

# Manganese Sulfate Monohydrate

## Safety Data Sheet

According to OSHA-GHS 2015

Updated: June 23th. 2015

Created date: January 2<sup>nd</sup>. 2015

Version: 1.2

### SECTION 1: Identification of the substance / mixture and of the Company / undertaking

#### 1.1. Product Identifier

Product form	: Substance
Trade name	: Tecmangam
Substance name	: Manganese Sulfate Monohydrate
Synonyms	: Manganese Sulfate : Manganese Monosulfate : Manganese ( II ) Sulfate Monohydrate : Manganese (2+) Sulfate Monohydrate
CAS No.	: 10034-96-5
Formula	: MnSO <sub>4</sub> . H <sub>2</sub> O

#### 1.2. Relevant Identified uses of the substance or mixture and uses advised against

##### 1.2.1 Relevant Identified Uses

Main use category	: Industrial use
Use of the substance / preparation	: Manufacturing of manganese sulfate, Manufacture of fungicides, Use of substance in the manufacture of other manganese based compounds and as intermediate, Leather tanning, Printing, Packing and cleaning, Laboratory reagent, Surface treatment, Fertilizer, Nutritional Additive.

##### 1.2.2 Uses advised against

No additional information available.

#### 1.3. Details of the supplier of the safety data sheet

##### Manufacturer:

ERACHEM MEXICO, S.A. DE C.V.  
Domicilio Conocido Carretera Tampico-Valles km 28,  
C.P. 92018 Tamós, Pánuco, Veracruz, México  
+52 (833) 357 5800 and +52 (833) 357 5801  
[SDSMEX@erametgroup.com](mailto:SDSMEX@erametgroup.com)

#### 1.4. Emergency telephone number

Emergency telephone +52 (833) 357 5800

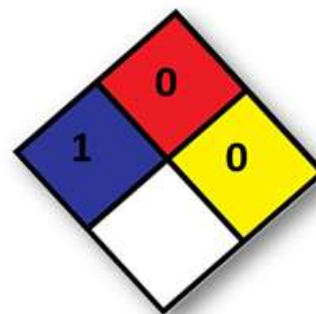
### SECTION 2: Hazards identification

#### 2.1. Clasification of the substance or mixture

GHS – US  
STOT RE 2 H373  
Aquatic Chronic 2 H411

NFPA (SCALE 0 – 4)

Health	1
Fire	0
Reactivity	0



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### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

Labeling according to GHS-US

Hazard pictograms (GHS-US)



GHS08

GHS09

Signal word (GHS-US)

: Warning

Hazard statements (GHS-US)

: H373 – May cause damage to organs (central nervous system) through prolonged or repeated exposure (inhalation)

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (GHS-US)

:

- Do not breathe dust, fume.
- Avoid release to the environment
- Avoid contact with eyes
- Avoid prolonged or repeated contact with skin
- Avoid ingestion
- Wear protective clothing, eye protection, protective gloves and dust mask.
- Dispose of contents / container accordingly to the current regulation

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition / information on ingredients

### 3.1. Substances

Substance type

: Mono-constituent

Name	Product identifier	%	Probable contaminants
Manganese sulfate monohydrate	(CAS No.) 10034-96-5	>= 95	None

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first measures

First-aid measures general	: When in doubt or if symptoms are observed, get medical advice. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: If Inhaled: Remove to fresh air and keep at rest in a position comfortable for breathing. Medical examination necessary even merely on suspicion of intoxication.
First-aid measures after skin contact	: After contact with skin, wash immediately with plenty of water and soap. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.
First-aid measures after ingestion	: If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms / injures : Conjunctival redness. Burns.

### 4.3. Indication of any immediate medical attention and special treatment needed

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

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: Water fog or spray
Unsuitable extinguishing media	: High power water jet

### 5.2. Special Hazard arising from the substance or mixture

Fire hazard	: Under fire conditions, hazardous fumes will be present.
Explosion hazard	: Not explosive.
Reactivity	: The product is stable at normal handling and storage conditions.

### 5.3. Advice for firefighters

Precautionary measures fire	: Use water spray or fog for cooling exposed containers  Exercise caution when fighting any chemical fire.
Protection during firefighting	: In case of fire: Wear self-contained breathing apparatus.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : See protective measures under point 7 and 8. Prevent unauthorized access.

#### 6.1.1 For non-emergency personnel

Protective equipment : Use personal protective equipment as required.

Emergency procedures : Evacuate area.

#### 6.1.2 For emergency responders

Protective equipment : Use personal protective equipment as required. Wear breathing apparatus if exposed to Vapours / dusts /aerosols.

Emergency procedures : Remove persons to safety.

### 6.2. Environmental precautions

Avoid release to the environment.

### 6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Clean contaminated objects and areas thoroughly observing Environmental regulations.

### 6.4. Reference to other sections

Treat the recovered material as prescribed in the section on waste disposal. See protective measures under point 7 and 8.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Avoid breathing dust.

Hygiene measures : Do not eat, drink or smoke when using this product.

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## 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep container tightly closed and in a well-ventilated place.

Storage conditions : Store in original container.

## 7.3. Specific end use (s)

No additional information available

## SECTION 8: Exposure controls / personal protection

### 8.1. Control Parameters

Manganese sulfate monohydrate (10034-96-5)		
USA ACGIH	ACGIH TWA (mg / m <sup>3</sup> )	0,2 mg/m <sup>3</sup>
USA OSHA	Ceiling limit value (mg / m <sup>3</sup> )	5 mg/m <sup>3</sup>

### 8.2. Exposure controls

Appropriate engineering controls : Technical measures and the application of suitable work processes have priority over personal protection 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.

Skin and body protection : Wear suitable protective clothing and gloves.

Respiratory protection : If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

Environmental exposure controls : Do not allow uncontrolled discharge of product into the environment. Avoid release to the environment.

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## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Molecular weight	: 169.01 g/mole
Appearance	: Powder and/or prills.
Color	: White to cream.
Odor	: Odorless.
Odor threshold	: Not applicable
pH	: 6,5 (450g/L) à 20°C
Melting point	: 450 °C
Freezing point	: No data available
Boiling point	: No data available
Flash point	: Not applicable
Flammability (solid, gas)	: Non-flammable.
Explosive limits	: Not explosive.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available e
Relative density	: 2,93 at 22 °C
Solubility	: Water: 45 %
Self-ignition temperature	: Non-flammable.
Decomposition temperature	: 850 °C
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: Not explosive.
Oxidizing properties	: Not oxidizing.
Evaporation rate	: No data available.
Partition Coefficient n-octanol / water	: No data available.
Others	: Hygroscopic

### 9.2. Other information

No relevant information available : -

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is stable at normal handling and storage conditions.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Under fire conditions, hazardous fumes will be present.

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### 10.4. Conditions to avoid

Extremely high temperatures.

### 10.5. Incompatible materials

Strong oxidizers.

### 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

Manganese sulfate monohydrate (10034-96-5)	
LD50 oral rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 4,98 mg/l

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific Target Organ Toxicity single exposure STOT SE1 : Not classified (Based on available data, the classification criteria are not met)

Specific Target Organ Toxicity repeated exposure STOT RE2 : May cause damage to organs (central nervous system) through prolonged or repeated exposure (inhalation).

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

## SECTION 12: Ecological Information

### 12.1. Toxicity

Manganese sulfate monohydrate (10034-96-5)	
LC50 fishes 1	14,5 mg/l
Ecology - water	Toxic to aquatic life with long lasting effects

### 12.2. Persistence and degradability

No additional information available.

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## 12.3. Bioaccumulative potential

Bioaccumulative potential : Not established

## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

No additional information available

## 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendation : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/containers to comply with local, state and federal regulations.

Ecology - waste materials : Avoid release to the environment

## SECTION 14: Transport Information

In accordance with IMDG / ICAO / IATA / DOT

### 14.1. UN number

UN : 3077

### 14.2. UN proper shipping name

Proper Shipping Name : Environmentally hazardous substance, Solid, N.O.S.

Transport document description : UN 3077 Environmentally Hazardous Substance, Solid, N.O.S., 9, III, (E)

### 14.3. Transport hazard class

Class (UN) : 9

### 14.4. Packing group

Packing group (UN) : III



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## 14.5. Environmental hazards

Marine pollutant

:



Other information

: No supplementary information available.

## 14.6. Special Precautions for user

14.6.1 Overland transport

No regulated for transport

14.6.2 Transport by sea

No additional information available

14.6.3 Air transport

No additional information available

## 14.7. Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture

15.1.1 US Federal regulations

No listed on the United States TSCA (Toxic Substances Control Act)

No listed on SARA 304 (Emergency release notification)

No listed on SARA 311,312 (Acute hazard, Chronic hazard, Fire hazard, Reactivity hazard)

Listed on SARA 313 (Specific toxic chemical listings)

15.1.2. International regulations

CANADA:

No listed on the Canadian DSL (Domestic substances List)

WHMIS Classification: Class D Division 2 Subdivision B – Toxic material causing other toxic effects

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

