



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
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Technical Data Sheet (TDS)

1. Product Overview

- Product Name: Ferrous Sulfate Heptahydrate
- English Name: Ferrous Sulfate
- CAS Number: 7720-78-7
- Formula: $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$
- Molecular Weight: 278.02 g/mol
- Product Characteristics: High-purity inorganic ferrous salt with excellent flocculation, reducing, and nutrient properties. Soluble in water, stable under sealed and dry conditions. Acts as an efficient iron source for plants and flocculant for water treatment. Cost-effective and widely used in agriculture, industry, and environmental fields.

2. Technical Specifications (Complies with GB/T 10531-2016)

Item	Specification
Appearance	Light green crystalline powder
Ferrous Sulfate ($\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$) Content	$\geq 99.0\%$
Total Iron (as Fe)	$\geq 20.0\%$
Water Insoluble Matter	$\leq 0.05\%$
pH Value (1% Aqueous Solution, 25°C)	3.0-4.5
Heavy Metals (Pb)	$\leq 0.0005\%$
Arsenic (As)	$\leq 0.0002\%$
Cadmium (Cd)	$\leq 0.0001\%$
Mercury (Hg)	$\leq 0.00001\%$
Chloride (as Cl^-)	$\leq 0.02\%$
Particle Size	80-200 mesh (passing rate $\geq 95\%$)
Solubility (20°C, water)	≥ 29.0 g/100 mL

3. Product Advantages

1. High Purity: $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$ content $\geq 99\%$, low impurities, stable performance.
2. Multi-Functional: Acts as flocculant (water treatment), iron supplement (agriculture), and reducing agent (industry).
3. Cost-Effective: Low dosage, easy to use, reducing operational costs.
4. Good Solubility: Rapidly dissolves in water, ensuring efficient absorption and reaction.
5. Environmentally Compatible: Biodegradable iron source for plants; no persistent pollution when used properly.

4. Application Fields

- Water Treatment: Municipal sewage decolorization, industrial wastewater flocculation (printing, dyeing, papermaking), pond water purification.



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- Agriculture: Soil amendment (corrects iron deficiency), foliar fertilizer for crops (fruits, vegetables, grains).
- Industrial Production: Raw material for iron oxide pigments, catalyst in chemical reactions, tanning agent in leather industry.
- Other Fields: Wastewater treatment for mining, feed additive (iron supplement for livestock), photographic developer.

5. Usage Methods

- Dosage:
 - Water Treatment: 50-200 mg/L (adjust based on water quality).
 - Agricultural Foliar Fertilizer: Dilute to 0.2-0.5% solution, spray on leaves every 7-10 days.
 - Soil Amendment: 50-100 kg/acre (mix with soil evenly).
- Usage: Dissolve in water (1:10-1:20 ratio) for liquid application; apply dry powder directly for soil amendment.
- Optimal Conditions: Avoid contact with oxidizing agents; apply in cool, dry weather for agricultural use.

6. Packaging & Storage

- Packaging Specifications:
 - 25 kg kraft paper bags with PE inner lining (industrial/agricultural grade).
 - 1000 kg FIBC bulk bags (large-scale use).
 - Custom packaging available upon request.
- Storage Conditions: Store in cool, dry, well-ventilated warehouse ($\leq 30^{\circ}\text{C}$); keep tightly closed; avoid air, moisture, and direct sunlight; store separately from oxidizing agents/strong bases.
- Shelf Life: 18 months (unopened, specified conditions); 6 months after opening.
- Transportation: UN 3077 (Class 9 Environmental Hazard); transport in sealed containers; avoid moisture, collision, and mixing with foodstuffs.

7. Safety & Protection

- Mildly irritating to skin and eyes; highly toxic to aquatic organisms.
- Wear safety glasses, nitrile gloves, and dust mask during handling; avoid dust inhalation.
- In case of skin/eye contact, rinse with plenty of water; seek medical attention if irritation persists.
- Do not ingest; if swallowed, rinse mouth with water and consult a doctor.
- Avoid direct discharge into water bodies; dispose of waste properly.

8. Quality Assurance

- Manufactured in accordance with ISO 9001 quality management system standards.
- Each batch is tested with a Certificate of Analysis (COA) to meet GB/T 10531-2016.
- Provide technical support: dosage adjustment, application method optimization, and problem-solving.