SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Company Name: Solutions 4Earth
Address: 215 Industrial Park Rd
City, State, Zipcode: Grace, ID 83241
Phone Numbers: 208-425-3100

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

Website: www.solutions4earth.com

Product Identifier: **NutriMend®**
Other Identifiers: R30164A
CAS Number: MIXTURE
Recommended Use: Nutrient additive for growing plants to help reduce soil salinity
Restrictions on Use: No data available.

SECTION 2 - HAZARD(S) IDENTIFICATION

GHS Classification(s): Skin Corrosion/Irritation Category 2
Serious Eye Damage/Eye Irritation Category 2B

GHS Label Elements:

GHS Hazard Symbols:

Signal Word: Warning

Hazard Statements: Causes skin and eye irritation

Precautionary Statements:

Prevention: Wash thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF ON SKIN: Wash with plenty of water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see First Aid on SDS or on this label).
If skin irritation occurs: Get medical advice or attention.
If eye irritation persists: Get medical advice or attention.
Take off contaminated clothing and wash before reuse.

Hazards Not Otherwise Classified: None known.

Percentage of Components with Unknown Acute Toxicity:
Oral: 22.8 %
Dermal: 63.1 %
Inhalation Vapor: 65.4 %
Inhalation Dust/Mist: 67.7 %

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

Substances/Mixtures:

Chemical or Common Name/Synonyms	CAS Number	% by Wt.
Calcium Nitrate Tetrahydrate	13477-34-4	< 30 %
Monoammonium Phosphate	7722-76-1	< 3 %
Citric Acid	77-92-9	< 3 %
Phosphoric Acid	7664-38-2	< 2 %

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

SECTION 4 - FIRST-AID MEASURES

Description of Necessary Measures:

Eye Contact: If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Do not permit victim to rub eyes. Remove contact lens if easy to do.

Skin Contact: If on skin: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Wash with soap and water. Do not apply oils or ointments unless ordered by the physician.

Inhalation: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. DO NOT use mouth-to-mouth method if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Ingestion: If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Most Important Symptoms/Effects, Acute and Delayed:

Eye Contact: Causes severe irritation. Causes: redness. pain.

Skin Contact: Causes moderate to severe irritation. Causes: redness. itching. pain.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May cause moderate irritation. May cause: coughing. shortness of breath. methemoglobinemia.

Ingestion: May cause severe irritation. May cause: nausea. vomiting. methemoglobinemia. diarrhea.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

SECTION 5 - FIRE-FIGHTING MEASURES

Extinguishing Media: Water fog. Carbon dioxide. Dry chemical. Alcohol foam. Foam. Water or foam may cause frothing.

Specific Hazards Arising from the Chemical:

Fire and Explosion Hazards: Product may react with some metals (ex.: Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas. May decompose explosively when heated or involved in a fire. May accelerate burning if involved in a fire. Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases flammability of any combustible substance in contact with it. At elevated temperatures there is a risk of exothermic polymerization (> 200C).

Hazardous Combustion Products: Nitrogen oxides. Calcium oxides. Ammonia. Biuret. Carbon oxides. Cyanuric acid. Unidentified toxic and/or irritating compounds. Acrolein.

Special Protective Equipment and Precautions for Fire-Fighters: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Containers may explode in the heat of a fire. Cool containers with flooding quantities of water until well after fire is out. Do not use direct water stream. May spread fire. Product generates heat upon addition of water, with possible spattering. Run-off from fire control may cause pollution.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, Emergency Procedures: Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit.

Methods and Materials for Containment and Clean Up: Contain spill, place into drums for proper disposal. Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

SECTION 7 - HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Avoid breathing mists or dusts. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Mixing with strong bases can cause high heat of reaction and generate steam.

Conditions for Safe Storage, Including any Incompatibilities: Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Avoid storage on wood floors or near wooden walls, etc.. Do not store near combustible materials. Keep away from metals. Corrosive to metals (as aqueous solution). Do not freeze. May react with certain metals to form explosive/flammable hydrogen gas. Do not use aluminum equipment for storage and/or transfer.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

Component	Limits
Phosphoric Acid	1 mg/m3 TWA

ACGIH Exposure Guidelines:

Component	Limits
Phosphoric Acid	1 mg/m3 TWA; 3 mg/m3 STEL

Engineering Controls: General room ventilation and local exhaust are required. Avoid creating dust or mist. Use explosion-proof ventilation equipment. Maintain adequate ventilation. Do not use in closed or confined spaces. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

Individual Protection Measures:

Eye/Face Protection: Wear chemical safety goggles and a full face-shield while handling this product. Do not wear contact lenses.

Skin Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Impervious. Chemical-resistant.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If dust or mist is present, wear: NIOSH-Approved respirator for dusts and mists. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection

programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Other Protective Equipment: Eye-wash station. Safety shower. Chemical safety shoes. Protective clothing.

General Hygiene Conditions: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Color: Clear. Dark brown.
Odor: Mild odor.
Odor Threshold: N.D.
pH: 2.1 (as is)
Freezing Point (deg. F): N.D.
Melting Point (deg. F): N.D.
Initial Boiling Point or Boiling Range: N.A.
Flash Point: N.A.
Flash Point Method: N.A.
Evaporation Rate (nBuAc = 1): N.D.
Flammability (solid, gas): N.D.
Lower Explosion Limit: N.A.
Upper Explosion Limit: N.A.
Vapor Pressure (mm Hg): N.D.
Vapor Density (air=1): N.D.
Specific Gravity or Relative Density: 1.2600 @ 25 Deg. C
Solubility in Water: Soluble
Partition Coefficient (n-octanol/water): N.D.
Autoignition Temperature: No Data
Decomposition Temperature: N.D.
Viscosity: N.D.
% Volatile (wt%): N.D.
VOC (wt%): N.D.
VOC (lbs/gal): N.D.
Fire Point: N.D.

SECTION 10 - STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under recommended conditions of storage, shipment and/or use.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. Slow hydrolysis may produce acids corrosive to metals. Reactive with halogens. Slightly reactive with oxidizing agents, reducing agents, acids, alkalis, moisture. Reacts with Sodium or Calcium Hypochlorite to form explosive Nitrogen Trichloride. May react with other hypochlorites to form explosive Nitrogen Trichloride. Undergoes thermal decomposition at elevated temperatures to produce solid cyanuric acid.

Conditions to Avoid: Avoid moisture. Avoid heat, flame, and other possible sources of ignition. Contact with organic materials may cause fire and explosions. Prolonged contact with metals such as aluminum, tin, lead and zinc may produce flammable hydrogen gas. Contact with water may cause violent reaction with evolution of heat. To dilute: Add product slowly to lukewarm water; not water to product. Do not freeze.

Incompatible Materials: Strong reducing agents. Combustible materials. Organic materials. Powdered metals. Ammonia. Hydrazine. Strong oxidizing agents. Acids. Bases. Nitrates. Sodium hypochlorite. Calcium hypochlorite. Hypochlorites. Halogens. Reducing agents. Alkalies. Caustics. Nitric Acid. Gallium perchlorate. Moisture. Mild steel. Aluminum. Zinc. Copper. Strong acids. Chlorine. Fluorine. Strong bases. Chromium trioxide. Potassium chlorate. Potassium permanganate.

Hazardous Decomposition Products: Nitrogen oxides. Calcium oxides. Biuret. Ammonia. Carbon oxides. Cyanuric acid. Acrolein.

SECTION 11 - TOXICOLOGICAL INFORMATION

Routes of Exposure: Eyes. Ingestion. Inhalation. Skin.

Symptoms/Effects: Acute, Delayed and Chronic:

Eye Contact: Causes severe irritation. Causes: redness. pain.

Skin Contact: Causes moderate to severe irritation. Causes: redness. itching. pain.

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May cause moderate irritation. May cause: coughing. shortness of breath. methemoglobinemia.

Ingestion: May cause severe irritation. May cause: nausea. vomiting. methemoglobinemia. diarrhea.

Numerical Measures of Toxicity:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Calcium Nitrate Tetrahydrate	Rat: 3900 mg/kg	No Data	No Data
Monoammonium Phosphate	No Data	Rabbit: > 7940 mg/kg	No Data
Citric Acid	Rat: 3000 mg/kg	Rat: > 2000 mg/kg	No Data
Phosphoric Acid	No Data	Rabbit: 2740 mg/kg	No Data

Cancer Information:
This product contains 0.1% or more of the following chemicals listed by NTP, IARC or OSHA as known or possible carcinogens:
Nitrates

Medical Conditions Aggravated by Exposure to Product: Respiratory system disorders. Eye disorders. Skin disorders. Impaired respiratory function. Lung disorders.

Other: May cause methemoglobinemia, which is characterized by chocolate-brown colored blood, headache, weakness, dizziness, breath shortness, cyanosis (bluish skin due to deficient oxygenation of blood), rapid heart rate, unconsciousness and possible death.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Hazardous Waste Number: N.A.

Disposal Method: Dispose of in accordance with all local, state and federal regulations. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Since emptied containers retain product residue, follow label warnings even after container is emptied.

SECTION 14 - TRANSPORT INFORMATION

DOT (Department of Transportation):

Proper Shipping Name: Not regulated by the DOT.
Note: This product was tested according to acute dermal irritation and corrosion in rabbits, protocol number 9300-01, in compliance with DOT 49 CFR 173.137 and is not DOT regulated.

SECTION 15 - REGULATORY INFORMATION

TSCA Inventory Status: Calcium nitrate tetrahydrate appears on the U.S. EPA TSCA Inventory under the CAS# representing the anhydrous form of this material (10124-37-5).
This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards: Please see Section 2 of this SDS.

Regulated Components: Component	CAS Number	CERCLA RQ	SARA EHS	SARA 313	U.S. HAP	WI HAP	Prop 65
Calcium Nitrate Tetrahydrate	13477-34-4	No	No	Yes	No	No	No
Monoammonium Phosphate	7722-76-1	No	No	Yes	No	No	No
Phosphoric Acid	7664-38-2	Yes	No	No	No	Yes	No

***Prop 65 - May Contain the Following Trace Components:**
This product may contain a detectable level of (a) chemical(s) subjuect to California proposition 65.

Note: * Reportable as nitrate compounds. * This substance is reportable under Sara Title III, Section 313 as ammonia from a water disassociable ammonium salt. * This substance is reportable for Section 313 only if dissolved in water. If dissolved in water, the manufacturing threshold for aqueous ammonia applies.

SECTION 16 - OTHER INFORMATION

Hazard Rating System
Health: 2
Flammability: 0
Reactivity: 0
* = Chronic Health Hazard

NFPA Rating System
Health: 2
Flammability: 0
Reactivity: 0
Special Hazard: None

SDS Abbreviations
N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

SDS Prepared by: CSH

Reason for Revision: New product.

Revised: 01-03-2018
Replaces: 01-03-2018

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which SOLUTION 4EARTH LLC assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.