





**Precautionary Statements**

**Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

Wear protective gloves/protective clothing/eye protection/face protection

<b>Inhalation</b>	Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
<b>Ingestion</b>	Immediate medical attention is required. Do not induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person.
<b>Most important symptoms/effects</b>	None reasonably foreseeable. Causes burns by all exposure routes. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

<b>Suitable Extinguishing Media</b>	CO <sub>2</sub> , dry chemical, dry sand, alcohol-resistant foam.
<b>Unsuitable Extinguishing Media</b>	No information available
<b>Flash Point</b>	No information available
<b>Method -</b>	No information available

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and other combustible materials.

**Storage**

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Corrosives area. To maintain product quality: Keep refrigerated.

## 8. Exposure controls / personal protection

### Exposure Guidelines

**Component**

**ACGIH TLV**

**OSHA PEL**

Legend

**Respiratory Protection**

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

<b>Physical State</b>	Solid
<b>Appearance</b>	Light red
<b>Odor</b>	Strong
<b>Odor Threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting Point/Range</b>	37 °C / 98.6 °F
<b>Boiling Point/Range</b>	No information available
<b>Flash Point</b>	No information available
<b>Evaporation Rate</b>	Not applicable
<b>Flammability (solid,gas)</b>	No information available
<b>Flammability or explosive limits</b>	
<b>Upper</b>	No data available
<b>Lower</b>	No data available
<b>Vapor Pressure</b>	No information available
<b>Vapor Density</b>	Not applicable

<b>Specific Gravity</b>	No information available
<b>Solubility</b>	Soluble in water
<b>Partition coefficient; n-octanol/water</b>	No data available
<b>Autoignition Temperature</b>	Not applicable
<b>Decomposition Temperature</b>	> 140°C
<b>Viscosity</b>	Not applicable
<b>Molecular Formula</b>	Mn N2 O6 . 4 H2 O
<b>Molecular Weight</b>	251.01

## 10. Stability and reactivity

<b>Reactive Hazard</b>	Yes
<b>Stability</b>	Hygroscopic. Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Avoid dust formation. Incompatible products. Excess heat. Exposure to moist air or water. Combustible material.
<b>Incompatible Materials</b>	Strong reducing agents, Combustible material
<b>Hazardous Decomposition Products</b>	Nitrogen oxides (NOx)
<b>Hazardous Polymerization</b>	No information available.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information

#### Component Information

<b>Component</b>	<b>LD50</b>	<b>LD50 Dermal</b>	<b>Classification</b>
Manganese nitrate	>300 mg/kg	Not listed	Not listed

#### Toxicologically Synergistic Products

No information available

#### Delayed and immediate effects as well as chronic effects from short-term and long-term exposure

**Irritation** Causes burn on all exposure routes

**Sensitization** No information available

**Carcinogenicity** The table below indicates whether each component listed any ingredients as a carcinogen

Component	CAS-No	IARC	NTP	ACQ	OSHA
Nitric acid, manganese(2+) salt, tetrahydrate	20694-39-7	Not listed			

<b>Symptoms / effects, both acute and delayed</b>	Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation
<b>Endocrine Disruptor Information</b>	No information available
<b>Other Adverse Effects</b>	The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

Do not empty into drains. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

<b>Persistence and Degradability</b>	Soluble in water Persistence is unlikely based on information available.
<b>Bioaccumulation/ Accumulation</b>	No information available.
<b>Mobility</b>	Will likely be mobile in the environment due to its water solubility.

## 13. Disposal considerations

<b>Waste Disposal Methods</b>	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.
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## 14. Transport information

### DOT

<b>UN-No</b>	UN2724
<b>Proper Shipping Name</b>	MANGANESE NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### TDG

<b>UN-No</b>	UN2724
<b>Proper Shipping Name</b>	MANGANESE NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### IATA

<b>UN-No</b>	UN2724
<b>Proper Shipping Name</b>	MANGANESE NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

### IMDG/IMO

<b>UN-No</b>	UN2724
<b>Proper Shipping Name</b>	MANGANESE NITRATE
<b>Hazard Class</b>	5.1
<b>Packing Group</b>	III

## 15. Regulatory information

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**N** - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

**P** - Indicates a commenced PMN substance

**R** - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

**S** - Indicates a substance that is identified in a proposed or final Significant New Use Rule

**T** - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

**XU** - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

**Y1** - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

**Y2** - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

### U.S. Federal Regulations

**TSCA 12(b)** Not applicable

#### **SARA 313**

<b>Component</b>	<b>CAS-No</b>	<b>Weight %</b>	<b>SARA 313 - Threshold Values %</b>
Nitric acid, manganese(2+) salt, tetrahydrate	20694-39-7	100	1.0
Manganese nitrate	10377-66-9	-	1.0

#### **SARA 311/312 Hazard Categories**

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	Yes

**CWA (Clean Water Act)**

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## Other International Regulations