



3055 W. M-21 *P.O. Box 150
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AGRO-CULTURE LIQUID FERTILIZERS

MATERIAL SAFETY DATA SHEET

A. GENERAL INFORMATION

Trade name: Manganese

Chemical Name: 4% MN-Manganese

Address: C.O.G. Marketers, LTD.
3055 W. M-21
St. Johns, MI 48879

Contact: Production Manager

Phone: (989) 224-4117 or 1-800-678-9029
After Business Hours - (989) 224-2562

Revised Date: January 1, 2009

B. FIRST AID

Eye Contact: Flush eyes immediately and thoroughly with water for at least 15 minutes. If irritation persists, get medical attention.

Skin Contact: Flush skin immediately and thoroughly with water. If irritation persists, get medical attention.

Inhalation: Generally not considered an inhalation hazard.

Ingestion: If conscious, immediately give large quantities of water and induce vomiting. Consult a physician.

C. HAZARDS INFORMATION - HEALTH

Inhalation: If misty condition prevails, may irritate.

Ingestion: Large doses of ammonium salts may give diarrhea or diuresis. Low oral toxicity.

Skin: Low skin irritation potential. (pH 7.0 to 7.2)

Eyes: Low eye irritation potential. (pH 7.0 to 7.2)

Unusual fire and explosion hazards:
None

D. PRECAUTIONS-PROCEDURES

Fire extinguishing agents recommended:

All standard agents are acceptable.

Special fire fighting precautions:

Due to possible evolution of ammonia, wear self contained breathing apparatus approved by Niosh. Use water spray to keep containers cool.

Ventilation: Unless heated to evolve ammonia or misted by heat, agitation, or spraying, natural ventilation should be adequate.

Normal Handling: Avoid breathing mist, if any should be formed. Minimize contact of liquid with eye, skin, and clothing. Use good personal hygiene and housekeeping.

Storage: Avoid using containers, pipes and fittings made of aluminum, mild steel, zinc-clad or copper bearing alloys.

Spill or Leak: Contain spills and maximize recovery. Mop up or pump up promptly into metal or plastic drum. (Caution should be exercised in the area of spilled material since Manganese can cause a slippery condition.)

E. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Respirators are not required under normal ventilated conditions.

Eyes and Face: Safety glasses are recommended.

Hands, Arms, & Body: Rubber coated gloves and clothing which minimize skin exposure are recommended if there is prolonged or repeated exposure of skin to liquid.

F. PHYSICAL DATA

Material is: Liquid (at normal conditions.)

Appearance & Odor: Light odorless liquid.

Specific Gravity: 1.250

pH: 7.0 - 7.2

G. ENVIRONMENTAL

EPA Hazardous substance: NO