

SECTION 1: Identification

1.1. Identification

Product form	: Substance
Trade name	: Manganese sulphate monohydrate
CAS-No.	: 10034-96-5
Formula	: MnSO4.H2O

1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Manufacturing of manganese sulphate Manufacture of fungicides Use of substance in the manufacture of other manganese based compounds and as intermediate Leather tanning Printing Packing Cleaning Laboratory reagent Surface treatment Fertilizer Nutritional Additives
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1.3. Supplier

Prince Erachem Mexico, S.A. de CV
Domicilio Conocido Carretera Tampico Valles Km28
Tamos, Panuco, C.P. 92018 - Veracruz Mexico
T +52 833 357 5800

1.4. Emergency telephone number

Emergency number : CHEMTREC (800) 424-9300

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Specific target organ toxicity (repeated exposure) Category 2	May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment - Chronic Hazard Category 2	Toxic to aquatic life with long lasting effects

2.2. GHS Label elements, including precautionary statements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

GHS09

Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: May cause damage to organs through prolonged or repeated exposure Toxic to aquatic life with long lasting effects
Precautionary statements (GHS-US)	: Do not breathe dust Avoid release to the environment Get medical advice/attention if you feel unwell Collect spillage Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

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2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%	GHS-US classification
Manganese sulphate monohydrate (Main constituent)	(CAS-No.) 10034-96-5	>= 95	STOT RE 2, H373 Aquatic Chronic 2, H411

Full text of hazard classes and H-statements : see section 16

3.2. Mixtures

Not applicable

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention. Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice and attention.
- First-aid measures after skin contact : Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. Wash skin with plenty of water.
- First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Consult an eye specialist. Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Do not induce vomiting. If swallowed, seek medical advice immediately and show this container or label. Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Burns.
- Symptoms/effects after eye contact : Redness.

4.3. Immediate medical attention and special treatment, if necessary

In case of doubt or persistent symptoms, consult always a physician.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Water spray. Dry powder. Foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Explosion hazard : Product is not explosive.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Fire fighting measures.
- Protection during firefighting : In case of fire: Wear a self contained breathing apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : See protection measures in section 7 and 8. Prevent unauthorized access.

6.1.1. For non-emergency personnel

- Protective equipment : Wear recommended personal protective equipment.
- Emergency procedures : Ventilate spillage area. Evacuate area. Do not breathe dust.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. Use personal protective equipment as required. Wear breathing apparatus if exposed to vapours/dusts/aerosols. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel.

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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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| For containment | : Collect spillage. |
| Methods for cleaning up | : Mechanically recover the product. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Clear contaminated areas thoroughly. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

6.4. Reference to other sections

Keep recovered product for subsequent disposal. See protection measures in section 7 and 8. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. Prevent unauthorized access. Do not allow to dry. Do not breathe dust. |
| Hygiene measures | : IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

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|--------------------|---|
| Technical measures | : Store in a well-ventilated place. Keep container tightly closed. |
| Storage conditions | : Keep only in original container. Store in a well-ventilated place. Keep cool. |

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

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| Appropriate engineering controls | : Technical measures and the application of suitable work processes have priority over personal protection equipment. Ensure good ventilation of the work station. |
| Environmental exposure controls | : Avoid release to the environment. |

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Gloves. Safety glasses. Protective clothing. Dust formation: dust mask.

Hand protection:

Wear suitable gloves

Eye protection:

Chemical goggles or face shield. Safety glasses

Skin and body protection:

Wear suitable protective clothing

respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment



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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Color	: light pink
Odor	: odorless
Odor threshold	: No data available
pH	: 6.5 (450g/L) at 20°C
Melting point	: 450 °C
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: Not applicable
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: 850 °C
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosion limits	: Not applicable
Explosive properties	: Not applicable.
Oxidizing properties	: Not applicable.

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Under fire conditions, hazardous fumes will be present.

10.4. Conditions to avoid

Do not allow to dry.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under fire conditions, hazardous fumes will be present.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	: Not classified
Skin corrosion/irritation	: Not classified pH: 6.5 (450g/L) at 20°C
Serious eye damage/irritation	: Not classified pH: 6.5 (450g/L) at 20°C

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Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: Not classified
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Redness.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.

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LC50 fish 1	14.5 mg/l
EC50 Daphnia 1	9.8 mg/l
EC50 Daphnia 2	5.7 mg/l
NOEC (chronic)	0.6 mg/l

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

No additional information available

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: an approved waste disposal plant. Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Avoid release to the environment.
Ecology - waste materials	: Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	: UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT
UN-No. (IMDG)	: 3077
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Class (IMDG)	: 9 - Miscellaneous dangerous substances and articles
Packing group (IMDG)	: III - substances presenting low danger
Limited quantities (IMDG)	: 5 kg

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Air transport

Transport document description (IATA) : UN 3077 Environmentally hazardous substance, solid, n.o.s., 9, III
UN-No. (IATA) : 3077
Proper Shipping Name (IATA) : Environmentally hazardous substance, solid, n.o.s.
Class (IATA) : 9 - Miscellaneous Dangerous Goods
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : REACH Disclaimer:
This information is based on current knowledge. Consistency of data in the SDS with CSR is considered, as far as the information is available at the time of compilation (cfr Revision date and Version number).

Full text of H-phrases:

H373	May cause damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product