes of occupational exposure.

Occupational Control Measures

SECTION 5

Airborne Exposure Limits:

None established.
-ACGIH Threshold Limit Value (TLV):
10 ppm (hydrogen sulfide)

Ventilation System:

A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant into the workroom air.

Personal Respirators (NIOSH Approved)

For conditions of use where exposure to the dust is apparent, a dust/mist respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.

Skin Protection:

Wear protective gloves and clean body-covering clothing.

Eye Protection:

Use chemical safety goggles. Contact lenses should be worn when working with this material.

Maintain eye wash fountain and quick-drench facility in work area.

Storage and Special Information

SECTION 7

Keep in a tightly closed container. Protect container from physical damage. Store in an explosion-proof refrigerator. Isolate from acids and alkalis.

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