

MATERIAL SAFETY DATA SHEET

Manganese Chelate 5%

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company : Growth Products, Ltd.
P.O. Box 1252
White Plains, NY 10602
Phone Number: 800-648-7626
Chemical Name / Common Name: Liquid Micronutrient Solution (Glucoheptonate)

Section 2 – HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS: None. This product does not require labeling.

Section 3 – PHYSICAL DATA

Physical State:	Amber/Brown Liquid	Evaporation Rate:	Same as Water
Color:	Dark Brown	Boiling Point:	215 Degrees F
Odor:	Slightly Sweet Rusty Odor	Freezing Point:	<0 Degrees F
Weight Per Gallon:	10.42# @ 21 Degrees C	Viscosity:	5 – 10 cps @ 21 Degrees C
Storage Life at 70F:	2 years	Flash Point/Method:	Noncombustible
pH – 21C:	7 - 8	Vapor Pressure:	N/A
Solubility:	Infinitely Miscible		

Section 4 – FIRE AND EXPLOSION HAZARD

Explosion Properties:	Noncombustible
Flammable Limit:	LEL: N/A UEL: N/A
Extinguishing Media:	Does Not Burn
Special Fire Fighting Procedures:	None
Unusual Fire and Explosion Hazards:	None

Section 5 – HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE ACUTE (SHORT TERM EXPOSURE):

Liquid contact may cause slight eye irritation and repeated skin exposure may cause some skin irritation

CHRONIC (LONG TERM EXPOSURE):

None known

Section 6 – EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Not expected to be harmful under normal conditions of use, however if allowed to become airborne, may cause irritation of nose, throat and lungs

EYE CONTACT: May cause irritation on prolonged or repeated contact

SKIN CONTACT: May cause irritation on prolonged or repeated contact

Section 7: TOXICITY INFORMATION

ACUTE TOXICITY (LETHAL DOSES)

DERMAL LD₅₀: N/E

ORAL LD₅₀: N/E

ACUTE TOXICITY (IRRITATION, SENSITIZATION)

EFFECTS TO EYES: No corneal or iridal effects were noted at a dose of 0.1 ml for rabbits
EFFECTS TO INGESTION: Non toxic or pathogenic
EFFECTS TO SKIN: Moderate irritation, reversible within 7 days
CARCINOGENICITY DATE: N/A

Section 8: REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: N/A
HAZARDOUS DECOMPOSITION PRODUCTS OF DRY MATERIAL: CO, CO₂, NH₃, Aldehydes (including Formaldehyde), particulate matter and other organic compound.
HAZARDOUS POLMERIZATION: Will not occur

Section 9: SPECIAL PROTECTION INFORMATION

PROTECTIVE GLOVES: Gloves
EYE PROTECTION: Use goggles if contact is likely.
OTHER PROTECTION: N/A
RESPIRATORY PROTECTION OR REQUIRED VENTILATION:
Not normally needed. Where air contaminants can exceed acceptable criteria use NIOSH/MSHA approved respiratory protection equipment.

Section 10 – SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Prevent product from entering drinking water supplies. Collect liquid or solidify with absorbent material and package for disposal according to local, state, and federal regulations.
WASTE DISPOSAL PRECEDURES:
This product is likely to have a pH less than 8.5 and would not be considered a federal hazardous waste according to EPA regulation 40CFR 261. Dispose in accordance with state and local regulation.
REPORTABLE QUANTITY UNDER CERCLA: N/A

Section 11 – STORAGE AND HANDLING INFORMATION

STORAGE TEMPERATURE:
MAX 100° F MIN 32° F INDOOR ✓ OUTDOOR ✗ REFRIG. ✗

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Not harmed by freezing. Thaw frozen fertilizer slowly and stir before using. Store in a cool place. Rotate stock in storage to use oldest first.

OTHER PRECAUTIONS:
Read entire label before using

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ABBREVIATIONS: N/E – NOT ESTABLISHED N/A – NOT APPLICABLE