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**SPECIFICATIONS FOR MAGNESIUM  
SULFATE CRYSTALS  
FEED & AGRICULTURAL USAGE  
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### Characteristics:

The material shall be colorless, solid at ambient temperatures, formed in small needle-like rhombic crystals and free of solid or fibrous foreign matter that will require dissolved material to be filtered before being used.

### Properties:

#### CHEMICAL

|                                                                         |       |
|-------------------------------------------------------------------------|-------|
| MgSO <sub>4</sub> (as MgSO <sub>4</sub> · 7H <sub>2</sub> O), minimum % | 99.00 |
| MgSO <sub>4</sub> , minimum %                                           | 48.00 |
| Mg, minimum %                                                           | 9.8   |
| S, minimum %                                                            | 12.9  |
| Chlorides (as Cl), maximum %                                            | 00.06 |
| Sodium Salts (as Na), maximum, ppm                                      | 25    |
| Potassium Salts (as K), maximum, ppm                                    | 25    |
| Calcium Salts (as Ca), maximum, ppm                                     | 25    |
| Lead Salts (as Pb), maximum, ppm                                        | 10    |

#### PHYSICAL

|                                                |                      |
|------------------------------------------------|----------------------|
| Color                                          | Colorless            |
| Crystal Form                                   | Rhombic (monoclinic) |
| Density, Bulk (approximate) lb/ft <sup>3</sup> | 65                   |
| Odor                                           | None                 |

### Quality Assurance Provision:

#### GENERAL

The material specified herein shall be manufactured using acceptable industrial practices.

The material shall be guaranteed to meet chemical and physical properties specified herein.

#### RESPONSIBILITY FOR TESTS & INSPECTIONS

Unless otherwise specified by purchaser, the supplier is responsible for providing a lot analysis of the material. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory. Analysis' are available for each lot at an additional charge.

### Packaging & Shipping

#### PACKAGING

Shall be accomplished in accordance with acceptable commercial practices for domestic or foreign shipments unless otherwise indicated by the purchaser. It shall be the vendor's responsibility to determine that packaging, as done, is adequate to assure that all material shall arrive at destination in an uncontaminated condition and ready for intended use.

#### SHIPPING

Shall be accomplished in accordance with acceptable commercial practices for domestic or foreign shipment for this type of product unless otherwise indicated by the purchaser.

### Characteristics

### Discussion

EPSOM SALT is one of the most common forms of magnesium sulfate. EPSOM SALT is a hydrated salt with seven molecules of water, so caking or bridging should not be a significant problem. Care should be taken, however, to protect the material if it is stored in the granular form for long periods of time. EPSOM SALT is readily soluble in water and will yield a saturated 24.5 percent solution of magnesium sulfate at storage temperatures of 66 – 75 degrees F.

**PRODUCERS OF MAGNESIUM SULFATE SINCE 1950**