



Manganese Carbonate

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Manganese Carbonate**

Product Code(s) : None reported.

Recommended use of the chemical and restrictions on use

: Waste water treatment; Odor control.

Chemical family

: Metal compounds

Name, address, and telephone number of the supplier:

World Metal, L.L.C.

10701 Corporate Drive
Suite 184
Stafford, TX, USA
77477

Supplier's Telephone # : 281-491-7474

24 Hr. Emergency Tel # : (800) 424-9300 (CHEMTREC)

Name, address, and telephone number of the manufacturer:

Refer to supplier

OUTSIDE THE USA +1-703-527-3889

Customer# 24837

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Fine, pink, light brown powder. Odorless.

Most important hazards: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012).

Hazardous classification:

Specific target organ toxicity - single exposure - Category 3

Specific target organ toxicity - repeated exposure- Category 2

WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). WHMIS classification:

Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material).

Label elements

The following label information is applicable only to the United States according to OSHA Regulations (29 CFR 1910.1200) (Hazcom 2012):

Signal Word

WARNING!

Hazard statement(s)

May cause respiratory irritation.

May cause damage to the nervous system through prolonged or repeated exposure.

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Precautionary statement(s)

Do not breathe dust or fume.
Use only outdoors or in a well-ventilated area.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
Call a POISON CENTER or doctor/physician if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.

Dispose of contents/container in accordance with local regulation.

Hazard pictogram(s)



The following label information is applicable only to Canada according to the Canadian Controlled Products Regulations (CPR/WHMIS):

Warning! May be harmful if inhaled or swallowed. Inhalation of fumes may result in metal fume fever, a flu-like illness. Chronic manganese exposures can lead to neurological problems. May cause damage to the blood system, the liver and the kidneys through prolonged or repeated exposure. May cause skin and eye irritation.

Precautions: Use in a well-ventilated area. Wear suitable protective equipment during handling. Avoid breathing dust and fume. Avoid contact with eyes, skin and clothing. Avoid contact with incompatible materials. Wash thoroughly after handling. Keep containers closed when not in use. Store in a cool, dry, well ventilated area.

FIRST AID: If inhaled, move to fresh air. If breathing is difficult, administer oxygen. If breathing stopped, begin artificial respiration. Get medical attention if irritation develops and persists. For skin contact, wash with soap and water while removing contaminated clothing. If irritation develops, consult a physician. For eye contact, flush with running water for at least 15 minutes. Get medical attention if irritation develops and persists. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person. Refer To Material Safety Data Sheet for further information.



Other hazards

Other hazards which do not result in classification:

Ingestion may cause irritation of the mouth, throat and stomach. Prolonged or repeated overexposure may cause liver, kidney and blood system effects.

Environmental precautions:

Avoid release to the environment. See ECOLOGICAL INFORMATION, Section 12.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical name</u>	<u>CAS #</u>	<u>Concentration</u>
Manganese carbonate	598-62-9	90.0 - 100.0



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SECTION 4. FIRST-AID MEASURES

Description of first aid measures

- Ingestion* : Do not induce vomiting. Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Get medical attention.
- Inhalation* : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Get medical attention.
- Skin contact* : Wash affected areas with soap and water. Get medical attention if irritation develops and persists.
- Eye contact* : Flush with large amounts of water for 15 minutes. If irritation or symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed

- : Ingestion may cause irritation of the mouth, throat and stomach.
May cause respiratory irritation.
May cause damage to the nervous system through prolonged or repeated exposure.
Prolonged or repeated overexposure may cause liver, kidney and blood system effects.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically. This product is a CNS depressant.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

- Suitable extinguishing media* : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.
- Unsuitable extinguishing media* : None known.

Special hazards arising from the substance or mixture / Conditions of flammability

- : Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Explosion Data: Sensitivity to Mechanical Impact / Static Discharge:

- : Not expected to be sensitive to mechanical impact or static discharge.

Hazardous combustion products

- : Carbon oxides; Manganese oxides.

Special protective equipment and precautions for firefighters

- Protective equipment for fire-fighters* : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn.
- Special fire-fighting procedures* : Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.



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Environmental precautions : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

: Ventilate the area. Contact the proper local authorities. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Prevent further leakage or spillage if safe to do so.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
 US CERCLA Reportable quantity (RQ): None reportable.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from bases and incompatibles. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.

Conditions for safe storage

: Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. No smoking in the area.

Incompatible materials

: Acids; Oxidizing agents; Inorganic bases .

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Manganese carbonate	0.02 mg/m ³ (respirable); 0.1mg/m ³ (inhalable) (as Mn)	N/Av	5 mg/m ³ (Ceiling) (as Mn)	N/Av

Exposure controls

Ventilation and engineering measures

: If product is processed in a manner that generates dusts or fumes, provide mechanical ventilation to control airborne exposure levels.

Respiratory protection

: Respiratory protection is required if the concentrations exceed the TLV. Use a NIOSH approved dust respirator if dust levels exceed exposure limits. Seek advice from respiratory protection specialists.

Skin protection

: Wear protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye / face protection

: Chemical goggles must be worn to prevent dusts from entering the eyes.

Other protective equipment

: An eyewash station and safety shower should be made available in the immediate working area. Wear appropriate protective clothing to prevent skin contact, such as coveralls or long sleeved shirt, long pants, and shoes and socks. Other equipment may be required depending on workplace standards.

General hygiene considerations

: Avoid breathing dust and fume. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.



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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Fine, pink, light brown powder.
Odour	: Odorless.
Odour threshold	: No information available.
pH	: No information available.
Melting/Freezing point	: > 200°C (> 392°F)
Initial boiling point and boiling range	: Decomposes on heating.
Flash point	: Not combustible.
Flashpoint (Method)	: N/Ap
Evaporation rate (BuAe = 1)	: No information available.
Flammability (solid, gas)	: No information available.
Lower flammable limit (% by vol.)	: N/Ap
Upper flammable limit (% by vol.)	: N/Ap
Oxidizing properties	: None known.
Explosive properties	: Not explosive
Vapour pressure	: No information available.
Vapour density	: No information available.
Relative density / Specific gravity	: 3.125
Solubility in water	: Insoluble.
Other solubility(ies)	: No information available.
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	: No information available.
Auto-ignition temperature	: No information available.
Decomposition temperature	: No information available.
Viscosity	: No information available.
Volatiles (% by weight)	: No information available.
Volatile organic Compounds (VOC's)	: No information available.
Absolute pressure of container	: N/Ap
Flame projection length	: N/Ap
Other physical/chemical comments	: No additional information.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Not normally reactive.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Hazardous polymerization does not occur.
Conditions to avoid	: Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.
Incompatible materials	: Acids; Oxidizing agents; Inorganic bases .
Hazardous decomposition products	: None known, refer to hazardous combustion products in Section 5.



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : May be harmful if inhaled. Inhalation of dust or fumes may cause irritation of the nose, throat and upper respiratory tract. Symptoms may include coughing, choking and wheezing. Inhalation of fumes may result in metal fume fever, a flu-like illness.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : Direct skin contact may cause slight or mild, transient irritation.

Sign and symptoms eyes

- : May cause mild irritation, redness and watering.

Potential Chronic Health Effects

- : Prolonged or repeated overexposure may cause liver, kidney and blood system effects.

Mutagenicity : Not expected to be mutagenic in humans.

Carcinogenicity : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive effects & Teratogenicity

- : Not expected to have other reproductive effects.

Senitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:
Specific target organ toxicity - single exposure - Category 3.
May cause respiratory irritation.

Specific target organ toxicity - repeated exposure - Category 2.

May cause damage to the nervous system through prolonged or repeated exposure.

Chronic manganese exposures can lead to neurological problems such as apathy, drowsiness, weakness, spastic gait, paralysis, and other neurological problems resembling Parkinsonism. These symptoms can become progressive and permanent if not treated.

Irritancy : May be mildly irritating to eyes and skin.

Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.

Synergistic materials : No information available.

Toxicological data : See below for toxicological data on the substance.

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Manganese carbonate	5.34 mg/L	> 2000 mg/kg	N/Av



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Other important toxicological hazards

: See Section 3 for additional information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

See the following tables for individual ingredient ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Manganese carbonate	598-62-9	N/Av	N/Av	N/Ap

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Manganese carbonate	598-62-9	Daphnia magna (Water flea) = > 3.6 mg/L	N/Av	N/Ap

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Manganese carbonate	598-62-9	N/Av	N/Av	N/Ap

Persistence and degradability

: No data is available on the product itself.

Bioaccumulation potential

: No data is available on the product itself.

Mobility in soil

: No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Empty containers may contain hazardous residues.

Methods of Disposal

: Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

RCRA

: If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.



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SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
TDG	None.	Not regulated.	Not regulated	none	
TDG Additional information	None.				
49CFR/DOT	None.	Not regulated.	Not regulated	none	
49CFR/DOT Additional information	None.				

Special precautions for user : Appropriate advice on safety must accompany the package.

Environmental hazards : This substance does not meet the criteria for an environmentally hazardous substance according to the IMDG Code. See ECOLOGICAL INFORMATION, Section 12.

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

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

<u>Ingredients</u>	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Manganese carbonate	598-62-9	Yes	None.	NO	No	N/Ap

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (Acute) health hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

<u>Ingredients</u>	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Manganese carbonate	598-62-9	No	N/Ap	No	No	No	No	No	No



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Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

International Information:

Components listed below are present on the following International Inventory list:

<u>Ingredients</u>	<u>CAS #</u>	<u>European EINECS</u>	<u>Australia AICS</u>	<u>Philippines PICCS</u>	<u>Japan ENCS</u>	<u>Korea KECI/KECL</u>	<u>China IECSC</u>	<u>NewZealand IOC</u>
Manganese carbonate	598-62-9	209-942-9	Present	Present	(1)-156	KE-23008	Present	None.

SECTION 16. OTHER INFORMATION

Legend

- : ACGIH: American Conference of Governmental Industrial Hygienists
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CNS: Central Nervous System
- DOT: Department of Transportation
- EPA: Environmental Protection Agency
- EINECS: European Inventory of Existing Commercial chemical Substances
- IARC: International Agency for Research on Cancer
- IBC: Intermediate Bulk Container
- Inh: Inhalation
- IMDG: International Maritime Dangerous Goods
- LC: Lethal Concentration
- LD: Lethal Dose
- N/Ap: Not Applicable
- N/Av: Not Available
- NIOSH: National Institute of Occupational Safety and Health
- NTP: National Toxicology Program
- OSHA: Occupational Safety and Health Administration
- PEL: Permissible exposure limit
- RTECS: Registry of Toxic Effects of Chemical Substances
- RCRA: Resource Conservation and Recovery Act
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System

References

- : 1. ACGIH, Threshold Limit Values for Chemical Substances and Physical Agents & Biological Exposure Indices for 2013.
- 2. International Agency for Research on Cancer Monographs, searched 2013.
- 3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2013 (Chempendium, HSDB and RTECs).
- 4. Material Safety Data Sheets from manufacturer.
- 5. US EPA Title III List of Lists - October 2012 version.
- 6. California Proposition 65 List - April 19, 2013 version.



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Other special considerations for handling

: Provide adequate information, instruction and training for operators.

<p>Prepared for: World Metal, L.L.C 10701 Corporate Drive Suite 184 Stafford, TX, USA 77477 Phone: 281-491-7474 Direct all inquiries to World Metal L.L.C</p>	
<p>Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

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