

SPECIFICATION

Product Name: Dried Ferrous Sulphate Monohydrate USP Grade
Chemical Formula: $\text{FeSO}_4 \cdot \text{H}_2\text{O}$
CAS Number: 17375-41-6
Molecular Weight: 169.93 g/mol
Appearance: Greyish white powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification			
(A) Iron	-	Responds positive for Iron	(A) Responds positive for Iron
(B) Ferrous Salt	-	Responds positive for Ferrous Salt	(B) Responds positive for Ferrous Salt
(C) Sulfate	-	Responds positive for Sulfate	(C) Responds positive for Sulfate
Lead	PPM	0.360 PPM	NMT 2 PPM
Mercury	PPM	Below Quantification Limit	NMT 1 PPM
Insoluble Substance	%	0.043%	NMT 0.5%
Assay as Fe	%	31.90 %	31.60 % to 33.50 %
Assay	%	86.80%	86.00 % to 89.00 %
Loss on drying	%	0.30%	Less than 1.0%

Physical Properties

- Solubility: Soluble in water. Insoluble in ethanol. Insoluble in ether. Insoluble in acetone.
Soluble in mineral acids.

Shelf Life & Storage

- Shelf Life: 3 years from date of manufacture under recommended storage.

- Storage Conditions: Store in a cool, dry, and well-ventilated place at 15–30°C. Protect from moisture, excessive humidity, direct sunlight, and air, as exposure may cause oxidation of ferrous iron (Fe^{2+}) to ferric iron (Fe^{3+}), resulting in discoloration and reduced potency. Keep the container tightly closed in the original, properly labeled container. Store away from strong oxidizing agents, alkalis, and incompatible materials to maintain product quality, potency, and stability in accordance with USP standards.

Applications

- Use: Widely used as a source of elemental iron in pharmaceutical, nutraceutical, food, and dietary supplement formulations. It helps prevent and treat iron deficiency and supports normal red blood cell and hemoglobin formation, oxygen transport, energy metabolism, and overall nutritional health. It is commonly incorporated into tablets, capsules, syrups, oral suspensions, sachets, powders, multivitamin and multimineral supplements, prenatal formulations, and iron-fortified foods.

- Dosage: Depends on the patient's age, iron status, clinical condition, and the amount of elemental iron required.

Packaging

- Standard Packing: 25 Kgs woven pp bag with inner liner or as per customer requirement.

- Labeling: Product name, batch number, net weight, manufacture date, expiry date, and manufacturer details.

* Specifications are based on the manufacturer's provided specifications.

RAWPHARMA

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