



13. DISPOSAL CONSIDERATIONS					
WASTE RESIDUE AND CONTAMINATED PACKAGING DISPOSAL	Triple rinse container, add rinsate to spray tank. Refer to manufacturer or supplier for information on container recovery or recycling. Dispose of packaging in a manner consistent with federal, state and local regulations.				
14. TRANSPORTATION INFORMATION					
US DOT TRANSPORT HAZARD CLASS	Not regulated.	LABELS & PLACARDS REQUIRED	None		
UN NUMBER	Not Available				
PACKING GROUP	Not Applicable				
MARINE POLLUTANT	Prevent spill from entering sewage or drainage systems and bodies of water. See section 12.				
15. REGULATORY INFORMATION					
CA PROP. 65	This product does not contain any chemicals known to state of California to cause cancer and birth defects or other reproductive harm.				
TSCA / CAA / CWA / CERCLA	Under U.S. CERCLA not listed.				
SARA TITLE III	This product contains the following toxic chemical material(s) with known CAS numbers subject to reporting requirements established by SARA Title III				
	SARA Section 311/312 Hazard Categories		SARA Section 313, Component		SARA Section 302, section 304
	Pressure	No	CAS#	302 EHS TPQ	304 EHS RQ
	Reactivity:	No	Proprietary	Not Listed	Not Listed
	Immediate (Acute):	Yes			
	Delayed (Chronic):	No			
INTERNATIONAL REGULATIONS	CANADA: WHMIS Not Available.				
	DSL/NDL: Not Listed				
16. OTHER INFORMATION					
ISSUE DATE	November 24, 2015	Revised: 11/24/2015			
SUPERCEDES	All previous versions				
	The information contained herein is accurate to the best of our knowledge. Bio-Gro, Inc. makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Chemical additions, processing, or otherwise altering this material may make information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. All Rights Reserved.				

BioGro, Inc.		SAFETY DATA SHEET		NUE Manganese 5%	
1. IDENTIFICATION					
MANUFACTURER/ OR SUPPLIER'S NAME Bio-Gro, Inc.			TELEPHONE NO./ AFTER HOURS EMERGENCY (509) 894-4110 / (800) 738-7457		
MAILING ADDRESS 5232 Outlet Drive / Pasco WA 99301			MANUFACTURING ADDRESS 681 Glade Rd / Mabton WA 98935		
PRODUCT NAME NUE Manganese 5%			WEBSITE www.BioGro.com		
CHEMICAL FAMILY , SYNONYMS AND TRADE NAMES Chelated Manganese Solution			RECOMMENDED USE OR RESTRICTIONS OF THE CHEMICAL Agricultural Mineral/Fertilizer		
2. HAZARD(S) IDENTIFICATION					
SIGNAL WORD WARNING	HAZARD STATEMENT H315: Cause skin irritation. H319: Causes serious eye irritation.		PRECAUTION STATEMENT Wear protective gloves/protective clothing/eye protection. Do not handle until all safety precautions have been read and understood. Do not taste or swallow.		
SYMBOL(S) 					
3. MIXTURE COMPOSITION / INFORMATION ON INGREDIENTS					
COMPONENT	CAS NUMBER	BY WEIGHT	HAZARD DATA		
Proprietary solution containing Iron derived from a chelated manganese solution. Guaranteed analysis 4-0-0 Manganese 5%	Proprietary	100%	See Section 2		
4. FIRST-AID MEASURES					
EYE CONTACT	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Seek medical attention if irritation persists.				
SKIN CONTACT	Wash with soap and plenty of water. Wash contaminated clothing before reuse. If skin irritation occurs: get medical advice.				
INHALATION	Remove person to fresh air and keep comfortable for breathing. Seek medical attention. If not breathing, give artificial respiration if trained to do so.				
INGESTION	Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell.				

5. FIRE-FIGHTING MEASURES	
EXTINGUISHING MEDIA	Use extinguishing media suitable for surrounding materials to extinguish fire.
HAZARDOUS PRODUCTS OF COMBUSTION	Product may emit toxic fumes under fire conditions
FIRE FIGHTING PRECAUTIONS	The use of self-contained breathing apparatus (SCBA) and full protective clothing is recommended for fire-fighters for chemical fires. Dike and collect water used to fight fire for later treatment and disposal.

6. ACCIDENTAL RELEASE MEASURES	
PERSONAL PRE-CAUTION	Observe personal protective equipment in Section 8. Keep unnecessary and unprotected personnel from entering.
CONTAINMENT AND CLEANUP	Contain spill with dry earth or sand. Collect spillage and place material in a suitable container for disposal. See Section 13. Do not flush into local waterways, drains, or potable water source.
ENVIRONMENTAL PRECAUTIONS	It should only be used as part of an overall agricultural mineral program that is based on recommendations from soil and tissue analysis.

7. HANDLING AND STORAGE	
HANDLING	Wear personal protective equipment (PPE section 8). Do not taste or swallow. Avoid contact with skin. Avoid contact with eyes. Do not eat, drink or smoke when using. Wash thoroughly with soap and water after handling. Wash PPE after use with this product.
STORAGE	Store in original packaging. Keep upright. Store out of direct sunlight in a well ventilated area. Do not over-heat. Do not store below freezing. Store away from incompatible materials (see section 10). Maintain air gap. Keep away from children, feed and food products.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION	
ENGINEERING CONTROLS	Facilities storing or utilizing this material should be equipped with an eyewash station and a safety shower. Practice good industrial hygiene and safety standards. Do not eat, drink or smoke in work areas. Use in accordance with the agricultural worker protection standard, CFR Part 170. Do not apply this product in a way that will contaminate workers or other persons.
EYE/FACE PROTECTION	Wear appropriate protective eyeglasses with side-shield or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
SKIN PROTECTION	Avoid skin contact by wearing chemical resistant gloves, long sleeves and long pants, coveralls, socks, and boots. Wear appropriate clothing to prevent skin exposure. The type of protective equipment used should be equivalent to the concentration of the hazardous material. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Wash and dry hands.
RESPIRATORY PROTECTION	Wear respiratory protection during operations where spraying or misting occurs. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Pinkish Liquid	ODOR	No Odor
SPECIFIC GRAVITY (H ₂ O=1)	1.25 Kg/l at 68° F	GALLON WEIGHT	9.9 lbs / gal
pH	3.5-4.0	ODOR THRESHOLD	Not Available
FREEZING POINT	Not Available	EVAPORATION RATE	Not Available
FLASHPOINT	Not Available	VAPOR PRESSURE	Not Available
AUTO-IGNITION TEMP	Not Available	VAPOR DENSITY (AIR = 1)	Not Available
BOILING POINT, 760 MM HG	100°C (212°F)	SOLUBILITY	Not Available
MELTING POINT	Not Available	% VOLATILE	Not Available
FLAMMABILITY LIMITS	Not Available	OCTANOL/WATER PARTITION COEFFICIENT	Not Available

Note: These physical data are typical values of material tested and not intended to be a guaranteed analysis of specification of any specific lot.

10. STABILITY AND REACTIVITY

INCOMPATIBLE MATERIALS / STABILITY	Stability: Stable under recommended transport and storage conditions. Incompatibility: None Materials to Avoid: Not Available.
HAZARDOUS REACTIONS / DECOMPOSITION PRODUCTS	No hazardous reactions known to occur under normal use conditions. No hazardous decomposition products are known to occur.

CONDITIONS TO AVOID	Unknown. See section 7 for storage information.
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11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY VALUES	Acute Oral LD50 (Rat): No Data Available Acute Dermal LD50 (Rabbit): No Data Available Acute Inhalation LC50 (Rat): No Data Available
ROUTES OF EXPOSURE	Skin and eye contact, inhalation, ingestion.
SIGNS AND SYMPTOMS OF OVEREXPOSURE	Short term effects: No Data Available Long term effects: No Data Available
CHRONIC EFFECTS CARCINOGENICITY	Not considered a carcinogen by IARC, NTP, or OSHA.
SPECIFIC TARGET ORGAN TOXICITY	Reproductive/developmental toxicity: No Data Available

12. ECOLOGICAL INFORMATION

ECOTOXICITY	No data available	MOBILITY IN SOIL	No data available
PERSTISTANCE & DEGRADABILITY	No data available	BIOACCUMULATIVE POTENTIAL	No data available