



## MSDS—PHC Plant Saver™

**Unusual Fire and Explosion Hazards:** Dispersion of fine dust in the air may form an explosive mixture. If decomposed with heat, will give off toxic fumes of ammonia and formaldehyde, sulfur oxides, and above 1800 F, phosphorus oxides and fluoride gases.

### *Section V -- Reactivity Data*

**Stability:** Chemically stable      **Conditions to Avoid:** Avoid stirring up dust. Avoid ignition of dust.

**Incompatibility (Materials to avoid):** Some ingredients of this product may ignite on contact with hydrogen trisulfide. Some ingredients may react violently when mixed with hydrogen peroxide, ethylene oxide, nitric acid, calcium hypochlorite, magnesium, or fluorine, or when heated with powdered aluminum, calcium disilicate, magnesium, or metal acetylides. Acids: Several ingredients are soluble in aqueous acids generating heat. Incompatible materials include phosphorus, maleic anhydride, and ethoxyethynyl alcohols with ether.

### *Section V -- Reactivity Data*

**Hazardous Decomposition or Byproducts:** When burned: CO, CO<sub>2</sub>, SO<sub>2</sub>, Hydrocarbons, small amounts of sulfuric acid.

**Hazardous Polymerization:** Will Not Occur

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### *Section VI -- Health Hazard Data*

**Route(s) of Entry:** Inhalation--Yes (Primary)      Skin--Yes      Ingestion--Yes      Eyes--Yes

**Target Organs:** Upper respiratory system.

### **Health Hazards (Acute and Chronic):**

**Acute:** May irritate skin or eyes, nose throat or respiratory system; abrasive action of dust can injure the eye. May result in allergic response, or infection if product comes in direct contact with eyes, lungs, or open wounds. Product dust or spray mist may be irritating to nasal and respiratory passages, and/or lungs if inhaled, with symptoms of sore throat and coughing. Avoid breathing dust. Levels above 10 ug/m<sup>3</sup> of suspended sulfates in the air may cause an excess risk of asthmatic attacks in susceptible persons. Inhalation of the product's bacteria-laden dust into the respiratory tract could theoretically cause infection to occur in persons with a weakened immune system. Ingestion of significant amounts may cause diarrhea and abdominal pain. Contains some manganese compounds, which can cause localized inflammation if small particles become embedded into the skin. Excessive and repeated inhalation of manganese compounds (beyond the allowable levels) can produce, pleuritis, and/or fatal pneumonia.

**Chronic:** This product produces fine dusts, which may cause delayed respiratory disease or allergy if inhaled over a prolonged period of time, continuously or intermittently. Potentially allergenic. Avoid breathing dust. Long-term exposure to excessive levels of dust containing significant amounts of manganese compounds can cause a Parkinson Disease-like syndrome or psychosis. Prolonged or repeated contact may cause skin irritation in individuals sensitive to mineral dust. Repeated or prolonged inhalation of magnesium dust has been reported to cause increased incidence of digestive disorders.

**Carcinogenicity:** This product may contain a small amount of **crystalline silica**. IARC Monographs concludes that there is "limited evidence" of the carcinogenicity of crystalline silica

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to humans. IARC Classification 2A: probable human carcinogen. The National Toxicology Program (NTP) lists respirable crystalline silica among substance which may "reasonably be anticipated to be carcinogens."

**Signs and Symptoms of Exposure:** Eye irritant. 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 eyes, lungs, or open wounds. Can cause eye irritation or allergic response. See above under "Health Hazards, Chronic". If ingested in sufficient quantity, may cause gastrointestinal disturbance, including nausea, abdominal pain, diarrhea, and fluorosis. Contains some manganese compounds, which can cause localized inflammation if small particles become embedded into the skin.

**Medical Conditions Generally Aggravated by Exposure:** Individuals with any pulmonary and/or respiratory disease such as asthma, bronchitis, emphysema, etc. should not be exposed to dust or mist. Individuals with kidney impairment may be at increased risk. Interactions with medications may occur. Contact with open wounds could potentially result in irritation or infection. May provoke asthmatic response in persons with asthma who are sensitive to airway irritants. Risk of both respiratory or wound infection is increased for persons with weakened immune systems. Persons with compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should consult with their physician before handling microbial products.

**Emergency and First Aid Procedures:** If material is ingested, drink water, induce vomiting, call a physician. If inhaled, remove to fresh air, give oxygen if needed; give artificial respiration if needed, get medical attention. Watch for possible development of respiratory infection. In case of skin contact, wash area with soap and water. In case of contact with an open wound, wash with soap and water, and use an over-the-counter approved topical antiseptic. If material gets into eyes, flush with water, see physician if discomfort persists.

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### *Section VII -- Precautions for Safe Handling and Use*

**Steps to be Taken in Case Material is Released or Spilled:** Avoid stirring up excessive dust. Sweep up and collect excess material with adequate ventilation, and use the spilled product as directed. Then rinse area with water. Product does not exhibit any characteristics of a hazardous waste, and it is suitable for landfill disposal.. Follow all local, state, and federal regulations regarding disposal.

**Waste Disposal Method:** Collect excess and apply to plants as originally intended. Material does not contain pesticides.

**Precautions to be Taken in Storage and Handling:** Avoid stirring up excessive dust. Avoid ignition of dust. Avoid inhaling dust. Wear nonporous gloves.

**Other Precautions:** Wash hands after handling. Use normal hygiene practices. If spilled on clothes, wash as usual. All foods and smoking materials should be kept in a separate area from the storage/use location of this product. Eating, smoking, and drinking should be prohibited in areas where there is potential for significant exposure to this material. Hands and face should be

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thoroughly washed before eating, drinking, or smoking. Persons with compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should avoid this product.

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### *Section VII -- Control Measures*

**Respiratory Protection:** Dust mask. Use NIOSH/MSHA approved respirator where TLV limits for crystalline silica may be exceeded.

**Ventilation:** Any means adequate to avoid buildup of concentrations above the TLV or PEL, or of explosive airborne concentrations, such as mechanical ventilation, hood, good engineering controls, etc.

**Protective Gloves:** Rubber, latex, vinyl, or other nonporous gloves recommended.

**Eye Protection:** Safety goggles recommended in situations where eye contact could occur.

**Other Protective Clothing or Equipment:** Apron recommended.

**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 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.

Persons with compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should avoid this product, and other products containing bacterial inoculants. Persons with compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should avoid this product.

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