

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 the dissolved material to be filtered before being used. Epsom salt is one of the most common forms of magnesium sulfate heptahydrate. EPSOM SALT is a hydrated salt with seven molecules of water, so caking or bridging can occur. Care should be taken to protect the material if it is stored in the granular form for long periods of time. EPSOM SALT is readily soluble in water.

P R O P E R T I E S	Identification	Test of Magnesium	Positive
		Test of Sulfate	Positive
		Consistently Free of Volatile Organic Impurities	
	Chemical	pH	5.0 – 9.2
		Loss of ignition	40.0% - 52.0%
		Chloride, maximum, ppm	140
		Arsenic, maximum, ppm	3
		Heavy Metals, maximum, ppm	10
		Iron, maximum, ppm	20
		Selenium, maximum, ppm	30
Physical	Assay	99%–100.5%	
	Color	Colorless	
	Crystal Form	Rhombic (monoclinic)	

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.

RESPONSIBILITIES FOR TESTS & INSPECTIONS:

Unless otherwise specified by purchaser, the supplier is responsible for providing a lot analysis on 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 materials 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.

**PRODUCERS OF MAGNESIUM SULFATE SINCE 1950
USA**

102 Commerce Street • Waynesville, North Carolina 28786 • Tel 828-452-4784 • Fax 828-452-4786
200 Brown Street • Greendale, Indiana 47025 • Tel 812-537-4852 • Fax 812-537-2382



Product Specification For:
Magnesium Sulfate Crystals, Tech
2023

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 the dissolved material to be filtered before being used.

Epsom salt is one of the most common forms of magnesium sulfate heptahydrate. EPSOM SALT is a hydrated salt with seven molecules of water, so caking or bridging can occur. Care should be taken 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.

P R O P E R T I E S	Identification	Test of Magnesium	Positive
		Test of Sulfate	Positive
	Chemical	pH	5.0 – 9.2
		Loss of ignition	40.0% - 52.0%
		Chloride, maximum, ppm	200
		Heavy Metals (as Pb), maximum, ppm	10
		Iron, maximum, ppm	20
		Selenium, maximum, ppm	30
		Assay	99%–100.5%
	Physical	Color	Colorless
Crystal Form		Small; White	

QUALITY ASSURANCE PROVISION

GENERAL:

Magnesium Sulfate Crystals shall be manufactured using current Good Manufacturing Practices (cGMP).

The material shall be guaranteed to meet chemical and physical properties specified herein, and said material is free from all Class I, II and III residual solvents as listed by the ICH Q3C guidance.

RESPONSIBILITIES FOR TESTS & INSPECTIONS:

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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 materials 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.

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Characteristics:

MAGRICULTURE® Magnesium Sulfate Crystals 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.

P R O P E R T I E S	Identification	Test of Magnesium	Positive
		Test of Sulfate	Positive
		Consistently Free of Volatile Organic Impurities	
	Chemical	pH	5.0 – 9.2
		Loss of ignition	40.0% - 52.0%
		Chloride, maximum, ppm	200
		Arsenic, maximum, ppm	3
		Heavy Metals (as Pb), maximum, ppm	10
		Iron, maximum, ppm	20
		Selenium, maximum, ppm	30
Physical	Assay	99%–100.5%	
	Color	Colorless	
	Crystal Form	Rhombic (monoclinic)	

Quality Assurance Provision:

GENERAL

MAGRICULTURE® Magnesium Sulfate Crystals shall be manufactured using current Good Manufacturing Practices (cGMP).

MAGRICULTURE® Magnesium Sulfate Crystals shall be guaranteed to meet the chemical and physical properties specified herein.

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 can occur. Therefore, care should be taken 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.

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