



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Manganese Product

**Other means of identification** None.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer**

**Company name** Materion Advanced Materials Group

**Address** 42 Mt. Ebo Road South  
Brewster, NY 10509  
United States

**Telephone** Supplier Phone 1+845.279.0900

**Website** materion.com

**E-mail** Not available.

**Emergency phone number** Chemtrec 1+703.527.3887

## 2. Hazard(s) identification

**Physical hazards** Flammable solids Category 2

**Health hazards** Serious eye damage/eye irritation Category 2B  
Reproductive toxicity Category 1  
Specific target organ toxicity, repeated exposure Category 1

**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 3  
Hazardous to the aquatic environment, long-term hazard Category 3

**OSHA defined hazards** Not classified.

**Label elements**

**Hazard symbol** None.

**Signal word** None.

**Hazard statement** Not available.

**Precautionary statement**

**Prevention** Not available.

**Response** Not available.

**Storage** Not available.

**Disposal** Not available.

**Hazard(s) not otherwise classified (HNOC)** None known.

**Supplemental information** None.

## 3. Composition/information on ingredients

### Substances

Chemical name	Common name and synonyms	CAS number	%
Manganese		7439-96-5	100

## 4. First-aid measures

Inhalation	If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.
Most important symptoms/effects, acute and delayed	Not available.

## 5. Fire-fighting measures

Suitable extinguishing media	DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.
Unsuitable extinguishing media	Water.
Specific hazards arising from the chemical	Water reactive material.
Special protective equipment and precautions for firefighters	Not available.
Fire fighting equipment/instructions	Do not get water inside container.

## 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	The product is immiscible with water and will spread on the water surface. Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Do not get water on spilled substance or inside containers. For waste disposal, see section 13 of the SDS.

## 7. Handling and storage

Precautions for safe handling	Do not allow water to get into container because of violent reaction and possible flash fire. Avoid prolonged exposure.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Keep container dry. Never allow product to get in contact with water during storage. Store in a building without sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Material	Type	Value	Form
Manganese Product	Ceiling	5 mg/m <sup>3</sup>	Fume.
Components	Type	Value	Form

Manganese (CAS 7439-96-5)	Ceiling	5 mg/m <sup>3</sup>	Fume.
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#### US. NIOSH: Pocket Guide to Chemical Hazards

Material	Type	Value	Form
Manganese Product	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	1 mg/m <sup>3</sup>	Fume.
Components	Type	Value	Form

Manganese (CAS 7439-96-5)	STEL	3 mg/m <sup>3</sup>	Fume.
	TWA	1 mg/m <sup>3</sup>	Fume.

<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Control parameters</b>	Follow standard monitoring procedures.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Not normally needed.
<b>Skin protection</b>	
<b>Hand protection</b>	Not normally needed.
<b>Other</b>	Wear suitable protective clothing.
<b>Respiratory protection</b>	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
<b>Thermal hazards</b>	Not available.
<b>General hygiene considerations</b>	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Not available.
<b>Odor</b>	Not applicable.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	2274.8 °F (1246 °C)
<b>Initial boiling point and boiling range</b>	3741.8 °F (2061 °C)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	< 0.0000001 kPa at 25 °C
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	7.44 g/cm <sup>3</sup>
<b>Molecular formula</b>	Mn

Molecular weight	54.94 g/mol
Specific gravity	7.44

## 10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material reacts with water.
Possibility of hazardous reactions	Not available.
Conditions to avoid	Exposure to water vapor. Contact with incompatible materials.
Incompatible materials	Not available.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	Not available.
Skin contact	Not available.
Eye contact	Not available.
Ingestion	Not available.

Symptoms related to the physical, chemical and toxicological characteristics	Not available.
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### Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Not available.
Serious eye damage/eye irritation	Not available.
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	Not available.
Germ cell mutagenicity	Not available.

### Carcinogenicity

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity	Not available.
Specific target organ toxicity - single exposure	Not available.
Specific target organ toxicity - repeated exposure	Not available.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

## 12. Ecological information

### Ecotoxicity

Product	Species	Test Results
Manganese Product		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia magna)	40 mg/l, 48 hours

\* Estimates for product may be based on additional component data not shown.

<b>Persistence and degradability</b>	Not available.
<b>Bioaccumulative potential</b>	Not available.
<b>Mobility in soil</b>	Not available.
<b>Other adverse effects</b>	Not available.

## 13. Disposal considerations

<b>Disposal instructions</b>	Consult authorities before disposal. Do not allow this material to drain into sewers/water supplies.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. Transport information

### DOT

Not regulated as dangerous goods.

### IATA

Not regulated as dangerous goods.

### IMDG

Not regulated as dangerous goods.

## 15. Regulatory information

### US federal regulations

#### TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

#### CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

#### US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - Yes Pressure Hazard - No Reactivity Hazard - No
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#### SARA 302 Extremely hazardous substance

Not listed.

<b>SARA 311/312 Hazardous chemical</b>	Yes
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**SARA 313 (TRI reporting)**

<b>Chemical name</b>	<b>CAS number</b>	<b>% by wt.</b>
Manganese	7439-96-5	100

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Manganese (CAS 7439-96-5)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US - New Jersey RTK - Substances: Listed substance**

Manganese (CAS 7439-96-5)

**US - Pennsylvania RTK - Hazardous Substances: All compounds of this substance are considered environmental hazards**

Manganese (CAS 7439-96-5)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Manganese (CAS 7439-96-5)

**US. Massachusetts RTK - Substance List**

Manganese (CAS 7439-96-5)

**US. New Jersey Worker and Community Right-to-Know Act**

Manganese (CAS 7439-96-5)

**US. Pennsylvania RTK - Hazardous Substances**

Manganese (CAS 7439-96-5)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Manganese (CAS 7439-96-5)

**US. Rhode Island RTK**

Manganese (CAS 7439-96-5)

**US. California Proposition 65**

Not Listed.

**16. Other information, including date of preparation or last revision****Issue date** 05-26-2015**Revision date** 05-28-2015**Version #** 02

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