



13. DISPOSAL CONSIDERATIONS						
WASTE RESIDUE AND CONTAMINATED PACKAGING DISPOSAL	Triple rinse container, add rinsate to spray tank. Do not rinse down drain. 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 dangerous goods.	LABELS & PLACARDS REQUIRED	None			
UN NUMBER	Not Available.					
PACKING GROUP	Not Available.					
MARINE POLLUTANT	Not Available.					
15. REGULATORY INFORMATION						
CA PROP. 65	WARNING. This product contains a chemical known to State of California to cause cancer and birth defects or other reproductive harm.					
TSCA / CAA / CWA / CERCLA	Mixture Component Reportable Quantity (RQ): Not Available.					
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, SARA Section 302, SARA section 304			
	Pressure	No	313 Mixture Component	CAS#	313 RQ	302/304 EHS RQ
	Reactivity:	No	Nickel Compounds	N495	Y	
	Immediate (Acute):	Yes	Nitrate Compounds	N511	Y	
	Delayed (Chronic):	Yes				
INTERNATIONAL REGULATIONS	CANADA: WHMIS: Not Available.					
	DSL/NDSL: This mixture is not on any list.					
16. OTHER INFORMATION						
ISSUE DATE December 1, 2015		Revised: 12-1-15				
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 Nickel 3%			
1. IDENTIFICATION			
MANUFACTURER/ OR SUPPLIER'S NAME Bio-Gro, Inc.		TELEPHONE NO./ AFTER HOURS EMERGENCY (509) 894-4110 / (800) 738-7457	
MAILING ADDRESS PO Box 326 Mabton WA 98935		MANUFACTURING ADDRESS 681 Glade Rd / Mabton WA 98935	
PRODUCT NAME NUE Nickel 3%		WEBSITE www.BioGro.com	
CHEMICAL FAMILY, SYNONYMS AND TRADE NAMES Chelated Nickel Solution, Nickel Nitrate Solution		RECOMMENDED USE OR RESTRICTIONS OF THE CHEMICAL Agricultural Micronutrient Fertilizer	
2. HAZARD(S) IDENTIFICATION			
SIGNAL WORD WARNING	HAZARD STATEMENT H302: Harmful if swallowed H360: May damage fertility or the unborn child. H350: May cause cancer. H317: May cause an allergic skin reaction.	PRECAUTION STATEMENT Do not handle until all safety precautions have been read and understood. Avoid breathing dust/gas/fumes/mist/vapor/spray. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection. Wash skin thoroughly after handling.	
SYMBOL(S) 			
3. MIXTURE COMPOSITION / INFORMATION ON INGREDIENTS			
CHEMICAL NAME	CAS NUMBER	BY WEIGHT	INGREDIENT HAZARD DATA
Proprietary mixture of Nickel Nitrate and Glycine Solution. Guaranteed Analysis: Nitrogen 5%, Nickel 3%	Proprietary	100%	DANGER. Harmful if swallowed. Causes irritation to Eyes, Skin, and respiratory tract. Causes damage to organs (thyroid, lungs, heart, kidneys) through prolonged or repeated exposure. Suspected of causing genetic defects. Suspected of causing cancer. May damage fertility or the unborn child.
*Percentage based on protected production formula and is not a guaranteed analysis.			
4. FIRST-AID MEASURES			
EYE CONTACT	Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Get medical attention if eye irritation persists.		
SKIN CONTACT	Wash with plenty of soap and water. Wash contaminated clothing before reuse. IF skin irritation or rash 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	Call a POISON CENTER for advice to induce vomiting. Do not eat, drink or smoke when using this product. Rinse mouth. Never give anything by mouth to an unconscious person.		

5. FIRE-FIGHTING MEASURES	
EXTINGUISHING MEDIA	Use extinguishing media suitable for surrounding materials to extinguish fire. Use foam, dry chemical, carbon dioxide or water spray if suitable for surrounding materials.
HAZARDOUS PRODUCTS OF COMBUSTION	Non-Flammable. Non-explosive. Hazardous products of combustion could include nitrogen oxides.
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 PRECAUTION	Observe personal protective equipment in Section 8. Keep unnecessary and unprotected personnel from entering. Avoid breathing vapors, mists or gas. Avoid contact with the spilled material.
CONTAINMENT AND CLEANUP	Contain spill with dry earth, sand or suitable material. 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	Avoid discharge to the environment. Do not apply when weather conditions favor drift from target areas.

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	Keep only in original container. Keep container tightly closed. Store out of direct sunlight in a well ventilated area. Do not overheat. Do not store below freezing. Store away from incompatible materials (see section 10). Maintain air gap. Keep locked up and 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	Clear Green Liquid	ODOR	Slightly Acid/Mineral
SPECIFIC GRAVITY (H ₂ O=1)	1.174 Kg/l at 68° F	GALLON WEIGHT	9.8 lbs / gal
pH	3.2 – 3.7	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	Not Available	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 normal transport and storage conditions. Incompatible Materials: (for Potassium Hydroxide) strong acids, magnesium, metals.
HAZARDOUS REACTIONS / DECOMPOSITION PRODUCTS	Hazardous Polymerization does not occur. No hazardous reactions known to occur under normal use conditions. No hazardous decomposition known.
CONDITIONS TO AVOID	Not Available. See section 7 for storage information.

11. TOXICOLOGICAL INFORMATION	
ACUTE TOXICITY VALUES	Acute Oral LD50 (Rat): Not Available. Acute Dermal LD50 (Rat): Not Available. Acute Inhalation LC50 (Rat): Not Available.
ROUTES OF EXPOSURE	Ingestion, Skin / Eye, Inhalation.
SIGNS AND SYMPTOMS OF OVEREXPOSURE	Short term effects: Eyes watering, redness of skin, coughing, nose irritation. Long term effects: No data available.
CHRONIC EFFECTS CARCINOGENICITY	Nickel Nitrate: IARC- 2B Possible carcinogenic to humans; NTP – Reasonably anticipated to be a human carcinogenic; OSHA – not a carcinogen
SPECIFIC TARGET ORGAN TOXICITY	No data available.

12. ECOLOGICAL INFORMATION			
ECOTOXICITY	PHYTOTOXICITY– applying excessive amounts of nickel can be highly phytotoxic to plants. Do not exceed 200 ppm Ni in a single foliar application.	MOBILITY IN SOIL	Dependent on soil condition.
		BIOACCUMULATIVE POTENTIAL	No data available.
PERSTISTANCE & DEGRADABILITY	No data available. In plants, uptake of metals depends on the plant species and bio-availability of the metal in the soils. It should only be used as part of an overall agricultural mineral program based on recommendation and/or soil tissue analysis.		