

FOR CHEMICAL EMERGENCY, SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CALL DAY OR NIGHT 1-800-561-8273 or  
CHEMTREC 1-800-424-9300

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### DISTRIBUTED BY:

LOVELAND PRODUCTS CANADA, INC.  
789 Donnybrook Drive • Dorchester, Ontario N0L 1G5

24-Hour Emergency Phone: 1-800-561-8273  
Additional Emergency Phone (Canutec): 1-613-996-6666 (Collect)

**CHEMICAL IDENTITY:** Mancozeb; a coordination product of zinc ion and manganese ethylene bisdithiocarbamate\*

**PRODUCT USE:** Group M Fungicide

**PCP REG. NO.:** 24734.01

**MSDS Number:** 24734.01-12-LPI

**MSDS Revisions:** Sections 1, 4

**Date of Issue:** 09/13/12

**Supersedes:** 10/20/09

## 2. COMPOSITION, INFORMATION ON INGREDIENTS

<u>Chemical Ingredients:</u>	<u>Percentage by Weight:</u>	<u>CAS No.</u>	<u>TLV (Units)</u>
Mancozeb	16.00	8018-01-7	not listed
(Manganese equivalent)	3.20		
(Zinc equivalent)	0.40		
(ethylene bisdithiocarbamate equivalent)	12.40		
Inert Ingredients	84.00		

## 3. HAZARDS IDENTIFICATION SUMMARY

**KEEP OUT OF REACH OF CHILDREN – WARNING** – May be harmful if swallowed or inhaled. May cause irritation of eyes, nose, throat and skin. Avoid inhalation of dust. Avoid contact with eyes, skin, or clothing. Remove contaminated clothing and wash before reuse.

This product is off-white to light brown powder with virtually no odour.

## 4. FIRST AID MEASURES

**If on skin:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**If swallowed:** Call a poison control centre or doctor immediately for treatment advice. Have a person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control centre or doctor. Do not give anything by mouth to an unconscious person.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL: 1-800-561-8273. Have the product container, label or product name and Pest control Product Registration Number with you when seeking medical attention.

## 5. FIRE FIGHTING MEASURES

**FLASH POINT (°F/Test Method):** Not applicable

**FLAMMABLE LIMITS (LFL & UFL):** Not applicable

**EXTINGUISHING MEDIA:** Considered non-combustible, use medium appropriate to surrounding fire. Dry chemical, carbon dioxide, foam, water spray or fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Oxides of sulfur, oxides of nitrogen, hydrogen sulfide, carbon disulfide, and other unknown hazardous material may be formed in a fire situation.

**SPECIAL FIRE FIGHTING PROCEDURES:** If water is used to fight fire or cool containers, contain run-off by diking to prevent contamination of water supplies. Avoid breathing smoke. Wear self-contained breathing apparatus and full protective gear.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Dusts may form explosive mixtures with air; avoid using heavy water streams.

## 6. ACCIDENTAL RELEASE MEASURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

Avoid breathing dusts. Cover with an absorbent such as pet litter and sweep up dry spills and transfer to approved chemical containers. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Flush the area with water to remove any residue. Check local, state and federal regulations for proper disposal.

**CAUTION:** Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

**7. HANDLING AND STORAGE**

**HANDLING:** Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**STORAGE:** Store in a safe manner. Store in original container only. Store in a cool, dry place. Never allow this product to become wet during storage. Moisture may lead to chemical changes that reduce fungicidal activity and create vapors, which may be flammable. Do not contaminate water, food or feed by handling and storage or disposal. Keep away from fire or sparks.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Not normally required.

**RESPIRATORY PROTECTION:** Not normally required. If vapours or dusts exceed acceptable levels, wear a NIOSH approved pesticide respirator.

**EYE PROTECTION:** Chemical goggles or shielded safety glasses.

**SKIN PROTECTION:** Wear protective clothing: long-sleeved shirts and pants, shoes plus socks. Wear rubber or chemical-resistant gloves.

	<b>OSHA PEL 8 hr TWA</b>	<b>ACGIH TLV-TWA</b>
Particulates (PNOC**)	15 mg/m <sup>3</sup> (total dust)	Not Established

**Personal Protective Equipment: Applicators and other handlers (other than mixers and loaders) must wear:** coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material and shoes plus socks, and protective eyewear. **Mixers and loaders must wear:** coveralls over long-sleeved shirt and long pants, chemical resistant gloves made of any waterproof material, shoes plus socks, protective eyewear and chemical-resistant apron when mixing or loading. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be reused until it has been cleaned.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>APPEARANCE AND ODOR:</b> Off-white to light brown powder with virtually no odour	<b>SOLUBILITY:</b> Insoluble
<b>SPECIFIC GRAVITY (Water = 1):</b> 0.48-0.64 g/ml	<b>pH:</b> Not applicable
<b>VAPOR PRESSURE:</b> Not applicable	<b>BULK DENSITY:</b> 480 -640 kg/m <sup>3</sup>
<b>PERCENT VOLATILE (by volume):</b> Not applicable	<b>BOILING POINT:</b> Not applicable
<b>Note:</b> These physical data are typical values based on material tested but may vary from sample to sample.	<b>EVAPORATION RATE:</b> Not applicable
Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.	

**10. STABILITY AND REACTIVITY**

**STABILITY:** Stable

**CONDITIONS TO AVOID:** None known.

**INCOMPATIBILITY:** Acids.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of sulfur, oxides of nitrogen, hydrogen sulfide, carbon disulfide, and other unknown hazardous material may be formed in a fire situation.

**HAZARDOUS POLYMERIZATION:** Will not occur.

**11. TOXICOLOGICAL INFORMATION**

<b>Acute Oral LD<sub>50</sub> (rat):</b> 4500 mg/kg	<b>Acute Dermal LD<sub>50</sub> (rabbit):</b> >5000 mg/kg
<b>Eye Irritation (rabbit):</b> Causes substantial but temporary eye injury.	<b>Skin Irritation (rabbit):</b> Causes mild irritation
<b>Inhalation LC<sub>50</sub> (rat):</b> > 5.14 mg/L	<b>Skin Sensitization (guinea pig):</b> Not established.
<b>Carcinogenic Potential:</b> None listed in OSHA, NTP, IARC or ACGIH	

**12. ECOLOGICAL INFORMATION**

This product is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Cover or incorporate spilled treated seed. Do not contaminate water by disposing of equipment wash waters.

**13. DISPOSAL CONSIDERATIONS**

Do not reuse empty bag. Completely empty bag into application equipment. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the container unsuitable for further use. Dispose of the container in accordance with provincial requirements. For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of spill, and for clean-up of spills. Do not contaminate water, food or feed by storage or disposal.

**14. TRANSPORT INFORMATION**

**DOT Shipping Description:** NOT REGULATED BY USDOT.

**U.S. Surface Freight Classification:** INSECTICIDES OR FUNGICIDES, INSECT OR ANIMAL REPELLENTS; NOI; OTHER THAN POISON (NMFC 102120; CLASS: 60)

**15. REGULATORY INFORMATION**

<b>NFPA &amp; HMIS Hazard Ratings:</b>	NFPA		HMIS
	1 Health	0 Least	1 Health
	1 Flammability	1 Slight	1 Flammability
	0 Instability	2 Moderate	0 Reactivity
		3 High	F PPE
		4 Severe	

**SARA Title III Hazard Category:** Immediate Y Fire N Sudden Release of Pressure N  
 Delayed Y Reactive N

**Reportable Quantity (RQ) under U.S. CERCLA:** Not listed  
**SARA, Title III, Section 313:** Manganese Compounds 16%  
**RCRA Waste Code:** Not listed  
**CA Proposition 65:** Not listed

**16. OTHER INFORMATION**

**MSDS STATUS:** Sections 1 and 4 revised

**PREPARED BY:** Registrations and Regulatory Affairs

**REVIEWED BY:** Environmental Health and Safety

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