

MSDS— PHC for Flowers 12-16-12

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 irritation or infection. Avoid skin and eye contact.

Inhalation : dust may be slightly irritating with symptoms of sore throat and coughing. Levels above 10 ug/m³ of suspended sulfates in the air may cause an excess risk of asthmatic attacks in susceptible persons. 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, Nitrioltriactic 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: Nitrioltriactic 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).

Contains 0.2% copper sulfate: RTECS 1982 (mutagenicity).

Reproductive Effects: EDTA and its sodium salts have been reported, in some studies, to 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

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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. Potentially allergenic. 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 result in irritation if product comes in direct contact with open wounds or eyes. 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 with compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should consult with physician before handling such 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 heavily-soiled clothing before reuse.

Inhalation: If inhaled, move to fresh air. If difficulty in breathing persists, administer oxygen, and get immediate medical attention.

Ingestion: Seek immediate medical attention. Unless advised otherwise, induce vomiting by administering syrup of ipecac or by sticking finger down throat. 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 or garden 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. 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 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 should not be worn in dusty scenarios. Use local exhaust. 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.

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Other Precautions: Eye wash fountains should be readily available, and easily accessible in production situations where this material is handles in large quantity. 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.

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: Wash hands after handling. If material contacts wounded or broken skin, was affected area with soap and water and apply an approved over-the-counter antiseptic for wounds to prevent infection. If heavily 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.

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 0.2% manganese, and about 0.32% zinc. The EDTA-containing ingredients are subject to the following:

Environmental Lists:

TSCA: Toxic Substance Control Act – listed.

DSL: Domestic Substance List (Canada)