

Material Safety Data Sheet

Last Update: August 11, 2008

Identity: PHC for Trees 27-9-9

Section I -- Manufacturer

Plant Health Care, Inc.
440 William Pitt Way
Pittsburgh, PA 15238

Emergency Phone #: 800-421-9051
Phone # for Information: 412-826-5488

Section II -- Hazardous Ingredients/Identity Information

Hazardous Components	OSHA PEL	ACGIH TLV
Live Bacteria beneficial to plants		
Potassium phosphate	None determined	
Potassium Nitrate	None determined	
Ammonium molybdate (0.0009% as Mo)		
Ferric sodium EDTA complex	None determined	
Iron salts, soluble, as Fe		1 mg/m ³
Manganese disodium EDTA complex	None determined	
Manganese, inorganic compounds as Mn		0.2 mg/m ³
Zinc disodium EDTA complex	None determined	
Ureaformaldehyde	None determined	
Copper EDTA complex		1 mg/m ³ as Cu
Boric Acid		
Nuisance Dust:		
Respirable	5 mg/m ³	3 mg/m ³
Total	15 mg/m ³	10 mg/m ³

Section III -- Physical/Chemical Characteristics

Boiling Point:	NA	Specific Gravity:	NA
Vapor Pressure:	NA	Melting Point:	>200 F
Vapor Density:	No vapor	Evaporation Rate:	NA

Solubility in Water: soluble
Appearance and Odor: Grey powder, mild odor.

Section IV -- Fire and Explosion Hazard Data

Flash Point: No Data **Flammable Limits; LEL:** No Data; **UEL:** No Data

Extinguishing Media: Water fog, foam, alcohol foam, CO₂, dry chemical

Special Fire Fighting Procedures:

Fire fighters should wear butyl rubber boots, gloves, and a NIOSH/MSHA approved self-contained breathing apparatus.

Unusual Fire and Explosion Hazards: Contains significant amount of Potassium nitrate, an oxidizer, which can accelerate any fire or explosion situations. Short term exposure to smoke

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and gases from burning or exposure to high heat may lead to irreversible lung injury without early signs and symptoms.

Section V -- Reactivity Data

Stability: Chemically stable **Conditions to Avoid:** High heat sources, sparks, open flame.
Avoid prolonged storage at high temperatures.

Incompatibility (Materials to avoid): Avoid strong bases. May form explosive mixes with strong acids (nitric acid or perchloric acid) or bleach (calcium or sodium hypochlorite). Long term storage in direct contact with reactive metals such as aluminum, zinc, copper, copper alloys, nickel, magnesium, etc. May react to release hydrogen gas which can form explosive mixtures with air. Aqueous reaction with strong alkalis can create heat. Other materials to avoid include nitrates, strong oxidizing agents, bleach, strong acids, strong reducing agents, calcium nitrate, phosphorus, maleic anhydride, and ethoxyethynyl alcohols with ether.

Hazardous Decomposition or Byproducts: Burning or high heat may release noxious fumes and gases such as ammonia, carbon monoxide, nitrous oxides, acetic acid, sulfuric acid, sulfur dioxide, oxides of phosphorus, phosphoric acid, biuret, or other toxic compounds depending on the other combustion sources.

Hazardous Polymerization: Will Not Occur

Section VI -- Health Hazard Data

Route(s) of Entry: Inhalation--yes Skin--yes Ingestion--yes Eyes: yes

Health Hazards (Acute and Chronic):

Acute: Skin contact may result in irritation. Eye irritant, may cause burns. Direct contact with eyes or open wounds could result in infection. Avoid skin and eye contact. Inhalation : dust may be slightly irritating with symptoms of sore throat and coughing. Ingestion of significant amounts may cause nitrate toxicity, diarrhea and abdominal pain, and, less likely, hypocalcemia, ammonia toxicity and hyperkalemia with cardiac arrhythmia.

Chronic: Prolonged inhalation may lead to respiratory tract irritation. Contains only a trace amount (less than 0.006%) of a material, Nitriolotriacetic acid (NTA), which has been shown to cause kidney toxicity based on animal data. Repeated or prolonged inhalation of magnesium dust has been reported to cause increased incidence of digestive disorders. Target organs appear to include the kidney and bladder.

Carcinogenicity: Nitriolotriacetic acid (NTA) and its salts (referring to the EDTA-containing ingredients in this product) were determined to be "possibly carcinogenic to humans" (Group 2B) by the International Agency for Research on Cancer (IARC), and determined to be a compound which "May reasonably be anticipated to be a carcinogen" by the National Toxicology Program (NTP).

Reproductive Effects: Possible birth defects hazard: contains material which may cause birth defects based on animal data. EDTA and its sodium salts have been reported, in some studies, to

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cause birth defects in laboratory animals only at exaggerated doses that were toxic to the mother. These effects are possibly associated with zinc deficiency caused by chelation and removal of zinc from the body. Exposures having no effect on the mother are expected to have no effect on the fetus.

Signs and Symptoms of Exposure: Skin or eye irritation. Severe eye irritant. May cause nausea and intestinal distress if ingested in significant quantities. Excess inhalation of dust may result in irritation of the throat, and respiratory system, or cause shortness of breath, and reduced pulmonary function. Infection could result if product contacts open wounds or eyes. Can cause eye irritation or allergic response. See above under "Health Hazards", Acute and Chronic. If ingested in sufficient quantity, may cause gastrointestinal disturbance, including nausea, abdominal pain, diarrhea.

Medical Conditions Generally Aggravated by Exposure: May provoke asthmatic response in persons with asthma who are sensitive to airway irritants. Individuals with kidney impairment may be at increased risk. Interactions with medications may occur. Persons having medical conditions making them sensitive to exposure to common bacteria (such as individuals with AIDS, or those taking some anti-rejection drugs, or individuals receiving chemotherapy) should consult with their physician before handling bacterial products.

Emergency and First Aid Procedures: Eyes: Flush with water for at least 15 minutes. Call a physician.

Skin: Wash affected area with soap and water. If material contacts wounded or broken skin, treat wound with an antiseptic to prevent infection. If irritation develops, consult a physician. Remove and launder contaminated clothing separately before reuse.

Inhalation: If inhaled, move to fresh air. If difficulty in breathing persists, administer oxygen, and get immediate medical attention. Watch for possible development of respiratory infection.

Ingestion: Seek immediate medical attention. Unless advised otherwise, do not induce vomiting. Do not give anything by mouth if person is unconscious or nearly so, has no gag reflex, or is having convulsions.

Section VII -- Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Avoid stirring up excessive dust. Moisten to sweep up and collect excess material while avoiding creating airborne dust. Do not breathe dust. Then apply the product to the lawn as directed. If dissolved product is spilled, contain and collect the spill to prevent discharge to surface streams or storm sewers. Then use the product as directed, or dry the product for proper disposal.. Subsequently, clean the spill area with a disinfectant. Beware of slippery floors when material becomes wet, or if spillage occurs in wet areas. Dissolved product will discolor water. This product may be corrosive to aluminum. Contact pollution control officials if spilled into public waters.

Waste Disposal Method: If possible, the spilled product should be collected, diluted , and applied as a fertilizer to plants or trees, as intended. If disposed, the dissolved product should be dried before disposal. Disposal must be in accord with federal, state, and local regulations.

Precautions to be Taken in Handling or Storage: Avoid stirring up dust. Contact lenses

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should not be worn. Use local exhaust. Do not freeze. Avoid unnecessary skin contact. Do not breath dust, mist, or fumes. This product may be corrosive to aluminum. Store in PVC, PE, stainless steel or bituminized containers. Avoid containers or fittings made of brass, bronze, copper, or other copper-bearing alloys or galvanized metals.

Other Precautions: Eye wash fountains should be readily available, and easily accessible. All foods and smoking materials should be kept in a separate area from the storage/use location of this product. Eating, smoking, and drinking and should be prohibited in areas where there is potential for significant exposure to this material. Hands and face should be thoroughly washed before eating, drinking, or smoking.

Section VIII -- Control Measures

Respiratory Protection: If dusts, vapors, or mists are generated, wear NIOSH/MSHA approved respirator with dust, mist, and fume filters.

Ventilation: Use local exhaust for liquid dissolved material, and filtered exhaust for dry, dusty material. Do not breathe dusts, mists, or fumes. Avoid unnecessary skin contact. Do not freeze.

Protective Gloves: Rubber, latex, vinyl, or any gloves without pores.

Eye Protection: Chemical goggles recommended if dusting conditions exists.

Other Protective Clothing or Equipment: Coveralls, apron, gloves, boots as necessary to prevent skin contact. Clean clothing should be worn daily to avoid possible long-term buildup of the product leading to chronic overexposure.

Other: Open wounds or disruptions in the skin should be covered with a chemical-resistant patch to minimize absorption risks and infection risks.

Work/Hygienic Practices: The bacteria contained in this product are strains of typically harmless soil and water bacteria, and do not cause infections under normal circumstances. However, reasonable precautions are in order. Handle as you would rich, dark soil or compost: keep it out of your mouth, eyes, lungs, and broken skin. Do not eat, drink, or smoke when handling product. Wash hands after handling. If material contacts wounded or broken skin, was affected area with antibacterial soap and water. Treat wound with an antiseptic to prevent infection. If spilled on clothes, wash separately from other clothes. Clean clothing should be worn daily to avoid possible long-term buildup of the product leading to chronic overexposure. Wash hands and face before handling food or drink.

Transport Information:

Required Labels: Corrosive (to aluminum) labels are required for air, water, and international shipment. None required for domestic land shipment.

Environmental Hazardous Substance: This product does not contain an environmentally hazardous substance. However, as a fertilizer, it will stimulate algae blooms in surface waters.

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Regulatory Information:

The manganese and zinc compounds in this product are subject to SARA Title III, Section 313 supplier notification/release reporting requirements under the manganese and zinc compounds categories, respectively. This product contains about 0.05% manganese, and about 0.05% zinc. The EDTA-containing ingredients are subject to the following:

Environmental Lists:

TSCA: Toxic Substance Control Act – listed.

DSL: Domestic Substance List (Canada)

State Regulations: This product contains the following components (in trace quantities) that are regulated under California proposition 65: Ethylene Oxide; Dioxane.

Ingredient	Cancer List	Reprod. List	No Sig. Risk Lvl.	RPI
Ethylene Oxide	Y	Y	2	ND
Dioxane	Y	N	30	ND