INTERNATIONAL AG LABS
A BIOLOGICAL APPROACH TO AGRICULTURE

AMAZE
Material Safety Data Sheet

Section 1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Source: International Ag Labs, 800 W. Lake Ave., PO Box 788, Fairmont, Minnesota 56031

Product Name:	Amaze	CAS #
Ingredients:	Urea	57-13-6
	Phosphoric Acid	7664-38-2
	Monopotassium Phosphate	7758-11-4
	Calcium Nitrate	10124-37-5

AMAZE is a revolutionary foliar spray designed to feed the plant soluble calcium through the leaves.

Emergency Phone: 507-235-6909

Section 2 HAZARDOUS IDENTIFICATION

Potential Acute Health Effects:

Ingestion: Very hazardous in case of ingestion. Liquid or spray mist may produce tissue damage particularly on mucous membranes of mouth. May cause irritation or the gastrointestinal tract to include nausea, vomiting and diarrhea.

Eye Contact: Very hazardous in case of eye contact (irritant, corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes. Inflammation of the eye is characterized by redness, watering, and itching.

Skin Absorption: Very hazardous in case of skin contact (corrosive, permeate).

Skin Contact: Very hazardous in case of skin contact (irritant). Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Inhalation: Slightly hazardous in case of inhalation (lung sensitizer). Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Spray mist may produce tissue damage particularly on mucous membranes of respiratory tract.

Effects of Overdose: Severe over-exposure can result in death.

Potential Chronic Health Effects:

CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood, liver, skin, eyes, bone marrow. Repeated or or prolonged exposure to the substance can produce target organs damage. Repeated or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs. May be toxic to blood, cardiovascular system.

Section 3 FIRST AID MEASURES

Ingestion: Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist. If vomiting occurs and the victim is

conscious, give water to further dilute the chemical. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Eye Contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact: Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation: Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Notes to Physician: No specific antidote, medical staff contacts Poisons Information Center. All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

Section 4 FIRE FIGHTING AND EXPLOSIVE MEASURES

Flammability of the Product: May be combustible at high temperature.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...).

Fire Hazards in Presence of Various Substances:

Of metals. Slightly flammable to flammable in presence of heat.

Explosion Hazards in Presence of Various Substances:

Non-explosive in presence of open flames and sparks, of shocks.

Fire Fighting Media and Instructions: Use extinguishing media suitable for surrounding materials. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Special Remarks on Fire Hazards: Reacts with metals to liberate flammable hydrogen gas. Formation of flammable gases with aldehydes, cyanides, mercaptins, and sulfides.

Hazardous Decomposition Products: Thermal decomposition products are dependent on temperature. Under fire - hydrogen, phosphine (highly flammable gases), oxides of potassium, oxides of phosphorous.

Special Remarks on Explosion Hazards: Mixtures with nitromethane are explosive. (Phosphoric Acid)

Protective Clothing: Fire Fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 5 ACCIDENTAL RELEASE MEASURES

Personal Precautions: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounded areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through split material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 7).

Small Spill: Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: Neutralize the residue with a dilute

solution of sodium carbonate. Dispose of according to local and regional authority requirements.

Large Spill: Corrosive liquid. Poisonous liquid. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities. DO NOT let product reach drains or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management.

Section 6 HANDLING AND STORAGE

Precautions: Do not ingest. Do not breathe gas/fumes/ vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, combustible materials, metals alkalis. May corrode metallic surfaces. Keep locked up. Toxic to fish and other aquatic organisms. Do not contaminate water supplies by handling and storage of product. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 23°C (73.4°F). Store in original packaging as approved by manufacturer.

Section 7 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

Personal Protection: Face shield. Full suit. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves. Boots.

Personal Protection In Case Of A Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Section 8 PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point:	Unknown	**Solubility in Water:**	Complete
Density:	3.03	**Vapor Pressure, mm Hg:**	Not applicable
Flashpoint:	N/A	**Reaction with Water:**	None
pH:	<1.0	**Appearance:**	Crystal clear liquid

Section 9 STABILITY AND REACTIVITY

Stability (Normal Conditions): Stable

Incompatibility with various substances: Reactive with oxidizing agents, combustible materials, metals, alkalis.

Special Remarks on Reactivity: Hygroscopic. Absorbs moisture from air. Reacts violently with Gallum Perchlorate. Reacts with chlorine to form chloramines. It also reacts with the following: sodium hypochlorite, sodium nitrate, calcium hypochlorite, $NaNO_2$, P_2Cl_5, nitrosyl perchlorate, strong oxidizing agents (permanganate, nitrate, dichromate, chloride).

Corrosivity: Extremely corrosive in presence of copper, of stainless steel(304), of stainless steel(316). Highly corrosive in presence of aluminum. Minor corrosive effect on bronze. Severe corrosive effect on brass. Corrosive to ferrous metals and alloys. Non-corrosive in presence of glass.

Materials to Avoid: Organic chemicals. Ammonia. Strong oxidizing agents, strong acids.

Conditions to Avoid: Excess heat.

Hazardous Decomposition Products: Decomposes on heating emitting toxic fumes, including those oxides of nitrogen, hydrogen, phosphine, oxides of phosphorous, oxides of of potassium.

Polymerization: Will not occur.

Section 10 TOXICOLOGY INFORMATION

Routes of Entry: Absorbed through skin. Dermal contact. Eye contact. Inhalation. Ingestion.

Chronic Effects on Humans: May cause damage to the following organs: blood, liver, skin, eyes, bone marrow. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. May cause damage to the following organs: blood, cardiovascular system.

Other Toxic Effects on Humans: Extremely hazardous in case of inhalation (lung corrosive). Very hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive), or ingestion.

General Information: Nitrates: Ingestion of large quantities will cause methaemaglobinemia with headaches, heart beat irregularities, blood pressure loss, cramps and breathing difficulties. cyanosis will occur. Nephritis can result from chronic exposure.

Special Remarks on Chronic Effects on Humans:

May cause adverse reproductive effects (fetotoxicity) and genetic material (mutagenicity) based on animal studies. Passes through the placental barrier in human and is present in breast milk.

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects: Skin: Causes skin irritation. Eyes: Causes eye irritation. Inhalation: Causes irritation of the respiratory tract, nose, and throat, coughing and sneezing. May also affect blood, metabolism and urinary system. Ingestion: Causes digestive (gastrointestinal) tract irritation with nausea, vomiting, and diarrhea. May affect behavior (altered sleep time, change in motor activity), cardiovascular system (heart rate), and the brain. May also affect the blood and may cause tumorigenic effects. Chronic Potential Health Effects: Prolonged exposure may cause adverse reproductive effects. Laboratory experiments on animals have resulted in mutagenic effects. Prolonged exposure or exposure at high concentrations may cause eye damage.

Section 11 ECOLOGICAL INFORMATION

General Information: Drift or runoff may adversely affect non-target plants. Do not apply directly to water. Do not contaminate water when disposing of equipment wash water. Do not apply when weather conditions favor drift from target area.

Ecotoxicity: No data available.

Products of Biodegradation: Possible hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation:

The products of degradation are less toxic than the product itself.

Environmental Fate: Avoid contaminating waterways, drains and sewers.

Section 12 DISPOSAL CONSIDERATIONS

Waste Disposal Procedures: Dispose according to federal, provincial/state and local environmental regulations.

Section 13 TRANSPORT INFORMATION

Shipping Name: Amaze

Hazard Class:	None	**C.A.S. Number:**	N/A
Reportable Quantity (RQ):	None	**D.O.T. Number:**	None
Labels Required:	None	**Haz Waste No:**	None
Placard:	None	**EPA Reqlst No:**	None

 July 5, 2014