MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**NUTRI-GROW MAGNUM**
CHEMICAL NAME/CLASS:	Inorganic Salt Mixture
PRODUCT NUMBER:	**2-40-16**
PRODUCT USE:	Fertilizer
MANUFACTURER'S NAME	**BIAGRO WESTERN SALES, INC.**
ADDRESS:	35803 Road 132 Visalia, CA 93292
EMERGENCY PHONE:	CHEMTREC: 1-800-424-9300
BUSINESS PHONE:	(559) 635-4784
FAX PHONE:	(559) 625-9255
DATE OF PREPARATION:	October 23, 2001

2. COMPOSITION and INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS #	% w/w	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL			OTHER
			TWA mg/m^3	STEL mg/m^3	TWA mg/m^3	STEL mg/m^3	IDLH mg/m^3	mg/m^3
Ammonium Compounds	Proprietary	>1	NE	NE	NE	NE	NE	NE
Organic Acid	Proprietary	> 1	NE	NE	NE	NE	NE	NE
Potassium Compounds	Proprietary	> 1	NE	NE	NE	NE	NE	NE
Potassium Citrate Compound	Proprietary	> 1	NE	NE	NE	NE	NE	NE
Water and other components. Each of the other components are present in less than 1 percent concentration (or 0.1% concentration for potential carcinogens, reproductive toxins, respiratory tract sensitizers, and mutagens).		Balance	None of the other components contribute significant, additional, hazards at the concentrations present in this product. All pertinent hazard information has been provided in this document, per the requirements of the Federal Occupational Safety and Health Administration Standard (29 CFR 1910.1200), U.S. State equivalent Standards and Canadian Workplace Hazardous Materials Identification System Standards (CPR 4).					

NE = Not Established See Section 16 for Definitions of Terms Used

NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format.

NOTE (2): Phosphorous Acid, Ammonium Hydroxide, and Potassium Hydroxide are part of the formulation for this solution; however, they are added to adjust the pH and do not contribute any significant, additional hazards to this product. Subsequently, these compounds are not considered further in this document.

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: This is a water-clear, solution with a no appreciable odor. This product presents a slight health hazard (in terms of irritation of contaminated skin, eyes, or mucous membranes). This product presents no significant flammability or reactivity hazards. Emergency responders must wear the personal protective equipment suitable for the situation to which they are respond

3. HAZARD IDENTIFICATION (Continued)

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: The chief routes of overexposure to this product are inhalation of mists or sprays generated by the product and contact with skin or eyes. The symptoms of overexposure, via route of entry, are as follows:

INHALATION: Inhalation of sprays, aerosols, or mists of this solution may irritate the nose, throat, and exposed mucous membranes. Symptoms of such exposure may include coughing, sneezing, and sore throat. Symptoms are generally alleviated when overexposure ends.

CONTACT WITH SKIN or EYES: Contact with skin may irritate and redden exposed tissue. The Organic Acid component of this solution is a potential allergen. Prolonged or repeated skin contact can cause allergy-like symptoms (e.g., dermatitis). Contact with eyes will cause tearing, pain, reddening, and irritation.

SKIN ABSORPTION: Skin absorption is not anticipated to be a significant route of exposure to any component of this product.

INGESTION: Though not a likely route of occupational exposure, ingestion may irritate the throat, esophagus, and other tissues of the digestive system. Symptoms of such exposure would include coughing, nausea, vomiting, and diarrhea.

INJECTION: Injection of this product, via puncture with a contaminated object, may cause a burning sensation, reddening, and swelling around the site of injection.

HEALTH EFFECTS OR RISKS FROM EXPOSURE: An Explanation in **Lay Terms**.

ACUTE: Symptoms of short-term exposures would include pain, reddening, and irritation of exposed tissue. Severe inhalation or ingestion overexposure may be harmful.

CHRONIC: Prolonged or repeated skin contact may cause dermatitis and other allergy-like skin reactions. Refer to Section 11 (Toxicology Information) for further information on the components of this solution.

TARGET ORGANS: ACUTE: Skin and eyes. CHRONIC: Skin

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH	(BLUE)	1
FLAMMABILITY	(RED)	0
REACTIVITY	(YELLOW)	0
PROTECTIVE EQUIPMENT		D

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		SEE SECTION 8

For routine fertilizer applications.

See Section 16 for Definition of Ratings

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Contaminated individuals must be taken for medical attention if any adverse reaction occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of the label and MSDS to physician or health professional with victim.

SKIN EXPOSURE: If the product contaminates the skin, decontaminate the affected area with running water. The minimum recommended flushing time is 15 minutes, especially if adverse skin reactions occur. If necessary, remove exposed or contaminated clothing, taking care not to contaminate eyes.

EYE EXPOSURE: If this product enters the eyes, open the contaminated individual's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. Minimum flushing is for 15 minutes.

INHALATION: If mists or sprays of this product are inhaled, remove the contaminated individual to fresh air. If necessary, use artificial respiration to support vital functions. Remove or cover gross contamination to avoid exposure to rescuers.

INGESTION EXPOSURE: If this product is swallowed, CALL PHYSICIAN OR POISON CONTROL CENTER FOR MOST CURRENT INFORMATION. DO NOT INDUCE VOMITING. Rinse mouth with water immediately, if victim is conscious. Never induce vomiting or give diluents (milk or water) to someone who is unconscious, having convulsions, or unable to swallow. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. If contaminated individual is convulsing, maintain an open airway and obtain immediate medical attention.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting respiratory problems, dermatitis, and other skin disorders can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms and eliminate overexposure.

5. FIRE-FIGHTING MEASURES

FLASH POINT: Not applicable.
AUTOIGNITION TEMPERATURE: Not applicable.
FLAMMABLE LIMITS (in air by volume, %):

Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

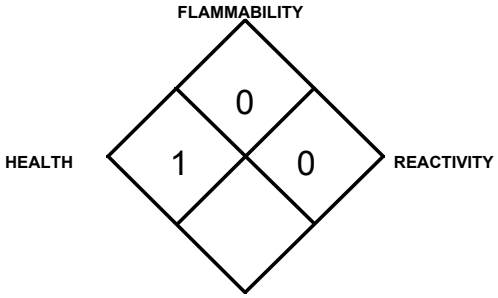
FIRE EXTINGUISHING MATERIALS:

Water Spray: YES
Foam: YES
Halon: YES
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: When involved in a fire and exposed to extremely high temperatures, the components of this product will decompose to produce irritating vapors and toxic gases (e.g., phosphorous oxides, phosphine, carbon oxides, and ammonia).

Explosion Sensitivity to Mechanical Impact: Not applicable.
Explosion Sensitivity to Static Discharge: Not applicable.

NFPA RATING



See Section 16 for Definition of Ratings

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. If possible, prevent runoff water from entering storm drains, bodies of water, or other environmentally sensitive areas.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: In case of a release, clear the affected area and protect people. Uncontrolled releases should be responded to by appropriately trained personnel in proper personal protective equipment, using pre-planned procedures. In terms of small, incidental releases (e.g., 1 gallon from a leaking container), the minimum personal protective equipment should be as follows: gloves, goggles, and appropriate body protection (e.g., boots, Tyvek suit). For large releases (e.g., 55-gallon drum), the minimum personal protective equipment should be Level C: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hardhat, and an Air-Purifying respirator with a high-efficiency particulate filter. In the event of a spill in which excessive amounts of mists are generated or one in which the level of oxygen is below 19.5% or is unknown, the minimum equipment should be Level B: triple-gloves (rubber gloves and nitrile gloves over latex gloves), chemical resistant suit and boots, hard hat, and Self-Contained Breathing Apparatus. If necessary, dike the spill to prevent releases from contaminating environmentally sensitive areas. Absorb spilled liquid with polypads or other suitable absorbent materials. Rinse area thoroughly with water. Decontaminate the area thoroughly. Place all spill residue in an appropriate container and seal. Reuse this product or dispose of in accordance U.S. Federal, State, or local procedures and appropriate Canadian standards (see Section 13, Disposal Considerations).

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK AND HYGIENE PRACTICES: As with all chemicals, avoid getting this product ON YOU or IN YOU. Wash thoroughly after handling this product. Do not eat, drink, smoke, or apply cosmetics while handling this product. Avoid breathing vapors or mists generated by this product. Use in a well-ventilated location. Remove contaminated clothing immediately.

STORAGE AND HANDLING PRACTICES -- NON-BULK CONTAINERS: All employees who handle this material should be trained to handle it safely. Open containers and drums slowly on a stable surface. Open drum bunks carefully to relieve any pressure build-up, which may have developed during storage. All containers of this product must be properly labeled. Empty containers may contain residual amounts of this product; therefore, empty containers should be handled with care. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Store away from incompatible materials (see Section 10, Stability and Reactivity). Material should be stored in secondary containers or in a diked area, as appropriate. Keep container tightly closed when not in use. Inspect all incoming containers before storage to ensure that containers are properly labeled and are not damaged.

STORAGE AND HANDLING PRACTICES -- BULK CONTAINERS: Bulk containers (e.g., 250 gallon "mini-bulk" tanks) holding this product should be loaded and unloaded in strict accordance with container manufacturer's recommendation and all established on-site safety procedures. Appropriate personal protective equipment must be used (see Section 8, Engineering Controls and Personal Protection). All transfer and dilution equipment must be inspected prior to each use. Transfer and dilution operations must be attended at all times. Hoses must be verified to be clean and free of incompatible chemicals prior to connection to the tank. Valves and hoses must be verified to be in the correct positions prior to starting transfer and dilution operations.

7. HANDLING and STORAGE (Continued)

PROTECTIVE PRACTICES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely, if necessary. Collect all rinsates and dispose of in accordance U.S. Federal, State, or local procedures and appropriate Canadian standards (see Section 13, Disposal Considerations).

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: Use with adequate ventilation to prevent inhalation of sprays or mists. All operations should be directed at minimizing the generation of aerosols, sprays, or mists. Eyewash stations/safety showers should be near areas where this product is used or sprayed.

RESPIRATORY PROTECTION: None required under normal circumstances of use. If operations generate aerosols, mists, or sprays which cause exposures in excess of the guidelines listed in Section 2 (Composition and Information on Ingredients), respiratory protection may be needed (e.g., air-purifying respirator with a high efficiency particulate filter) and must comply with the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations, or the appropriate standards of Canada and its Provinces. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998).

EYE PROTECTION: Splash goggles or safety glasses. Wear face shield for operations involving more than 5 gallons of this solution in which splashes or sprays can be generated.

HAND PROTECTION: Wear Neoprene gloves for routine industrial use. Use triple gloves for spill response, as stated in Section 6 (Accidental Release Measures) of this MSDS.

BODY PROTECTION: Use body protection appropriate for task (e.g., coveralls, or rubber apron).

9. PHYSICAL and CHEMICAL PROPERTIES

RELATIVE VAPOR DENSITY (air = 1): Not established.
EVAPORATION RATE (n-BuAc = 1): Not established.
DENSITY: 13.7 lb/gal
MELTING/FREEZING POINT: Not established.
SOLUBILITY IN WATER: Completely soluble.
BOILING POINT: Not established.
VAPOR PRESSURE, mm Hg @ 20°C (68°F): Not established.
pH: 6.5
ODOR THRESHOLD: Not established.
COEFFICIENT OF OIL/WATER DISTRIBUTION (PARTITION COEFFICIENT): Not available.
APPEARANCE AND COLOR: This is a clear, colorless, solution with no appreciable odor.
HOW TO DETECT THIS SUBSTANCE (warning properties): The appearance and odor may act as distinguishing characteristics of this product.

10. STABILITY and REACTIVITY

STABILITY: Stable.

DECOMPOSITION PRODUCTS: When exposed to extremely high temperatures, the components of this product will decompose to produce irritating vapors and toxic gases (e.g., phosphorous oxides, phosphine, carbon oxides, and ammonia).

MATERIALS WITH WHICH SUBSTANCE IS INCOMPATIBLE: Strong bases, strong oxidizers, strong reducers, and water-reactive materials.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Exposure to extreme temperatures and incompatible materials.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA: The specific toxicology data available for components greater than 1% in concentration are as follows.

AMMONIUM COMPOUND 1:
LCLo (inhalation, rat) = 580 ppm/1 hour
LCLo (inhalation, guinea pig) = 288 ppm/2 hours

AMMONIUM COMPOUND 2:
There are currently no toxicology data available for this compound.

ORGANIC ACID:
Skin Irritancy (rabbit) = 500 mg/24 hours; moderate
Skin Irritancy (rabbit) = 500 mg/24 hours; mild
Eye Irritancy (rabbit) = 750 µg/24 hours; severe
Eye Irritancy (rabbit) = 750 mg/24 hours; severe

ORGANIC ACID (continued):
LD_{50} (oral, rat) = 3 g/kg
LD_{50} (intraperitoneal, rat) = 883 mg/kg
LD_{50} (intraperitoneal, rat) = 290 mg/kg
LD_{50} (subcutaneous, rat) = 5500 mg/kg
LD_{50} (oral, mouse) = 5040 mg/kg
LD_{50} (intraperitoneal, mouse) = 903 mg/kg
LD_{50} (subcutaneous, mouse) = 2700 mg/kg

11. TOXICOLOGICAL INFORMATION (Continued)

TOXICITY DATA (continued):

ORGANIC ACID (continued):

LD_{50} (intravenous, mouse) = 42 mg/kg; Behavioral: convulsions or effect on seizure threshold, Lungs, Thorax, or Respiration: cyanosis, Gastrointestinal: changes in structure or function of salivary glands

LDLo (oral, rabbit) = 7000 mg/kg; Behavioral; tremor, convulsions or effect on seizure threshold, muscle contraction or spasticity

LD_{50} (intravenous, rabbit) = 330 mg/kg; Behavioral: convulsions or effect on seizure threshold, Lungs, Thorax, or Respiration: cyanosis, Gastrointestinal: changes in structure or function of salivary glands

POTASSIUM COMPOUND 1:

There are currently no toxicology data available for this compound.

PHOSPHITE COMPOUND 2:

There are currently no toxicology data available for this compound.

PHOSPHITE SALT COMPOUND 1:

There are currently no toxicology data available for this compound.

PHOSPHITE COMPOUND 2:

There are currently no toxicology data available for this compound.

POTASSIUM CITRATE COMPOUND:

There are currently no toxicology data available for this compound.

SUSPECTED CANCER AGENT: The components of this product are not found on the following lists: U.S. FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA and therefore are neither considered to be nor suspected to be cancer-causing agents by these agencies

IRRITANCY OF PRODUCT: This product may irritate contaminated tissue upon prolonged or repeated exposure.

SENSITIZATION TO THE PRODUCT: The Organic Acid component of this product is a potential skin sensitizer. Prolonged or repeated skin contact can cause allergy-like skin reactions (e.g., dermatitis, rashes).

REPRODUCTIVE TOXICITY INFORMATION: Listed below is information concerning the effects of this product and its components on the human reproductive system.

Mutagenicity: Human mutation data are available for the Triol Alcohol component of this product; these data were obtained during clinical studies on specific human tissues exposed to high doses of this compound.

Embryotoxicity: This product is not reported to produce embryotoxic effects in humans.

Teratogenicity: This product is not reported to cause teratogenic effects in humans.

Reproductive Toxicity: This product is not reported to cause reproductive effects in humans. Clinical studies on test animals exposed to relatively high doses of the Triol Alcohol component of this product provided reproductive toxicity data.

A mutagen is a chemical which causes permanent changes to genetic material (DNA) such that the changes will propagate through generational lines. An embryotoxin is a chemical which causes damage to a developing embryo (i.e. within the first eight weeks of pregnancy in humans), but the damage does not propagate across generational lines. A teratogen is a chemical which causes damage to a developing fetus, but the damage does not propagate across generational lines. A reproductive toxin is any substance which interferes in any way with the reproductive process.

ACGIH BIOLOGICAL EXPOSURE INDICES: Currently, there are no ACGIH Biological Exposure Indices (BEIs) determined for the components of this product.

12. ECOLOGICAL INFORMATION

WORK PRACTICES MUST PREVENT UNINTENTIONAL, ENVIRONMENTAL RELEASES.

ENVIRONMENTAL STABILITY: The components of this solution are relatively stable, but will decompose over time to generate other inorganic compounds. The following environmental data are available for the components of this product:

ORGANIC ACID:

Water Solubility = 59.2% (20°C); 84% (100°C)

Biological Oxygen Demand (BOD): 40%, 5 days; 60%, 10-20 days.

Food Chain Concentration Potential: Very Low

Experimental Log P = -1.64

Persistence: Can ferment on standing. Biodegrades quite rapidly. It is dangerous to aquatic life in high concentrations. Lowers pH in water but does not dissociate to any great extent.

12. ECOLOGICAL INFORMATION (Continued)

ENVIRONMENTAL STABILITY (continued):

TRIOL ALCOHOL:

Water Solubility = Miscible.

Log K_{ow} = -1.76.

5-Day Biological Oxygen Demand = 0.54 p/p; 10 day BOD = 0.98 p/p; 20 Day BOD = 1.0 p/p:

Terrestrial Fate: If released to soil, this compound is expected to undergo rapid biodegradation under aerobic conditions. Biodegradation is also expected under anaerobic condition. Based on its Log Kow of -1.76 and its water solubility, the soil absorption coefficients for this compound can be estimated at 3 and 2, respectively, using regression-derived equations. These values indicated that this compound will be highly mobile in soil. This compound is not expected to significantly volatilize from most or dry soil to the atmosphere.

Aquatic Fate: If released to an aquatic environment, this compound is expected to rapidly degrade under aerobic conditions. Degradation is also likely in seawater and under anaerobic conditions. Based on water solubility and its Log Kow, the bioconcentration factors for this compound can be estimated at 3 and 0.2, respectively. These values indicate that bioconcentration is not significant in aquatic organisms.

Atmospheric Fate: If released to the atmosphere, this compound may undergo a gas-phase oxidization with photochemically produced hydroxyl radicals. An estimated reaction rate indicates that the atmospheric half-life of this compound in the atmosphere to be 33 hours. The water solubility of this compound indicates that is may also undergo atmospheric removal by wet deposition processes.

EFFECT OF MATERIAL ON PLANTS or ANIMALS: This solution may irritate contaminated animals. Refer to Section 11 (Toxicology Information) for information on this product's components and their effects on test animals. This product is a fertilizer. Releases of large quantities into an area can substantially alter the nutrient composition affect terrestrial plant life.

EFFECT OF CHEMICAL ON AQUATIC LIFE: This product is a fertilizer. Releases of large quantities into a body of water can substantially alter the nutrient composition affect aquatic plant and animal life. The following aquatic toxicity information is available for the components of this product.

ORGANIC ACID:

EC_0 (*Pseudomonas putida* bacteria) 16 hours = > 10,000 mg/L

EC_0 (*Microcystis aeruginosa* algae) 8 days - 80 mg/L

EC_0 (*Scenedesmus quadricauda* green algae) 7 days = 640 mg/L

EC_0 (*Entosiphon sulcatum* protozoa) 72 hours = 485 mg/L

EC_0 (*Uronema parduczi* Chatton-Lwoff protozoa) = 622 mg/L

LD_0 (*Daphnia magna* giant water flea) = 80 mg/L, long-time exposure in soft water

LD_0 (goldfish) 625 mg/L, long-time exposure in hard water

LD_{100} (*Daphnia magna* giant water flea) = 120 mg/l long-time exposure in soft water

LD_{100} (goldfish) 894 mg/L, long-time exposure in hard water

Toxic (*Daphnia* water flea) = 100 mg/L

Toxic (goldfish) 4 hours = 894 ppm fresh water

ORGANIC ACID (continued):

Period of survival at pH 4.0 (goldfish) 48 hours = 894 mg/L

Period of survival at pH 4.5 (goldfish) = 625 mg/L

TLm (shore crab) 48 hours = 160 ppm salt water

TRIOL ALCOHOL:

LC_{50} (*Pimephales promelas,* fathead minnow) = 44000 mg/L

LC_{50} (*Carassius auratus,* goldfish) = 5000 mg/L

EC_0 (Pseudomonas putida, bacteria) >10,000 mg/L/ 16 hours

EC_0 (Microcystis aeruginosa, algae) = 2,900 mg/L/ 8 days

EC_0 (Scenedesmus quadricauda, green algae) >10,000 mg/L/ 7 days

EC_0 (Entosiphon sulcatum, protozoa) = 3,200 mg/L/ 72 hours

EC_0 (Uronema parduczi Chatton-Lwoff, protozoa) >10,000 mg/L

LC_{50} (goldfish) 5,000 mg/L/ 24 hours

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or those of Canada and its Provinces. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

U.S. EPA WASTE NUMBER: Not applicable.

14. TRANSPORTATION INFORMATION

THIS MATERIAL IS NOT HAZARDOUS, PER 49 CFR 172.101, U.S. DEPARTMENT OF TRANSPORTATION.

PROPER SHIPPING NAME: Not applicable.

HAZARD CLASS NUMBER and DESCRIPTION: Not applicable.

UN IDENTIFICATION NUMBER: Not applicable.

PACKING GROUP: Not applicable.

DOT LABEL(S) REQUIRED: Not applicable.

NORTH AMERICAN EMERGENCY RESPONSE GUIDE NUMBER - 1996: Not applicable.

MARINE POLLUTANT: No component of this product is listed as a DOT Marine Pollutant (49 CFR 172.101, Appendix B).

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: THIS MATERIAL IS NOT CONSIDERED AS DANGEROUS GOODS.

15. REGULATORY INFORMATION

ADDITIONAL U.S. REGULATIONS:

U.S. SARA REPORTING REQUIREMENTS: The components of this product are not subject to the reporting requirements of Sections 302, 304 and 313 of Title III of the Superfund Amendments and Reauthorization.

U.S. SARA THRESHOLD PLANNING QUANTITY: There are no specific Threshold Planning Quantities for any component of this product. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

15. REGULATORY INFORMATION (Continued)

U.S. CERCLA REPORTABLE QUANTITY (RQ): Not applicable.

U.S. TSCA INVENTORY STATUS: The components of this product are listed on the TSCA Inventory.

OTHER U.S. FEDERAL REGULATIONS: Not applicable.

U.S. STATE REGULATORY INFORMATION: Components of this product are covered under specific State regulations, as denoted below:

Alaska - Designated Toxic and Hazardous Substances: Triol Alcohol Mist.
California - Permissible Exposure Limits for Chemical Contaminants: Triol Alcohol Mist.
Florida - Substance List: No.
Illinois - Toxic Substance List: Triol Alcohol Mist.
Kansas - Section 302/313 List: No.
Massachusetts - Substance List: No.
Michigan - Critical Materials Register: No.
Minnesota - List of Hazardous Substances: Triol Alcohol Mist.
Missouri - Employer Information/Toxic Substance List: Triol Alcohol Mist.
New Jersey - Right to Know Hazardous Substance List: No.
North Dakota - List of Hazardous Chemicals, Reportable Quantities: No.
Pennsylvania - Hazardous Substance List: Triol Alcohol.
Rhode Island - Hazardous Substance List: Triol Alcohol Mist.
Texas - Hazardous Substance List: No.
West Virginia - Hazardous Substance List: No.
Wisconsin - Toxic and Hazardous Substances: No.

CALIFORNIA SAFE DRINKING WATER AND TOXIC ENFORCEMENT ACT (PROPOSITION 65): No component of this product is on the California Proposition 65 lists.

ANSI LABELING (Z129.1): **CAUTION!** MAY CAUSE SKIN, EYE, AND RESPIRATORY SYSTEM IRRITATION. PROLONGED SKIN CONTACT MAY CAUSE ALLERGIC REACTIONS. HARMFUL IF SWALLOWED. FOR AGRICULTURAL USE ONLY. KEEP AWAY FROM CHILDREN. Avoid contact with skin, eyes, and clothing. Avoid prolonged skin contact. Wash thoroughly after handling. Use in well-ventilated area. Use gloves, safety goggles, and appropriate body protection. **FIRST-AID:** In case of skin or eye contact, flush with copious amounts of water. Recommended flushing time is for 15 minutes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. If adverse reactions occur, get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO_2 or "alcohol" foam. **IN CASE OF SPILL:** Absorb with an inert material (e.g., polypads), then place in a suitable container. Consult Material Safety Data Sheet.

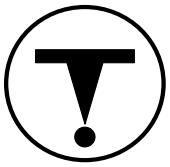
ADDITIONAL CANADIAN REGULATIONS:

CANADIAN DSL/NDSL INVENTORY STATUS: The components of this product are on the DSL Inventory List.

OTHER CANADIAN REGULATIONS: Not applicable.

CANADIAN ENVIRONMENTAL PROTECTION AGENCY (CEPA) PRIORITY SUBSTANCES LISTS: Not applicable

CANADIAN WHMIS SYMBOLS: **Class D2B:** Other Toxic Effects



16. OTHER INFORMATION

PREPARED BY:

CHEMICAL SAFETY ASSOCIATES, Inc.
9163 Chesapeake Drive, San Diego, CA 92123-1002
(619) 565 - 0302

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Biagro Western Sales, Inc. assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Biagro Western Sales, Inc. assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent. It is used for computer-related searching.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV -** Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average **(TWA)**, the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level **(C)**. Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. **IDLH -** Immediately Dangerous to Life and Health **-** This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200° F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100° F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Subrankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF =** Bioconcentration Factor, which is used to determine if a substance will concentrate in lifeforms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Agency. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.