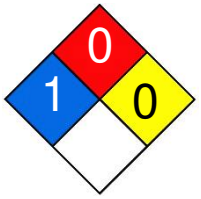
Material Safety Data Sheets



Revision 3

1. IDENTIFICATION

Product Name	Magnesium sulfate, heptahydrate
Other Names	Epsom Salt, Magnesium Sulfate; Magnesium sulphate - MAGRICULTURE; Sulfuric acid magnesium salt (1:1), heptahydrate
Uses	Pharmaceuticals, bath soak, purgative; Industrial use; for correcting magnesium deficiency in crops and for use in animal feed.
Chemical Family	No Data Available
Chemical Formula	$MgSO_4.7H_2O$
Chemical Name	Sulfuric acid, magnesium salt, heptahydrate
Product Description	No Data Available

Company	**Arman sina.co**
Contact Information	info@armansina.com **www.armansina.com**

2. HAZARD IDENTIFICATION

Hazard Classification	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Signal Word	None
Dangerous Goods Classification	No Data Available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Magnesium sulfate, heptahydrate	MgSO4.7H2O	10034-99-8	<=100 %

4. FIRST AID **MEASURES**

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Get medical advice/attention if large quantities of this material are swallowed or if you feel unwell. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation occurs, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO_2), foam or water spray for extinction. *This material is compatible with all extinguishing media and standard firefighting techniques.
Fire and Explosion Hazard	Oxides of sulfur may be generated during fire.
Hazardous Products of Combustion	Fire or heat will produce irritating and/or toxic fumes, including oxides of Sulfur, Magnesium oxide.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material - Spillages may be slippery! Promptly clean up spills. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area.
Containment	Prevent further leakage or spillage if safe to do so. Prevent dust cloud.
Decontamination	Flush residue with water.
Environmental Precautionary Measures	Avoid contaminating waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a well-ventilated place, out of direct sunlight, protected from extremes of temperature and humidity. Keep containers tightly closed when not in use - check regularly for spills. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m3 (measured as inhalable dust). - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m3 (total); TWA = 3 mg/m3 (respirable).
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/respirator. Use suitable respiratory protection based on the level of exposure incurred (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear safety glasses or chemical goggles. - Hand protection: Handle with gloves. Recommended: Wear gloves if abrasion or irritation occurs. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Lab coat or overalls, safety shoes,
Special Hazards Precaustions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals, fine granular or powder
Odour	Odourless
Colour	White or transparent
pH	Approx. 6 - 7 (5% w/w in water)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	1,000 ° C
Freezing Point	No Data Available
Solubility	Soluble in water (71 g/100 ml at 20 ° C)
Specific Gravity	1.76 g/cm3
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	55 - 58 lb/ft3
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat will produce irritating and/or toxic fumes, including oxides of Sulfur, Magnesium oxide.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	At very high temperatures, magnesium oxide, sulfur dioxide and sulfur trioxide may be generated.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid generating dust. Avoid extremes of temperature and direct sunlight.
Materials to Avoid	Incompatible/reactive with Metal hydrides and other water reactive materials.
Hazardous Decomposition Products	Fire or heat will produce irritating and/or toxic fumes, including oxides of Sulfur, Magnesium oxide.
Hazardous Polymerisation	No information available.

11. **TOXICOLOGICAL** INFORMATION

General Information

- Acute toxicity: Ingestion may cause abdominal cramps and diarrhoea. Produces a laxative effect. Swallowing large amounts may lead to heart changes, flaccid paralysis and cyanosis.
- Skin corrosion/irritation: Contact with skin may result in irritation.
- Eye damage/irritation: Dust may cause mild eye irritation. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.
- Respiratory/skin sensitisation: No information available.
- Germ cell mutagenicity: No information available.
- Carcinogenicity: Not listed by IARC, NTP, or OSHA
- Reproductive toxicity: No information available.
- STOT (single exposure): Not classified. Breathing in dust may result in respiratory irritation.
- STOT (repeated exposure): Not classified.
- Aspiration toxicity: No information available.

Acute

Ingestion

Acute toxicity (Oral):
- LDlo, Man: 428 mg/kg [RTECS; Supplier's SDS].
- LDlo, Woman: 351 mg/kg [RTECS; Supplier's SDS].

Carcinogen Category None

12. ECOLOGICAL **INFORMATION**

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	Sinks and mixes with water.
Environmental Fate	Avoid contaminating waterways.
Bioaccumulation Potential	Material does not bioaccumulate.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container in accordance with local/regional/national regulations.

Special Precautions for Land Fill Contaminated packaging: Do not reuse container.

14. TRANSPORT INFORMATION

Land Transport

Proper Shipping Name	Magnesium sulfate, heptahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport
IMDG Code

Proper Shipping Name	Magnesium sulfate, heptahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport
IATA DGR

Proper Shipping Name	Magnesium sulfate, heptahydrate
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for AIR transport.

15. OTHER INFORMATION

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Key/Legend

< Less Than
> Greater Than
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (° C) Degrees Celcius
deg F (° F) Degrees Farenheit
g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluable in each other.
inHg Inch of Mercury
inH2O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or L Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight