
	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 1 of 8

Section 1 - Identification

- (a) **Product Identifier:** Magnesium Sulfate in Water for Injection
- (b) **Product Code:** 83634-500
83634-501
- Common/Trade Name:** Magnesium Sulfate Injection
- Chemical Name:** Magnesium Sulfate Heptahydrate
- Chemical Family:** Anticonvulsant
- (c) **Product Use:** Pharmaceutical, Injectable
- Product Type:** Regulated Prescription Drug
- Container Information:** Polypropylene Plastic Bag
- (d) **Distributor:** Avenacy 10 N. Martingale Road, Suite 225, Schaumburg, IL 60173, 847-773-4901
- (e) **Emergency Telephone:** 855-283-6229

Section 2 - Hazards Identification

Classification:	GHS: Not classified as hazardous
Signal Word:	Not Classified
Hazard Statement	Not classified in accordance with international standards for workplace safety.
Symbols	None
Precautionary Statement(s)	Prevention Observe good industrial hygiene practices. Response Wash hands after handling. Storage Store away from incompatible materials. Disposal Dispose of waste and residues in accordance with local authority requirements.
Description of Hazards	None
Unknown Acute Toxicity	None

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 2 of 8

Section 3 – Composition / Information on Ingredients

Magnesium Sulfate 4% Concentration


Chemical Name	Common Name / Synonym	% Composition or other measure	CAS No.	Impurities / Stabilizing Additives
Magnesium Sulfate Heptahydrate	Magnesium Sulfate Heptahydrate	40 mg/mL	10034-99-8	N/A
Water for Injection	Water for Injection	q.s. to 1 mL	7732-18-5	N/A
Sulfuric Acid	Sulfuric Acid	q.s. to pH 3.5 – 6.5	7664-93-9	N/A
Sodium Hydroxide	Sodium Hydroxide	q.s. to pH 3.5 – 6.5	1310-73-2	N/A

Magnesium Sulfate 8% Concentration

Chemical Name	Common Name / Synonym	% Composition or other measure	CAS No.	Impurities / Stabilizing Additives
Magnesium Sulfate Heptahydrate	Magnesium Sulfate Heptahydrate	80 mg/mL	10034-99-8	N/A
Water for Injection	Water for Injection	q.s. to 1 mL	7732-18-5	N/A
Sulfuric Acid	Sulfuric Acid	q.s. to pH 3.5 – 6.5	7664-93-9	N/A
Sodium Hydroxide	Sodium Hydroxide	q.s. to pH 3.5 – 6.5	1310-73-2	N/A

Section 4 – First Aid Measures

Eye Exposure:	Rinse with water. Get medical attention if irritation develops and persists
Skin Exposure:	Wash off with soap and water. Get medical attention if irritation develops and persists.
Ingestion:	Rinse mouth. Get medical attention if symptoms occur.
Injection:	See patient package insert in shipping carton for complete information.
Inhalation:	Move to fresh air. Call a physician if symptoms develop or persist.
Notes to Physician:	Treat Symptomatically.

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 3 of 8

Section 5 – Fire-fighting Measures

Extinguishing Media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).

Hazardous Decomposition Products: During fire, gases hazardous to health may be formed.

Special Protective Equipment / Precautions: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Section 6 - Accidental Release Measures

Spill: **Large Spills:** Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Release to Air: No information available.

Release to Water: Avoid discharge into drains, water courses or onto the ground.

Section 7 - Handling and Storage


General Handling: Observe good industrial hygiene practices.

Storage Conditions: Store at 20° to 25°C (68° to 77°F). [See USP Controlled Room Temperature.] Protect from freezing.

Section 8 - Exposure Controls / Personal Protection

(a) **Exposure Limits:** None

pH adjuster	Type	Value	
Sulfuric acid (CAS 7664-93-9)	PEL	1 mg/m ³	
Sodium hydroxide (CAS 1310-73-2)	PEL	2 mg/m ³	
US. ACGIH Threshold Limit Values			
pH adjuster	Type	Value	Form
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m ³ fraction	Thoracic
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³	
US. NIOSH: Pocket Guide to Chemical Hazards			

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 4 of 8

pH adjuster	Type	Value
Sulfuric acid (CAS 7664-93-9)	TWA	1 mg/m ³
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m ³

(b) Engineering Controls


Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

(c) Individual Protection Measures

Respiratory Protection:	In case of insufficient ventilation, wear suitable respiratory equipment. If respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.
Eye Protection:	Wear safety glasses with side shields (or goggles).
Skin Protection:	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier. Wear suitable protective clothing.
Additional Exposure Precautions:	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9 - Physical and Chemical Properties

(a)	Appearance	Colorless liquid.
(b)	Odor	Not applicable
(c)	Odor Threshold	Not available
(d)	pH	3.5 to 6.5
(e)	Melting Point:	Not available
(f)	Initial Boiling Point:	Not available
(g)	Flash Point	Not available
(h)	Evaporation Rate:	Not available
(i)	Flammability	Not available
(j)	Upper Lower Flammability or Explosion Limits	Not available
(k)	Vapor Pressure:	Not available
(l)	Vapor Density:	Not available
(m)	Relative Density	Not available
(n)	Solubility(ies)	Not available

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 5 of 8

(o)	Partition Coefficient: n-octanol/water	Not available
(p)	Auto-ignition Temperature	Not available
(q)	Decomposition Temperature	Not available
(r)	Viscosity	Not available

Section 10 - Stability and Reactivity

(a)	Reactivity	No data available.
(b)	Chemical Stability	Stable at normal conditions of use.
(c)	Possibility of Hazardous Reactions	Not oxidizing.
(d)	Conditions to Avoid	None known.
(e)	Incompatible Materials	None known.
(f)	Hazardous Decomposition Products	Thermal decomposition product includes oxides of sulfur.

Section 11 - Toxicological Information


Likely Routes of Exposure	Eye Contact and skin absorption
Symptoms related to the physical, chemical, and toxicological characteristics	Adverse effects associated with therapeutic use include flushing, sweating, decrease in blood pressure (hypotension), circulatory failure, central nervous system depression.
Delayed and immediate effects and also chronic effects from short- and long-term exposure	Direct contact with eyes may cause temporary irritation.

Acute Toxicity

Component	Type	Route	Species	Dosage
Magnesium sulfate heptahydrate	LD ₅₀ min	Oral	Rat	5000 mg/kg
		Oral	Mouse	3000 mg/kg
		Subcutaneous	Mouse	980 mg/kg

Reproductive toxicity pr-rat TDLo: 750 mg/kg Magnesium sulfate heptahydrate (17-21D preg)

Carcinogenicity Sulfuric Acid is Carcinogenic to Humans (IARC – Group 1)

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 6 of 8

Section 12 - Ecological Information

Ecotoxicity	No data available.
Persistence and degradability	No data available.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other Adverse Effects	No data available.

Section 13 - Disposal Considerations

Waste Disposal: Dispose of in a manner consistent with federal, state, and local regulations

Section 14 - Transport Information

Not regulated for transport under USDOT, IATA, or IMDG regulations.

Section 15 - Regulatory Information

Below is selected regulatory information chosen primarily for possible Avenacy usage. This section is not a complete analysis or reference to all applicable regulatory information. Please consider all applicable laws and regulations for your country/state.

U.S. Regulations:


- TSCA – Not regulated
- CERCLA - Not on this list
- SARA 302 - Not on this list
- SARA 313 - Not on this list

Section 16 - Other Information

As of the date of effectiveness, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.


For additional information contact:

Avenacy
 10 N. Martingale Road, Suite 225
 Schaumburg, IL 60173
 847-773-4901

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 7 of 8

Glossary: This glossary contains definitions of general terms used in SDSs. Not all of these Glossary Terms will apply to this SDS.

ACGIH	American Conference of Governmental Industrial Hygienists
AICS	Australian Inventory of Chemical Substances
AIHA	American Industrial Hygiene Association
ANSI	American National Standards Institute
CAS Number	Chemical Abstract Service Registry Number
CERCLA	Comprehensive Environmental Response Compensation and Liability Act (of
CHAN	Chemical Hazard Alert Notice
CHEMTREC	Chemical Transportation Emergency Center
DOT	Department of Transportation
DSL	Domestic Substances List
ECHA	European Chemicals Agency
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EPA	Environmental Protection Agency
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
HEPA	High Efficiency Particulate Air (Filter)
HMIS	Hazardous Materials Identification System
IARC	International Agency for Research on Cancer
ICAO/IATA	International Civil Aviation Organization/International Air Transport
IMO	International Maritime Organization
KOW	Octanol/Water Partition Coefficient
LEL	Lower Explosive Limit
MSDS	Material Safety Data Sheet
MSHA	Mine Safety and Health Administration
NA	Not Applicable, except in Section 14 where NA = North America
NE	Not Established
NADA	New Animal Drug Application
NAIF	No Applicable Information Found
NCI	National Cancer Institute
NDSL	Non-Domestic Substances List
NFPA	National Fire Protection Association
NIOSH	National Institute for Occupational Safety and Health
NPDES	National Pollutant Discharge Elimination System
NOS	Not Otherwise Specified
NTP	National Toxicology Program
OSHA	Occupational Safety and Health Administration
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit (OSHA)
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act
SDS	Safety Data Sheet
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value (ACGIH)
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average/8 Hours Unless Otherwise Noted
UEL	Upper Explosive Limit

	Document Type: Safety Data Sheet	Magnesium Sulfate In Water for Injection		
	Effective Date: 12 JAN 2024	SDS No.: SDS007	Revision No: 01	Page 8 of 8

UN	United Nations
USP	United States Pharmacopeia
WEEL	Workplace Environmental Exposure Level (AIHA)
WHMIS	Workplace Hazardous Materials Information System