

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Sodium Sulfide
- English Name: Sodium Sulfide
- CAS Number: 1313-82-2
- Formula: $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$
- Molecular Weight: 240.18 g/mol
- Product Characteristics: High-purity pale yellow crystalline flakes, strong reducing agent. Highly soluble in water, alkaline in solution. Reacts with acids to release hydrogen sulfide gas.

2. Technical Specifications

Item	Specification
Appearance	Colorless to pale yellow crystalline flakes
Purity ($\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$)	$\geq 98.0\%$
S^{2-} Content	25.0-26.0%
Na_2CO_3	$\leq 1.0\%$
Na_2SO_4	$\leq 0.5\%$
Heavy Metals (Pb)	$\leq 0.001\%$
Iron (Fe)	$\leq 0.005\%$
Moisture Content	$\leq 0.5\%$
pH Value (1% solution, 25°C)	≥ 12
Solubility (20°C)	≥ 180 g/100 mL (water)

3. Product Advantages

- High purity and strong reducing activity for efficient chemical reactions.
- Excellent solubility in water for easy formulation.
- Cost-effective for industrial applications.
- Reliable quality with strict batch testing.

4. Application Fields

- Dyeing & Printing: Sulfur dyeing of textiles, dye synthesis.
- Leather Processing: Hair removal and unhairing of hides.
- Wastewater Treatment: Removal of heavy metals (Pb, Cd, Cu) via precipitation.
- Ore Flotation: Flotation agent for sulfide ores.
- Chemical Synthesis: Production of sulfur-containing organic compounds, pharmaceuticals.

5. Usage Methods

- Dyeing: Dissolve 5-10% in water, add to dye bath, heat to 60-80°C.
- Wastewater Treatment: Add 100-500 ppm to wastewater, stir for 30 minutes, filter precipitates.
- Leather Processing: Dilute to 10-15% solution, soak hides for 4-8 hours.
- Optimal Conditions: Use at 20-40°C; avoid contact with acids and oxidizing agents.



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6. Packaging & Storage

- Packaging Specifications: 25 kg/bag (plastic-lined kraft bag), 50 kg/drum (HDPE), 100 kg/drum (HDPE).
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Keep container tightly closed. Avoid moisture and acids. Temperature $\leq 30^{\circ}\text{C}$.
- Shelf Life: 18 months (unopened).
- Transportation: Handle as UN1849. Avoid collision, moisture, and contact with acids.

7. Safety & Protection

- Wear chemical protective suit, nitrile gloves, chemical splash goggles, and face shield during handling.
- Avoid contact with skin, eyes, and respiratory tract. In case of contact, follow first aid measures immediately.
- Keep away from acids and oxidizing agents.

8. Quality Assurance

- Manufactured under ISO 9001 quality management system.
- Each batch accompanied by COA.
- Provide technical support for application and formulation.

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