



# SAFETY DATA SHEET

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) (OSHA HCS)

## SECTION 1. IDENTIFICATION

Product name : Manganese(II) Bromide  
Product code : M3581

### Manufacturer or supplier's details

Company name of supplier : TCI America  
Address : 9211 N. Harborside Street Portland, OR 97203 U.S.A.  
Telephone : +1-800-4238616/+1-503-2831681  
Telefax : +1-888-5201075/+1-503-2831987  
E-mail address : sales-US@TCIchemicals.com

Chemical Emergencies: TCI America (8:00am - 5:00pm) PST +1-503-2867624

Transportation Emergencies: Chemtrec 24-Hour +1-800-4249300 (U.S.A.)/+1-703-5273887 (International)

### Recommended use of the chemical and restrictions on use

Recommended use : Use as laboratory reagent

## SECTION 2. HAZARDS IDENTIFICATION

### GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity (Oral) : Category 4  
Serious eye damage : Category 1  
Reproductive toxicity : Category 2  
Specific target organ toxicity - repeated exposure : Category 1 (Respiratory system, Nervous system)  
Short-term (acute) aquatic hazard : Category 2  
Long-term (chronic) aquatic hazard : Category 2

### GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H361 Suspected of damaging fertility or the unborn child.  
H372 Causes damage to organs (Respiratory system, Nervous system) through prolonged or repeated exposure.  
H411 Toxic to aquatic life with long lasting effects.

Precautionary Statements : **Prevention:**

P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

### Response:

P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.  
P305 + P351 + P338 + P310 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/ doc-

tor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P391 Collect spillage.

**Storage:**

P405 Store locked up.

**Disposal:**

P501 Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

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**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Components**

Chemical name	CAS-No.	Concentration (% w/w)
Manganese(II) Bromide	13446-03-2	>= 90 - <= 100

Actual concentration is withheld as a trade secret

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**SECTION 4. FIRST AID MEASURES**

If inhaled : Remove person to fresh air and keep comfortable for breathing. Get medical advice/ attention if you feel unwell.  
In case of skin contact : Take off all contaminated clothing immediately. If on skin, rinse well with water. If skin irritation or rash occurs: Get medical advice/ attention.  
In case of eye contact : Rinse with plenty of water. If easy to do, remove contact lens, if worn. If eye irritation persists: Get medical advice/ attention.  
If swallowed : Get medical advice/ attention. Rinse mouth.  
Most important symptoms and effects, both acute and delayed : None known.

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**SECTION 5. FIRE-FIGHTING MEASURES**

Suitable extinguishing media : Dry powder, Foam, Water spray, Carbon dioxide (CO2)  
Specific hazards during fire fighting : No information available.  
Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Immediately evacuate personnel to safe areas. Remove undamaged containers from fire area if it is safe to do so.  
Special protective equipment for fire-fighters : Use personal protective equipment.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures : Wear suitable protective equipment. Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off, etc.  
Environmental precautions : Should not be released into the environment.  
Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.

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**SECTION 7. HANDLING AND STORAGE**

Technical measures : Prevent dispersion of dust.  
Local/Total ventilation : Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Use a local exhaust ventilation.  
Advice on safe handling : Avoid contact with skin, eyes and clothing. Wear personal protective

Conditions for safe storage : equipment. Wash hands and face thoroughly after handling.  
Keep container tightly closed. Store in a cool and shaded area. Protect from moisture. Keep under inert gas. Store locked up.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Manganese(II) Bromide	13446-03-2	C	5 mg/m <sup>3</sup> (Manganese)	OSHA Z-1
		TWA (Inhalable particulate matter)	0.1 mg/m <sup>3</sup> (Manganese)	ACGIH
		TWA (Respirable particulate matter)	0.02 mg/m <sup>3</sup> (Manganese)	ACGIH
		C	5 mg/m <sup>3</sup> (Manganese)	OSHA P0
		TWA	1 mg/m <sup>3</sup> (Manganese)	NIOSH REL
		ST	3 mg/m <sup>3</sup> (Manganese)	NIOSH REL

**Engineering measures** : Install a closed system or local exhaust. Also install safety shower and eye bath.

### Personal protective equipment

Respiratory protection : Dustproof gas mask, Self-contained breathing apparatus

Hand protection : Impervious gloves

Eye protection : Safety glasses, Safety goggles, Face-shield

Skin and body protection : Impervious protective clothing

\*Use personal protective equipment (PPE) approved under appropriate government standards and follow local and national regulations.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Solid form  
 Color : orange - red  
 Odor : No data available  
 Odor Threshold : No data available  
 pH : No data available  
 Melting point/freezing point : 1288 °F / 698 °C  
 Boiling point/boiling range : No data available  
 Flash point : No data available  
 Flammability (solid, gas) : No data available  
 Upper explosion limit / Upper flammability limit : No data available  
 Lower explosion limit / Lower flammability limit : No data available  
 Vapor pressure : No data available  
 Relative vapor density : No data available  
 Relative density : No data available  
 Solubility(ies)  
   Water solubility : completely soluble  
   Solubility in other solvents : No data available  
 Partition coefficient: n-octanol/water (log value) : No data available  
 Autoignition temperature : No data available  
 Decomposition temperature : No data available  
 Viscosity  
   Viscosity, dynamic : No data available  
   Viscosity, kinematic : No data available  
 Molecular weight : 214.75 g/mol

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity	:	No data available
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	None under normal processing.
Conditions to avoid	:	Exposure to moisture.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	hydrogen bromide, Metal oxides

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**SECTION 11. TOXICOLOGICAL INFORMATION**

<b>Acute toxicity</b>	:	No information available.
<b>Skin corrosion/irritation</b>	:	No information available.
<b>Serious eye damage/eye irritation</b>	:	
Result	:	Irreversible effects on the eye
<b>Respiratory or skin sensitization</b>	:	No information available.
<b>Germ cell mutagenicity</b>	:	No information available.
<b>Carcinogenicity</b>	:	
IARC		No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA		No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.
NTP		No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<b>Reproductive toxicity</b>	:	
Reproductive toxicity - Assessment	:	Suspected human reproductive toxicant
<b>STOT-single exposure</b>	:	No information available.
<b>STOT-repeated exposure</b>	:	
Target Organs	:	Respiratory system, Nervous system
Assessment	:	Causes damage to organs through prolonged or repeated exposure.
<b>Repeated dose toxicity</b>	:	No information available.
<b>Aspiration toxicity</b>	:	No information available.

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**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Ecotoxicology Assessment**

Acute aquatic toxicity	:	Toxic to aquatic life.
Chronic aquatic toxicity	:	Toxic to aquatic life with long lasting effects.

**Persistence and degradability**

No data available

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Other adverse effects****Product:**

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
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**SECTION 13. DISPOSAL CONSIDERATIONS****Disposal methods**

Waste from residues	:	Disposal in accordance with local and national regulations.Entrust
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Contaminated packaging : disposal to a licensed waste disposal company.  
: Disposal in accordance with local and national regulations. Before disposal of used container, remove contents completely.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA-DGR

UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
Class : 9  
Packing group : III

#### IMDG-Code

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
Class : 9  
Packing group : III  
EmS Code : F-A, S-F  
Marine pollutant : yes

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

Not applicable for product as supplied.

### Domestic regulation

#### 49 CFR

UN/ID/NA number : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
Class : 9  
Packing group : III  
ERG Code : 171  
Marine pollutant : no

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

## SECTION 15. REGULATORY INFORMATION

### CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

### SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

### SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

**SARA 311/312 Hazards** : No SARA Hazards

**SARA 313** : The following components are subject to reporting levels established by SARA Title III, Section 313:  
Manganese(II) 13446-03-2 >= 90 - <= 100 %  
Bromide

### Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 112 (40 CFR 61):

Manganese(II) Bromide 13446-03-2 >= 90 - <= 100 %

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCM Intermediate or Final VOC's (40 CFR 60.489).

**Clean Water Act**

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product does not contain any toxic pollutants listed under the U.S. Clean Water Act Section 307

This product does not contain any priority pollutants related to the U.S. Clean Water Act

**US State Regulations****Massachusetts Right To Know**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know**

Manganese(II) Bromide

13446-03-2

**Maine Chemicals of High Concern**

Product does not contain any listed chemicals

**Vermont Chemicals of High Concern**

Product does not contain any listed chemicals

**Washington Chemicals of High Concern**

Product does not contain any listed chemicals

**California List of Hazardous Substances**

Manganese(II) Bromide

13446-03-2

**California Permissible Exposure Limits for Chemical Contaminants**

Manganese(II) Bromide

13446-03-2

**TSCA list**

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

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**SECTION 16. OTHER INFORMATION**

Revision Date : 05/05/2023

This SDS was prepared sincerely based on the information obtained, however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. The products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling operations, sufficient care should be taken, in addition to the safety measures suitable for the given situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.