

Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Iron(II) Sulfide
- English Name: Iron(II) Sulfide
- CAS Number: 1317-37-9
- Formula: FeS
- Molecular Weight: 87.91 g/mol
- Product Characteristics: High-purity black powder/lumps, chemically stable under normal conditions. Reacts with dilute acids to produce hydrogen sulfide gas. Suitable for chemical synthesis and industrial applications.

2. Technical Specifications

Item	Specification
Appearance	Black powder or lumps
Purity (FeS)	≥ 95.0%
Fe Content	63.5-64.5%
S Content	35.5-36.5%
Heavy Metals (Pb)	≤ 0.001%
Fe ³⁺ Content	≤ 1.0%
Moisture Content	≤ 0.5%
Insoluble Matter in Dilute Acid	≤ 0.5%
Density (25°C)	4.84 g/cm ³

3. Product Advantages

- High purity ensures reliable performance in chemical reactions.
- Stable under proper storage and handling conditions.
- Cost-effective source of sulfide for industrial processes.
- Easy to handle and formulate.

4. Application Fields

- Chemical Synthesis: Production of hydrogen sulfide gas, sulfur-containing organic compounds.
- Catalysis: Catalyst for hydrogenation and desulfurization reactions.
- Metallurgy: Raw material for iron and steel production, alloy manufacturing.
- Laboratory: Analytical reagent for chemical tests.
- Other: Pigment for ceramics, corrosion inhibitor, wastewater treatment.

5. Usage Methods

- Hydrogen Sulfide Production: React with dilute hydrochloric acid (1:2 ratio) in sealed generators.
- Catalysis: Add 0.5-5% (mass ratio) to reaction system, heat as required.
- Metallurgy: Mix with iron ore and fluxes, smelt at high temperature.
- Optimal Conditions: Use at 20-35°C; avoid contact with strong acids and oxidizing agents.

6. Packaging & Storage

- Packaging Specifications: 10 kg/bag (plastic-lined kraft bag), 25 kg/drum (HDPE), 100 kg/drum (HDPE).
- Storage Conditions: Store in cool, dry, well-ventilated warehouse. Keep container tightly closed. Avoid moisture and strong acids. Temperature $\leq 30^{\circ}\text{C}$.
- Shelf Life: 24 months (unopened).
- Transportation: Handled as non-dangerous goods; avoid collision and moisture.

7. Safety & Protection

- Wear protective gloves, safety goggles, and dust mask during handling.
- Avoid dust inhalation and eye contact; rinse immediately if contact occurs.
- Keep away from strong 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.