



# Manganese Citrate

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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### SECTION 1: Identification

#### 1.1. Identification

Product form : Substance  
Substance name : Manganese Citrate  
CAS-No. : 10024-66-5  
Formula :  $Mn_3(C_6H_5O_7)_2 \cdot 10H_2O$

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture : Nutrient; Dietary Supplement

#### 1.3. Supplier

##### Manufacturer

Jost Chemical Co.  
8150 Lackland Rd.  
Saint Louis, Missouri 63114  
T 314-428-4300 - F 314-428-4366  
[sds@jostchemical.com](mailto:sds@jostchemical.com) - [www.jostchemical.com](http://www.jostchemical.com)

#### 1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incident Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
United States and Canada: 1-800-424-9300 / +1 703-527-3887  
Global: +1 703-741-5970

### SECTION 2: Hazard(s) identification

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

##### GHS-US classification

Not classified

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

No labeling applicable

#### 2.3. Other hazards which do not result in classification

No additional information available

#### 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 Citrate (Main constituent)	(CAS-No.) 10024-66-5	100	Not classified

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 after inhalation : Remove person to fresh air and keep comfortable for breathing.  
First-aid measures after skin contact : Wash skin with plenty of water.  
First-aid measures after eye contact : Rinse eyes with water as a precaution.  
First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

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

Symptoms/effects after inhalation : May cause respiratory irritation.

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Symptoms/effects after skin contact	: Slight irritation.
Symptoms/effects after eye contact	: Mild eye irritation.
Symptoms/effects after ingestion	: Gastrointestinal complaints.
Chronic symptoms	: Impairment of the nervous system.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

### 5.2. Specific hazards arising from the chemical

Fire hazard	: Not flammable. Heating increases the fire hazard.
Explosion hazard	: Potential dust explosion hazard.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Cool down the containers exposed to heat with a water spray.
Protection during firefighting	: 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

#### 6.1.1. For non-emergency personnel

Protective equipment	: protective clothing. Protective goggles. Gloves. See "Material-Handling" to select protective clothing.
Emergency procedures	: Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment	: Collect spillage. Use suitable disposal containers. Knock down/dilute dust cloud with water spray.
Methods for cleaning up	: Mechanically recover the product.
Other information	: Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	: 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

Technical measures	: Comply with applicable regulations. Does not require any specific or particular technical measures.
Storage conditions	: Store in a clean, dry warehouse in the original unopened containers. Store in a well-ventilated place. Keep cool.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

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### 8.2. Appropriate engineering controls

Appropriate engineering controls : 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:

Dust production: dust mask with filter type P2. Gloves. Safety glasses.

#### Materials for protective clothing:

Wear suitable protective clothing, gloves and eye/face protection

#### Hand protection:

Impermeable protective gloves

#### Eye protection:

Safety glasses

#### Skin and body protection:

In case of dust production: dustproof clothing

#### Respiratory protection:

Dust mask

#### Personal protective equipment symbol(s):



## SECTION 9: Physical and chemical properties

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

Physical state : Solid  
Appearance : Pale pink powder.  
Color : Pink  
Odor : odorless  
Odor threshold : No data available  
pH : No data available  
Melting point : > 150 °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  
Molecular mass : 723.17 g/mol  
Solubility : Poorly soluble in water.  
Log Pow : No data available  
Auto-ignition temperature : Not applicable  
Decomposition temperature : No data available  
Viscosity, kinematic : No data available  
Viscosity, dynamic : No data available  
Explosion limits : Not applicable  
Explosive properties : No data available

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Oxidizing properties : No data available

### 9.2. Other information

Minimum ignition energy : ≈

## 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

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

Moisture.

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

manganese dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

#### Manganese Citrate (10024-66-5)

LD50 oral rat	9000 mg/kg
ATE US (oral)	9000 mg/kg body weight

Skin corrosion/irritation : Not classified (Lack of data)

Serious eye damage/irritation : Not classified (Lack of data)

Respiratory or skin sensitization : Not classified (Lack of data)

Germ cell mutagenicity : Not classified (Lack of data)

Carcinogenicity : Not classified (Lack of data)

Reproductive toxicity : Not classified (Lack of data)

Specific target organ toxicity – single exposure : Not classified (Lack of data)

Specific target organ toxicity – repeated exposure : Not classified (Lack of data)

Aspiration hazard : Not classified  
(Not applicable)

Viscosity, kinematic : No data available

Symptoms/effects after inhalation : May cause respiratory irritation.

Symptoms/effects after skin contact : Slight irritation.

Symptoms/effects after eye contact : Mild eye irritation.

Symptoms/effects after ingestion : Gastrointestinal complaints.

Chronic symptoms : Impairment of the nervous system.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

### 12.2. Persistence and degradability

No additional information available

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### 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 : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT

Not regulated

### Transportation of Dangerous Goods

Proper Shipping Name (Transportation of Dangerous Goods) : Not regulated for transport

### Transport by sea

Proper Shipping Name (IMDG) : Not regulated for transport

### Air transport

Proper Shipping Name (IATA) : Not regulated for transport

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Manganese Citrate (10024-66-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

### 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

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

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### SECTION 16: Other information

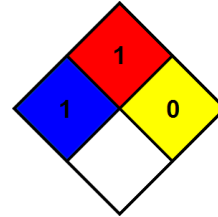
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NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (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*