

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Manganese Sulfate Monohydrate
CAS number	10034-96-5
Synonyms	Manganese (II) sulfate monohydrate; Manganous sulfate monohydrate

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory Chemicals
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1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Serious Eye Damage/Eye Irritation Category 1
Specific target organ toxicity - (repeated exposure) Category 2
Target Organs - Kidney, Liver, Blood.

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Causes serious eye damage.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

Prevention

Wear protective gloves/protective clothing/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.

Response

Get medical attention/advice if you feel unwell.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Disposal

Dispose of contents/container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

Toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Manganese sulfate monohydrate	-	10034-96-5	<=100
Manganese(II) sulfate	-	7785-87-7	-

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

Show this sheet to a doctor if medical advice is needed.

If inhaled	Remove to fresh air. Get medical attention immediately if symptoms occur.
In case of skin contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
In case of eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
If swallowed	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2 Most important symptoms and effects, both acute and delayed

Causes eye burns.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable extinguishing media None identified.

5.2 Specific hazards arising from the substance or mixture

Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Sulfur oxides. Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

5.4 Further information

Flash Point No data available.

Autoignition Temperature No data available.

Explosion limits

Upper No data available.

Lower No data available.

Sensitivity to Mechanical Impact No data available.

Sensitivity to Static Discharge No data available.

NFPA

Health	Flammability	Instability	Physical hazards
2	0	1	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment as required. Ensure adequate ventilation. Avoid dust formation.

6.2 Environmental precautions

Should not be released into the environment. See Section 12 for additional Ecological Information. Avoid release to the environment. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

6.4 Reference to other sections

Refer to protective measures listed in Sections 7 and 8. See section 13 for proper disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Store under an inert atmosphere. Protect from moisture. Incompatible Materials.

Incompatibilities

Reducing Agent. Peroxides.Organic materials. Bases. Oxidizing agent.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Manganese sulfate monohydrate	(Vacated) Ceiling Ceiling	5 mg/m3 5 mg/m3
Manganese(II) sulfate	(Vacated) Ceiling Ceiling	5 mg/m3 5 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Value
Manganese sulfate monohydrate	TWA TWA	0.02 mg/m3 0.1 mg/m3
Manganese(II) sulfate	TWA TWA	0.02 mg/m3 0.1 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Manganese sulfate monohydrate	IDLH TWA STEL	500 mg/m3 1 mg/m3 3 mg/m3
Manganese(II) sulfate	IDLH TWA STEL	500 mg/m3 1 mg/m3 3 mg/m3

Biological occupational exposure limits

No additional information.

8.2 Exposure controls

Appropriate engineering controls

None under normal use conditions.

Personal protective equipment**Eye/face protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection

No protective equipment is needed under normal use conditions.

Control of environmental exposure

Handle in accordance with good industrial hygiene and safety practice.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Solid
Appearance	Light red
Odor	Odorless
Odor Threshold	No information available
pH	3 - 3.5 (@ 20) (5 %)
Melting Point/Range	700 °C / 1292 °F
Boiling Point/Range	850 °C / 1562 °F
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No information available
Lower	No information available
Vapor Pressure	No information available
Vapor Density	No information available
Density	3.25
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	MnSO ₄ .H ₂ O
Molecular Weight	169.02
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None known, based on information available.

10.2 Chemical stability

Stable under normal conditions. Hygroscopic.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Avoid dust formation. Incompatible products. Excess heat. Exposure to moisture. Exposure to moist air or water.

10.5 Incompatible materials

Reducing Agent, Peroxides, Organic materials, Bases, Oxidizing agent.

10.6 Hazardous decomposition products

Sulfur oxides, Thermal decomposition can lead to release of irritating gases and vapors,

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Manganese(II) sulfate	782 mg/kg (Rat)	-	>4.45 mg/L (Rat) 4 h

Skin corrosion/irritation

No additional information.

Serious eye damage/eye irritation

Severe eye irritant.

Respiratory or skin sensitization

No additional information.

Germ cell mutagenicity

Mutagenic effects have occurred in microorganisms.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Manganese(II) Sulfate	7785-87-7	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

None known.

Specific target organ toxicity - repeated exposure

Kidney, Liver, and Blood.

Reproductive toxicity

No additional information.

Chronic effects

No additional information.

11.2 Additional Information

Tumorigenic effects have been reported in experimental animals. The toxicological properties have not been fully investigated.

SECTION 12: Ecological information**12.1 Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

12.2 Persistence and degradability

Soluble in water. Persistence is unlikely based on information available.

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information

DOT (US)

UN Number	UN3077
Proper Shipping name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packaging Group	III
Technical name	Manganese sulfate monohydrate

IMDG

UN Number	UN3077
Proper Shipping name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packaging Group	III
Technical name	Manganese sulfate monohydrate

IATA

UN Number	UN3077
Proper Shipping name	Environmentally hazardous substances, solid, n.o.s.
Hazard Class	9
Packaging Group	III
Technical name	Manganese sulfate monohydrate

SECTION 15: Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not applicable.

SARA 304 Emergency release notification

Not listed/applicable.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed/applicable.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed/applicable.

SARA 311/312 Hazardous

See section 2 for more hazard information.

SARA 313 (TRI reporting)

Manganese sulfate monohydrate = 1.0% Threshold.

Manganese (II) sulfate = 1.0% Threshold.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Manganese sulfate monohydrate = Listed.

Manganese (II) sulfate = Listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not listed/applicable.

Safe Drinking Water Act

Not listed/applicable.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed/applicable.

US state regulations

US. Massachusetts RTK - Substance List

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Manganese sulfate monohydrate = Listed.

Manganese (II) sulfate = Listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Manganese sulfate monohydrate = Listed.

Manganese (II) sulfate = Listed.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

SECTION 16: Other information

Date of Issue: 6/16/2025

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.