

Material Safety Data Sheet  
May be used to comply with  
OSHA's Hazard Communication Standard,  
29 CFR 1910.1200. Standard must be consulted  
for specific requirements.

U.S Department of Labor  
Occupational Safety and Health Administration  
(Non-Mandatory Form)  
Form Approved  
OMB No. 1218-0072

IDENTITY (As Used on Label and List)  
**Bonide Mancozeb Flowable w/ Zinc Concentrate**

**ID No. 627193964**  
Date: July 22, 2008

## Section I

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Bonide Products, Inc.	(800) 424-9300
6301 Sutliff Road	(315) 736-8231
Oriskany, NY 13424	

## Section II - Hazardous Ingredients/Identity

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Hazardous Components (Specific Chemical Identity: Common Name(s)	OSHA PEL	ACGIH TLV	Other Limits	% (Optional)
Mancozeb CAS #0081018-01-7				37%
A coordination product of zinc ion and manganese Ethylene bisdithiocarbamate				
In which the ingredients are:				
Manganese		7.4%		
Zinc		.9%		
Ethylene bisdithiocarbamate ion		28.7%		
Balance Total including:				63%
Calcium Lignosulfonate CAS #008061-52-7				
Ethylene Thiourea CAS #000096-45-7				
Hexamethylene Tetramine CAS# 000100-97-0				

## Section III -EMERGENCY AND FIRST AID PROCEDURES:

**EYES:** May cause eye irritation. Flush eyes thoroughly with water for 15 minutes. If irritation persists seek medical attention.

**SKIN:** Remove contaminated clothing and wash skin thoroughly with soap and plenty of water. If irritation develops, get medical attention. Prolonged skin contact is unlikely to result in absorption of harmful amount.

**INHALATION:** Move subject to fresh air, if affects persist seek medical attention. May cause irritation to respiratory tract.

**INGESTION:** Have person sip glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Never give anything by mouth to an unconscious person. Call a poison control center or doctor immediately for treatment advice.

**NOTE TO PHYSICIAN:** No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

## Section IV - Fire and Explosion Data

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**FLASHPOINT:** Not Combustible      **LEL:** ND      **UEL:** ND

**EXTINGUISHING MEDIA:** Water spray, Water fog, Dry Chemical, CO2

**FIRE FIGHTING INSTRUCTIONS:** Wear approved self-contained breathing equipment. Remain upwind. Avoid breathing smoke.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Contain run-off. Dried product can burn. Pesticide particulates can become airborne. Combustion generates toxic fumes of the following: Hydrogen sulfide, carbon disulfide, sulfur oxides, nitrogen oxides and carbon oxides.

## Section V- ACCIDENTAL RELEASE MEASURES

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**SPILL OR LEAK PROCEDURES:** Absorb small spills with inert material such as sand, earth, Zorbal. Transfer liquids and solids diking material to separate suitable containers for recovery or disposal.

## Section VI - Precautions for Safe Handling/Use

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**HANDLING:** Do not handle material near food, feed or drinking water. Always practice good hygiene when handling this or any chemical. Provide general or local exhaust ventilation to control airborne levels below the exposure guidelines. Keep out of reach of children. Wash thoroughly before eating, drinking or smoking.

## Section VII- Exposure Controls & Personal Protection

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PROTECTIVE GLOVES: Impervious gloves. EYE PROTECTION: Safety glasses or goggles.  
 OTHER PROTECTION EQUIPMENT: Wear washable work clothes to be wash before reuse.  
 STORAGE: Do not store this material near food, feed or drinking water. Store in a well-ventilated area. Keep container tightly closed when not in use. Keep from freezing; material stability may be affected. The maximum recommended storage temperature for this material is 120° F.  
 THRESHOLD LIMIT VALUE OR LD50LC50: 1 mg/M3 for Ethylene bis dithiocarbamate

## Section VIII - Physical/Chemical Ingredients

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APPEARANCE AND ODOR: Yellowish, thick liquid	ODOR: Sulfur like
BOILING POINT: 212° F	MELTING POINT: 32° F
SPECIFIC GRAVITY: 1.3 to 1.4	pH 5 to 7
SOLUBILITY IN WATER: Dispersible	VISCOSITY: 200 to 1000 CPS
EVAPORATION RATE: <1 water	

## Section IX - Reactivity Data

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STABILITY: Stable under normal conditions  
 CONDITIONS TO AVOID: Avoid temperatures above 120 F.  
 INCOMPATIBILITY: Avoid contact with oxidizing agents and acids.  
 HAZARDOUS POLYMERIZATION: Not known to occur.

## Section X - Environmental and Disposal Information

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WASTE DISPOSAL METHOD: So not contaminate food, feed, or water by storage or disposal. Wastes are toxic. Improper disposal of excess waste , spray mixture or rinsate is a violation federal; law. Dispose of waste in an approved chemical disposal site.

### DOT Information:

For non bulk road and air shipments: This material is not regulated.

For bulk road and vessel shipments:

ENVIRONMENTALLY HAZRDOUS SUBSTANCES, LIQUID, N.O.S. (MANCOZEB)  
 9 UN3082 PGIII / MARINE POLLUTANT (MANCOZEB)

**KEEP OUT OF REACH OF CHILDREN**

### ABBREVIATION KEY

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N/A: NOT AVAILABLE OR APPLICABLE	N/E: NOT ESTABLISHED
TLV: THRESHOLD LIMIT VALUE	TWA: TIME WEIGHTED AVG./8 HOUR WORKDAY
STEL: SHORT TERM EXPOSURE LIMIT	D.O.T.: DEPARTMENT OF TRANSPORTATION

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