

ACTAGRO

MATERIAL SAFETY DATA SHEET

EMERGENCY NUMBERS: (559) 843-2700 FIRE HAZARDS: *

Manufacturer: (559) 843-2700 Health Risk: 0
Company Resp: (559) 843-2700 Flammability: 0
MSDS Preparation Date February 12, 1999 Reactivity:
0

2=Moderate 1=Slight 0=Insignificant *NFPA - Scale: 5= N/A 4=Extreme 3=High

SECTION I - IDENTITY

Synonyms & Trade Names (Family): Manganese Ammonium Sodium Citrate Sulfate Solution
Cas No. Not assigned/mixture

Formula: 4.0% Manganese EPA No.
N/A
Hazard Class: Non-Hazardous NIOSH No. N/A
Manufacturer: Actagro LLC DOT/UN/NA No. N/A
Address: 4516 N. Howard Ave Kerman, Ca 93630

SECTION II - HAZARDOUS INGREDIENTS

Ingredient Name:	CAS#	Contents	OSHA	TWA
ACGIH TLV-TWA				
Leonardite Extract	None			
Manganese Ammonium Citrate	None			
Manganese Citrate	None			
Sodium Sulfate	None			

SECTION III - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point (F/760 mmHg): N/A Specific Gravity:
1.295
Vapor Pressure (mmHg): N/A Melting Point (F): N/A
Vapor Density (air=1): N/A Evaporation Rate (buAc=1) N/A
Percent Volatile by Volume: N/A Viscosity:
N/A
Ph Value: 8.5
Solubility Value (g/100g/H₂O, 68°F): Unknown Concentration (%/MOL) N/A
Solubility: Soluble in water.
Appearance: Liquid
Color: Black
Odor: Slight Ammonia

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (F): N/A Auto Ignition Temp (F):
N/A
F P Method N/A Explosion Limits:
Lower %: N/A
Upper%: N/A
NFPA Flammability Rating: Will not burn.
OSHA Flammability Class: N/A
Extinguishing Media: No specific method noted.
Special Fire Fighting Procedures: No specific fire fighting procedures noted.
Evacuation Procedures: No specific evacuation procedure noted, but evacuation of personnel may still be required in an emergency situation.
NIOSH Respirator Recommendation: No specific recommendation made, but respiratory protection may still be required under exceptional circumstances when excessive air contamination exists.
Unusual Fire and Explosion Hazards: No unusual fire and explosion hazard noted.

SECTION V - REACTIVITY DATA AND PHYSICAL HAZARDS

Stability: Normally stable.
Conditions to Avoid: N/A
Reactivity Index: Unknown
Hazardous Decomposition or Byproducts: None
Hazardous Polymerization: Will not polymerize.

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MSDS-

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Conditions to Avoid: None
Water Reactive: N/A
Air Reactive: No
Incompatible Specific Chemicals: None
Incompatible Classes of Chemicals: None

SECTION VI - HEALTH HAZARD INFORMATION

Routes of Entry: Skin absorption; ingestion.
Target organs: No specific target organs.
Toxic Dose (LD 50): N/A
Toxicity Index: Non-toxic.
Permissible Exposure Limits:
OSHA PEL: No standard. Carcinogenicity:
ACGIH TWA: No standard
ACGIH STEL: No standard NIP: No
NIOSH PEL: No standard IARC?: No
NIOSH IDLH: No standard OSHA?: No

Toxicological Information:

Health Warnings: This chemical may cause skin irritation.
Acute and Chronic Health Hazards: No specific acute or chronic health impact noted.
Signs and Symptoms of Exposure: No specific symptoms, but this chemical may still have
adverse health impact, either in

general, or on certain individuals.

Medical Conditions Generally

Aggravated by Exposure: None.

Emergency & First Aid Procedures:

Avoid contact with skin, eyes, or clothing.
In case of contact, immediately flush skin, eyes, or
clothing with plenty of water for at least 15 minutes.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material
is released or spilled: Stop leak if possible. Confine the spill. Do not
allow run-off to sewer systems. Try to reclaim the
material, then flush the area with water.

Waste Disposal: Recover and reclaim, or recycle the material.

Precautions to be taken in handling
and storing: None.

Other precautions: None

SECTION VIII - PROTECTION AND CONTROL MEASURES

Respiratory Protection: Not required.

Protective Gloves: No specific hand protection noted, but gloves may still be
advisable. For prolonged or repeated skin contact, use
suitable protective gloves.

Eye Protection: Wear chemical safety goggles where eye exposure is
reasonably probable.

Other Protective Clothing or Equipment: Wear appropriate clothing to prevent
repeated or prolonged skin contact.

Hygienic Work Practices: No specific hygiene procedures, but good personal hygiene
practices are always advisable, especially when working
with chemicals.

Ventilation Requirements: None.

SECTION IX - ADDITIONAL INFORMATION

NOTE: Use with caution and according to specifications on manufacturer's label.
MSDS may not fully reflect manufacturer's recommendations. Containers will contain
residues of the product. Do not re-use containers for any

purpose other than storing or mixing of fertilizers. The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.

END OF MSDS