

SPECIFICATION

Product Name: Magnesium Sulphate Monohydrate USP Grade
Chemical Formula: $\text{MgSO}_4 \cdot \text{H}_2\text{O}$
CAS Number: 14168-73-1
Molecular Weight: 138.38 g/mol
Appearance: White crystalline powder
Odor: Odorless

Chemical Composition

Parameter	Unit	Typical Value	Specification (Min./Max.)
Identification	-	Complies	5% w/v solution gives the reaction of magnesium salt and sulfates.
pH	-	Complies	5% w/v solution gives a pH between 5.0 to 9.2.
Iron	-	Complies	The limit is $0.5\mu\text{g}$ per g.
Loss on ignition	%	Complies	Between 13.0% and 16.0%
Heavy metals	%	Complies	NMT 0.001%
Selenium	%	Complies	NMT 0.003%
Assay	%	99.48%	NLT 99.0% and NMT 100.5%

Physical Properties

- Solubility: Soluble in water. Insoluble in ethanol. Insoluble in acetone.

Shelf Life & Storage

- Shelf Life: 5 years from date of manufacture under recommended storage.
- Storage Conditions: Store in a cool, dry, and well-ventilated place at 15–30°C. Keep the container tightly closed in the original, properly labeled container to protect from moisture, contamination, and excessive humidity. Store away from strong acids, strong oxidizing agents, and direct sunlight to maintain product quality and stability.

Applications

- Use: Widely as a source of magnesium in pharmaceutical and nutraceutical formulations. It is commonly incorporated into oral supplements, electrolyte formulations, oral rehydration products, and mineral preparations. In pharmaceutical applications, it is also used as an electrolyte replenisher and as an excipient in certain formulations. Additionally, it is used in laboratory and industrial applications where a high-purity, water-soluble magnesium salt is required.

- Dosage: Depends on the intended pharmaceutical formulation, therapeutic indication, patient age, renal function, and clinical condition. It should be used according to pharmacopeial standards, product formulation requirements, or as directed by a qualified healthcare professional.

Packaging

- Standard Packing: 50 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.