

PAGE #:1 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

### **SECTION 1 - CHEMICAL IDENTIFICATION**

PRODUCT NAME: Manganese Chloride 1M Solution  
 CATALOG #: M20100  
 SUPPLIER'S NAME: Melford Laboratories Ltd  
 SUPPLIERS ADDRESS: Bildeston Road, Chelsworth, Ipswich, IP7 7LE, UK  
 EMERGENCY CONTACT: 01449 741178  
 OTHER INFORMATION: support@melford.co.uk

### **SECTION 2 - HAZARDS IDENTIFICATION**

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

#### **GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

H318	Serious eye damage	Category 1
H373	Specific target organ toxicity, repeated exposure	Category 2

#### **2.2 GHS Label elements, including Hazard and Precautionary Statement(s)**

##### **Pictogram**



**Signal word: Danger**

##### **Hazard statement(s)**

H318	Causes serious eye damage
H373	May cause damage to organs prolonged or repeated exposure

##### **Prevention, Response, Storage and Disposal Precautionary Statement(s)**

P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician
P314	Get medical advice/attention if you feel unwell.
P501	Dispose of contents/ container to an approved waste disposal plant.

### **SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS Number	EINECS Number	Composition %age
Water	7732-18-5	231-791-2	87.5

PAGE #:2 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

Manganese Chloride	7773-01-5	231-869-6	12.5
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#### **SECTION 4 - FIRST-AID MEASURES**

##### **4.1 Description of first aid measures**

**General advice:** Consult a doctor and show this safety data sheet.

- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

**4.2 Most important symptoms and effects, both acute and delayed:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

**4.3 Indication of immediate medical attention and special treatment needed:** Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

#### **SECTION 5 - FIRE FIGHTING MEASURES**

##### **5.1 Extinguishing media**

**Suitable extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

**5.2 Special hazards arising from the substance or mixture:** Hydrogen chloride gas, Manganese/manganese oxides

**5.3 Precautions for fire-fighters:** Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

**5.4 Further information:** No data available

#### **SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures:** Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust or gas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

**6.4 Reference to other sections:** For required PPE see section 8. For disposal see section 13.

#### **SECTION 7 - HANDLING AND STORAGE**

PAGE #:3 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

**7.1 Precautions for safe handling:** Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place. Storage class : Non Combustible Liquids

**7.3 Specific end use(s):** Use in a laboratory fume hood where possible. Refer to employer's COSHH risk assessment.

## **SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

### **8.1 Control parameters**

#### **Components with workplace control parameters**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Manganese Chloride	TWA:0.02 mg/m <sup>3</sup> TWA:0.1 mg/m <sup>3</sup>	(Vacated)Ceiling: 5 mg/m <sup>3</sup> Ceiling: 5 mg/m <sup>3</sup>	IDLH: 500 5 mg/m <sup>3</sup> TWA:1.0 mg/m <sup>3</sup> STEL: 3 mg/m <sup>3</sup>
Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Manganese Chloride	TWA:0.2 mg/m <sup>3</sup>	TWA:0.2 mg/m <sup>3</sup>	TWA:0.2 mg/m <sup>3</sup>

- ❖ **ACGIH:** American Conference of Governmental Industrial Hygienists.
- ❖ **OSHA:** Occupational Safety and Health Administration.
- ❖ **NIOSH IDLH:** The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health

### **8.2 Exposure Controls**

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### **8.3 Personal protective equipment**

- i. **Eye/face protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **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 EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

PAGE #:4 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

<b>Appearance</b>	Liquid	<b>Vapor Pressure</b>	No Data Available
<b>Odor</b>	No Data Available	<b>Vapor Density</b>	No Data Available
<b>Odor Threshold</b>	No Data Available	<b>Relative Density</b>	No Data Available
<b>pH</b>	No Data Available	<b>Water Solubility</b>	No Data Available
<b>Melting / Freezing Point</b>	No Data Available	<b>Partition Coefficient</b>	No Data Available
<b>Initial Boiling Point Range</b>	No Data Available	<b>Auto-Ignition Temperature</b>	No Data Available
<b>Flash Point</b>	No Data Available	<b>Decomposition Temperature</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability Or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

#### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable under recommended storage conditions.

**Hazardous Decomposition Products:** Hydrogen chloride, Metal oxides.

**Hazardous Polymerization:** Not Listed

**Incompatibilities:** Strong reducing agents, Peroxides. Alkali Metals.

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

##### **Acute Toxicity**

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Manganese Chloride	250 mg/kg ( Rat ) 1031 mg/kg ( Mouse )	Not Listed	Not Listed

#### **SECTION 12 - ECOLOGICAL INFORMATION**

##### **Ecotoxicity**

Component	Freshwater Fish	Water Flea
Manganese Chloride	>1000 mg/L 48h	4.7 mg/L 48h

**Persistence and degradability/ Bioaccumulative potential:** No data available

##### **Mobility**

Component	log Pow
Manganese Chloride	0.85

**Results of PBT and vPvB assessment:** No data available

**Other adverse effects:** No data available

**Chronic Toxicity:** There are no known carcinogenic chemicals in this product

#### **SECTION 13 - DISPOSAL CONSIDERATIONS**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

PAGE #:5 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

**SECTION 14 - TRANSPORT INFORMATION**

DOT	TDG	IATA	IMDG/IMO
Not regulated	Not regulated	Not regulated	Not regulated

**SECTION 15 - REGULATORY INFORMATION**

**INTERNATIONAL INVENTORIES**

INGREDIENT: WATER					CAS #:7732-18-5		EINECS: 231-791-2		
TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	-	Listed	Listed	Listed

INGREDIENT: Manganese Chloride					CAS #:7773-01-5		EINECS: 231-869-6		
TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	Listed	Listed	Listed	Listed

**USA FEDERAL REGULATION**

**SARA 311/312 HAZARDOUS CATEGORIZATION**

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release Of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

TSCA 12(b)/ OSHA/ CERCLA/ Clean Water Act: Not Applicable

**SARA 313**

Component	CAS#	Weight %	SARA 313 – Threshold Values %
Manganese Chloride	7773-01-5	12.5	1.0

**Clean Air Act**

Component	HAPS Data
Manganese Chloride	Listed

**California Proposition 65:** This product does not contain any Proposition 65 chemicals.

**HMIS Rating**

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard

PAGE #:6 OF 6	<b>PRODUCT SAFETY DATA SHEET</b> <b>MELFORD LABORATORIES LTD</b>	ISSUE DATE: 12/15/14	REV.:1 REV Date :10/29/15
According to regulation (EC) No. 1272/2008	PRODUCT NAME: Manganese Chloride 1M Solution		ITEM NO: M20100

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**NFPA Rating**

<b>Health Hazard</b>	<b>Fire Hazard</b>	<b>Reactivity Hazard</b>
2	0	0

**STATE RIGHT TO KNOW**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Water	-	-	Listed	-	-
Manganese Chloride	-	Listed	Listed	Listed	-

**US DEPARTMENT OF TRANSPORTATION**

<b>REPORTABLE QUANTITY (RQ)</b>	<b>DOT MARINE POLLUTANT</b>	<b>DOT SEVER MARINE POLLUTANT</b>
No	No	No

**U.S. DEPARTMENT OF HOMELAND SECURITY:** This product does not contain any DHS chemicals.

**Canada:** This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**This SDS complies with the requirements of Regulation (EC).**

**SECTION 16 - OTHER INFORMATION**

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Melford Laboratories Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. This product is sold for laboratory research and development purposes use only.