

**GHS SAFETY DATA SHEET**

**1. IDENTIFICATION**

**Product Name: Sodium Sulfide Flake**

**Sodium Sulfide, Hydrated**

with not less than 30% water

SYNONYMS: Sodium Sulfide, 60-62% Flakes; Disodium Sulfide hydrate.

RECOMMENDED USES: - For industrial use to precipitate metals from solution

- Waste and wastewater treatment
- De-hairing agent in leather processing
- Pulp and paper manufacture
- Chemical and textile industrial processes

MANUFACTURER: Chemical Products Corporation (CPC)

P.O. Box 2470

102 Old Mill Road, S.E.

Cartersville, Georgia 30120-1692

Telephone: Day, 770-382-2144

Transportation Emergency: CHEMTREC 800-424-9300

**2. HAZARDS IDENTIFICATION**



**DANGER**

**CAUSES SEVERE SKIN BURNS AND EYE DAMAGE.**

CAN CAUSE PERMANENT EYE INJURY.

Toxic if swallowed. Corrosive to metals.

**CORROSIVE TO SKIN AND MUCOUS MEMBRANES BECAUSE OF HIGH ALKALINITY (CAUSTIC).**

**DUST CAUSES SEVERE RESPIRATORY TRACT IRRITATION AND IS HIGHLY CORROSIVE TO EYES AND SKIN.**

**CONTACT WITH ACID RELEASES POISONOUS AND FLAMMABLE HYDROGEN SULFIDE GAS.**

Wear protective gloves/protective clothing/eye protection/face protection.

Very toxic to aquatic life with long lasting effects.

Do not breathe dust.

**Sodium Sulfide Flake**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately seek medical assistance.

Wash skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Avoid release to the environment.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Immediately call a POISON CENTER or doctor.

IF ON SKIN (or hair): Immediately remove all contaminated clothing. Rinse skin with water/ shower. Continue rinsing.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Wash contaminated clothing before reuse.

Absorb spillage to prevent material damage.

Collect spillage.

Keep only in original container.

Dispose of contents/ container to an approved waste disposal plant.

**Additional Hazards**

Contact with acids liberates toxic gas.

Corrosive to the respiratory tract.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<u>COMPONENT</u>	<u>CAS #</u>	<u>EXPOSURE LIMITS</u>	<u>% BY WT</u>
Sodium Sulfide	1313-82-2	No ACGIH TLV or OSHA PEL established for Sodium Sulfide  For Hydrogen Sulfide gas: OSHA PEL - 20 ppm. ACGIH TLV-TWA - 10 ppm	60 - 63%
Water	7732-18-5		37 - 40%

**4. FIRST AID MEASURES****General advice**

In case of emergency, show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Ingestion:** Have victim drink as much milk or water as possible. Do not induce vomiting. If vomiting occurs, give more liquids. Never give anything by mouth to an unconscious person. **Get immediate medical assistance.**

**Sodium Sulfide Flake**

**Inhalation:** Remove from contaminated atmosphere. Begin artificial respiration immediately if necessary. Begin CPR immediately if necessary. Administer oxygen if it is available. Get medical attention if symptoms persist.

**Eye Contact:** Flush with large quantities of water for at least 15 minutes. **Always seek medical attention.**

**Skin Contact:** Flush with large quantities of water. Wash with soap and water if available.

## ***5. FIREFIGHTING MEASURES***

### **Suitable extinguishing media**

Dry powder

### **Special hazards arising from this product**

Sulfur oxides

### **Advice for firefighters**

Wear self contained breathing apparatus for fire fighting.

**Flashpoint:** Non-flammable; dust can be flammable if heated sufficiently to remove water of hydration.

**Flammability:** Finely divided dust can form combustible mixtures with air after water of hydration is lost. Dry grinding of these flakes can result in fires in the grinding equipment.

**Autoignition:** Not applicable.

**General Hazard:** POISON, FLAMMABLE HYDROGEN SULFIDE GAS WILL BE EVOLVED FROM THIS PRODUCT ON EXPOSURE TO ACID. If this product loses water of hydration and burns, toxic sulfur oxide gases will be produced. Water used to fight a fire will be highly alkaline and corrosive to skin if it contacts this product.

**Fire Fighting Instructions:** Firefighters should wear self-contained breathing apparatus. **Do not use carbon dioxide fire extinguishers because toxic hydrogen sulfide gas may be liberated from this product.**

**Fire Fighting Equipment:** Use water in flooding quantities. A heavy fog of water may be effective in knocking down vapors.

**Hazardous Combustion Products:** Poisonous sulfur dioxide gas will be generated if dust from this product burns.

**Sodium Sulfide Flake****6. ACCIDENTAL RELEASE MEASURES**

Wear respiratory protection. Avoid dust formation. Avoid breathing dust or vapors. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Small Spill:** Keep dry and away from acid. Scoop up and store in sealed containers. Dispose of in accordance with local, state, or federal regulations.

**Large Spill:** Keep dry and away from acid. Recover as much of the solid as possible. If the material is dissolved in water, mix the solution with excess oxidizing agent such as hydrogen peroxide or sodium hypochlorite to oxidize the sulfide and eliminate the danger of hydrogen sulfide evolution.

**7. HANDLING AND STORAGE**

Keep container tightly closed in a dry and well-ventilated place.

Never allow product to get in contact with water during storage. Do not store near acids.

Product is sensitive to moisture - hygroscopic.

Product becomes a highly alkaline, corrosive liquid above about 91°C (dissolves in its water of hydration).

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Avoid contact with skin, eyes and clothing. Wash hands immediately after handling the product.

**Engineering Controls:** Adequate ventilation is required to remove the toxic and corrosive dust which may be present. Safety shower and eyewash fountain should always be available in the work area.

**Respiratory Protection:** Use self-contained breathing apparatus or supplied-air respirator if the PEL for hydrogen sulfide might be exceeded.

**Skin Protection:** Cover all exposed skin to protect it from dust and small particles.

**Eye Protection:** Chemical safety goggles and safety shield for protection from dust and small particles.

Do not let product enter drains.

Discharge into the environment must be avoided.

**Sodium Sulfide Flake****9. PHYSICAL AND CHEMICAL PROPERTIES**

**Physical State:** Solid.

**Vapor Pressure:** Not applicable.

**Specific Gravity:** About 1.69

**Solubility in Water:** 25 g per 100 ml of water at 10 Deg. C. (50 Deg. F.)

**pH:** Highly alkaline.

**Boiling Point:** About 145 Deg. C. (293 Deg. F.)

**Melting Point:** About 91 Deg. C. (195 Deg. F.)

**Vapor Density:** Not applicable.

**Evaporation Rate:** Not applicable.

**Odor:** Slight "Rotten egg" odor.

**Appearance:** Yellow to orange waxy-looking solid flakes.

**10. STABILITY AND REACTIVITY**

Contact with acids liberates poisonous, flammable hydrogen sulfide gas. Mixing with strong oxidizers causes a violent reaction.

This product is stable under recommended storage conditions.

**Incompatibility:** Acids and strong oxidizers.

**Hazardous Decomposition Products:** Very high temperatures will decompose this product to form poisonous hydrogen sulfide gas.

**Hazardous Polymerization:** Does not occur.

**11. TOXICOLOGICAL INFORMATION**

This product is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Eye:** Corrosive due to product's alkalinity.

**Skin:** Corrosive to skin due to product's alkalinity. May be toxic when absorbed through the skin; no data available.

**Ingestion:** Human Oral LD<sub>50</sub> reported to be 50 mg/kg for anhydrous sodium sulfide. Equivalent to 80 mg/kg for this product.

**Inhalation:** Toxic hydrogen sulfide inhalation is assumed. Human LC<sub>50</sub> is 600 ppm for 30 minutes for hydrogen sulfide; equivalent to 2200 ppm respirable dust from this product.

**Sub-chronic:** Irritation to the conjunctiva and cornea of the eye from dust and possible vapors.

**Chronic:** Chronic acute exposures to dust may cause neurologic deficits like those in survivors of other severe asphyxiant poisonings.

**Teratogenic:** Not known.

**Reproductive:** Not known.

**Mutagenic:** Not known.  
no data available

## **12. ECOLOGICAL INFORMATION**

Very toxic to aquatic life.

Only the strength of this product contributes to its environmental toxicity. Dilution yields only naturally-occurring chemical species.

In water containing 3.2 mg/l of sodium sulfide, trout overturned in 2 hours at pH 9.0 and in 10 minutes at pH 7.8.

Sulfide ion reacts with oxygen; waters containing sulfide ions will not contain dissolved oxygen.

**DISTRIBUTION:** All components of this product are found naturally in all ecosystems.

**CHEMICAL FATE:** With dilution to background levels, the sulfide in this product will be readily incorporated into the preexisting natural sulfur cycle.

**Sodium Sulfide Flake****13. WASTE MANAGEMENT INFORMATION - DISPOSAL**

Listed RCRA Hazardous Waste (40 CFR 302) – No

Characteristic RCRA Hazardous Waste (40 CFR 302) - Yes

– D002 (corrosive waste)

– D003 (reactive waste)

Any disposal practice must be in compliance with local, state, and federal laws and regulations. (Contact local or state environmental agency for specific rules). Do not dump into sewers, on the ground, or into any body of water.

**14. TRANSPORT INFORMATION****DOT (US)**

**D.O.T. Shipping Name**..... : Sodium sulfide, hydrated.

**Technical Shipping Name**.....: Sodium sulfide flake.

**D.O.T. Hazard Class**..... : 8 - Corrosive. Packing Group II.

**U.N./N.A. Number**..... : UN 1849.

**Product R.Q. (lbs)**..... : None

**D.O.T. Label**..... : CORROSIVE.

**D.O.T. Placard**..... : CORROSIVE.

**Freight Class Bulk**..... : Inorganic chemical.

**Freight Class Package**..... : Inorganic chemical.

**Product Label**..... : Sodium Sulfide Flake

Marine pollutant: No

Poison Inhalation Hazard: No

**IMDG**

UN number: 1849

Class: 8 Packing group: II EMS-No: F-A, S-B

Proper shipping name: SODIUM SULPHIDE, HYDRATED

Marine pollutant: No

**IATA**

UN number: 1849 Class: 8 Packing group: II

Proper shipping name: Sodium sulphide, hydrated

**Sodium Sulfide Flake****15. REGULATORY INFORMATION**

**TSCA Status**..... : Listed on TSCA Inventory.

**CERCLA Reportable Quantity**..... : **None.**

**SARA 302 Components**

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

Sodium sulfide hydrate  
CAS No. 27610-45-3

**Pennsylvania Right To Know Components**

Sodium sulfide hydrate  
CAS No. 27610-45-3

**New Jersey Right To Know Components**

Sodium sulfide hydrate  
CAS No. 27610-45-3

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**RCRA Status:** If discarded in its purchased form, this product would be a characteristic D003 reactive hazardous waste because of its sulfide content and alkalinity. Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing or derived from this product should be classified as a hazardous waste under 40 CFR 261.20-24.



**Sodium Sulfide Flake****16. OTHER INFORMATION**

**National Fire Protection Association (NFPA) Ratings:** This information is intended solely for the use of individuals trained in the NFPA system.

**Health: 3**

**Flammability: 1**

**Reactivity: 1**

**Revision Indicator:** This GHS Safety Data Sheet replaces Safety Data Sheet dated July 2014.

**Disclaimer:** The information contained herein is accurate to the best knowledge of Chemical Products Corporation. Chemical Products Corporation makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.