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Material Safety Data Sheet (MSDS)

Product Name: Magnesium Sulphate Monohydrate Feed Grade
MSDS Generate Date: 20-05-2017
Revision Date: 30-12-2024

Supplier:

Rawpharma Biz Pvt Ltd
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1. Identification of the Substance and Company

Product Name: Magnesium Sulphate Monohydrate Feed Grade

Chemical Name: Magnesium Sulphate Monohydrate

Synonyms: Kieserite, Magnesium Sulfate Monohydrate, Magnesium Sulphate 1-Hydrate

CAS Number: 14168-73-1

Molecular Formula: $MgSO_4 \cdot H_2O$

Molecular Weight: 138.38 g/mol

Recommended Use:
Mineral supplement for animal feed, livestock nutrition, poultry feed, aquaculture feed, veterinary feed formulations, and agricultural applications.

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2. Hazard Identification

GHS Classification: Magnesium Sulphate Monohydrate Feed Grade is **not classified as hazardous** according to the Globally Harmonized System (GHS).

Potential Health Effects:

Inhalation: Dust may cause temporary irritation of the nose, throat, and respiratory tract.

Skin Contact: Prolonged or repeated contact may cause mild skin irritation or dryness.

Eye Contact: Dust particles may cause temporary redness, watering, and mechanical irritation.

Ingestion: Low toxicity under normal conditions of use. Excessive ingestion may have a laxative effect and may cause gastrointestinal discomfort.

Environmental Hazards: No significant environmental hazards are anticipated under normal conditions of use.

Precautionary Statements:

- Avoid breathing dust.
- Avoid excessive dust generation.
- Wear suitable eye protection when handling bulk quantities.
- Wash hands thoroughly after handling.
- Keep containers tightly closed when not in use.

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3. Composition / Information on Ingredients

Chemical Name: Magnesium Sulphate Monohydrate

CAS Number: 14168-73-1

Molecular Formula: $MgSO_4 \cdot H_2O$

Chemical Family: Inorganic Magnesium Salt

Purity: Typically 98.0% minimum (Feed Grade, depending on specification)

The product consists primarily of magnesium sulphate monohydrate with trace levels of moisture and naturally occurring mineral impurities maintained within feed-grade quality specifications.

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4. First Aid Measures

Inhalation: Move the affected person to fresh air. Obtain medical attention if irritation or breathing difficulty persists.

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing.

Eye Contact: Flush immediately with plenty of clean water for at least 15 minutes. Remove contact lenses if present. Seek medical attention if irritation persists.

Ingestion: Rinse mouth with water. Drink plenty of water. Seek medical advice if large quantities have been ingested or symptoms develop.

Most Important Symptoms:

- Mild respiratory irritation
- Temporary eye irritation
- Mild skin irritation
- Gastrointestinal discomfort following excessive ingestion

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5. Fire Fighting Measures

Suitable Extinguishing Media: Use extinguishing media appropriate for the surrounding fire.

Fire Hazards: The product is non-flammable and does not support combustion.

Hazardous Decomposition Products: When heated to decomposition temperatures, sulfur oxides and magnesium oxide may be produced.

Protective Equipment: Firefighters should wear self-contained breathing apparatus (SCBA) and protective clothing appropriate for the surrounding fire.

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6. Accidental Release Measures

Personal Precautions:

- Avoid generating dust.
- Ensure adequate ventilation.
- Wear suitable personal protective equipment.

Environmental Precautions: Prevent excessive quantities from entering drains, waterways, and soil.

Cleanup Methods: Sweep or vacuum carefully while minimizing dust generation. Collect into suitable containers for reuse or disposal.

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7. Handling and Storage

Handling

- Avoid inhaling dust.
- Avoid unnecessary dust generation.
- Maintain good industrial hygiene.
- Wash hands after handling.

Storage

Store in tightly sealed containers in a cool, dry, and well-ventilated place.

Protect from moisture, excessive humidity, contamination, and direct sunlight.

8. Exposure Controls / Personal Protection

- **Engineering Controls:** Provide adequate ventilation where dust is generated.

Personal Protective Equipment:

- **Respiratory Protection:** Approved particulate respirator where excessive dust exists.
- **Eye Protection:** Safety glasses or chemical safety goggles.
- **Hand Protection:** Protective gloves.
- **Skin Protection:** Suitable protective clothing where required.

9. Physical and Chemical Properties

Appearance: White to off-white crystalline powder or granules

Odor: Odorless

Physical State: Solid

pH (5% Solution): Approximately 5.5–8.0

Melting Point: Decomposes upon heating

Boiling Point: Not applicable

Bulk Density: Varies according to grade

Specific Gravity: Approximately 2.57

Solubility: Freely soluble in water; insoluble in alcohol

Flash Point: Not applicable

Auto-Ignition Temperature: Not applicable

Explosive Properties: None

Oxidizing Properties: None

Vapor Pressure: Not applicable

Vapor Density: Not applicable

10. Stability and Reactivity

Reactivity: Stable under recommended storage conditions.

Chemical Stability: Stable under normal handling and storage.

Conditions to Avoid: Excessive heat, Moisture, Contamination.

Incompatible Materials: Strong acids, strong oxidizing agents, and strong alkalis.

Hazardous Decomposition Products: Sulfur oxides and magnesium oxide at elevated temperatures.

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11. Toxicological Information

Acute Toxicity: Low acute toxicity.

Skin Irritation: May cause slight irritation after prolonged exposure.

Eye Irritation: Dust may cause temporary irritation.

Respiratory Effects: Dust may irritate the respiratory tract.

Carcinogenicity: Not classified as carcinogenic.

Mutagenicity: No known mutagenic effects.

Reproductive Toxicity: No known reproductive hazards.

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12. Ecological Information

Ecotoxicity: No significant environmental toxicity is expected under normal conditions of use.

Persistence and Degradability: Naturally occurring inorganic mineral salt.

Bioaccumulative Potential: Not expected to bioaccumulate.

Mobility: Highly soluble in water.

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13. Disposal Considerations

Dispose of unused product and contaminated packaging according to applicable local, regional, and national regulations.

Avoid unnecessary discharge into waterways, drains, and soil.

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14. Transport Information

Magnesium Sulphate Monohydrate Feed Grade is not classified as dangerous goods under ADR/RID, IMDG, IATA, or other applicable international transportation regulations. The product is stable, non-flammable, non-corrosive, and presents no significant transportation hazards when packaged and handled properly. Appropriate precautions should nevertheless be taken to prevent moisture absorption, contamination, dust generation, and physical damage to the packaging during transport.

UN Number: Not regulated.

UN Proper Shipping Name: Not regulated.

Transport Hazard Class: Not regulated.

Packing Group: Not regulated.

Environmental Hazard: Not classified as environmentally hazardous.

Marine Pollutant: No.

Road Transport (ADR/RID): The product is not regulated as dangerous goods for road or rail transportation. Transport in clean, dry, tightly sealed HDPE bags, laminated woven bags, fiber drums, or approved bulk containers. Protect packages from moisture, rain, contamination, and mechanical damage throughout transportation.

Sea Transport (IMDG): Magnesium Sulphate Monohydrate Feed Grade is not regulated under the International Maritime Dangerous Goods (IMDG) Code. It is not classified as a marine pollutant and requires no dangerous goods labels. Containers should remain tightly sealed and protected from seawater, excessive humidity, and contamination during shipment.

Air Transport (IATA): The product is not regulated as dangerous goods under International Air Transport Association (IATA) regulations. Standard commercial packaging is acceptable provided containers remain securely sealed and protected from moisture and physical damage.

Special Transport Precautions:

- Transport only in clean, dry, tightly sealed containers.
- Protect from moisture, rain, and excessive humidity.
- Avoid contamination during transportation.
- Prevent package damage during loading and unloading.
- Minimize dust generation while handling bulk material.
- Keep away from incompatible chemicals such as strong acids and oxidizing agents.
- Secure cargo properly to prevent movement during transportation.
- Follow good housekeeping practices throughout storage and transport.

Transport in Bulk According to MARPOL Annex II and IBC Code: Not applicable.

Emergency Transport Information: In the event of accidental spillage during transportation, isolate the affected area if necessary and avoid generating airborne dust. Sweep or vacuum the spilled material carefully into suitable containers for recovery or disposal. Prevent excessive quantities from entering drains, sewers, or natural waterways. Personnel involved in cleanup should wear suitable respiratory, eye, and skin protection where dust exposure is significant. Dispose of recovered material in accordance with applicable environmental regulations.

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15. Regulatory Information

- This product should be handled in accordance with applicable occupational safety, environmental protection, animal feed, and chemical handling regulations.
- Magnesium Sulphate Monohydrate Feed Grade is not classified as hazardous under the Globally Harmonized System (GHS).

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16. Other Information

The information contained in this Material Safety Data Sheet is based on current scientific knowledge and industrial experience. It is intended to provide guidance for the safe handling, storage, transportation, and disposal of the product. It does not constitute a warranty of product characteristics or suitability for any particular application. Users are responsible for ensuring compliance with all applicable laws and regulations.

- **MSDS Generate Date:** 20-05-2017
- **Revision Date:** 30-12-2024
- **Website:** www.rawpharmabiz.com
- MSDS are based on the manufacturer’s provided information.