

# Material Safety Data Sheet

Last Update: June 14, 2007

Identity: **PHC™ Flower Saver Plus Inoculant**

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## Section I -- Manufacturer

Plant Health Care, Inc.	<b>Emergency Phone #:</b>	800-421-9051
440 William Pitt Way	<b>Phone # for Information:</b>	412-826-5488
Pittsburgh, PA 15238		

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## Section II -- Hazardous Ingredients/Identity Information

Potentially Hazardous Components	%	OSHA PEL	NIOSH	ACGIH
Humate (Leonardite, natural mineral)	34%	1.5 mg/m <sup>3</sup>	-	0.1 mg/m <sup>3</sup>
Crystalline Quartz	0.7% - 2%	0.1 mg/m <sup>3</sup> (respirable)	50µg/m <sup>3</sup> (respirable)	
Sulfate of Potash		----	----	---
Calcium phosphate monobasic	4.5%	----	----	---
Nuisance Dusts				
Respirable (TWA)		5 mg/m <sup>3</sup>		10 mg/m <sup>3</sup>
Total (TWA)		15 mg/m <sup>3</sup>		10 mg/m <sup>3</sup>
Select strains of soil bacteria	0.08%	---	---	---
Phytoestrogenic compounds	0.015%	---	---	---

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## Section III -- Physical/Chemical Characteristics

<b>Boiling Point:</b>	NA	<b>Specific Gravity:</b>	NA
<b>Vapor Pressure:</b>	NA	<b>Melting Point:</b>	NA
<b>Vapor Density:</b>	NA	<b>Evaporation Rate:</b>	NA

**Solubility in Water:** Insoluble

**Appearance and Odor:** Mixture of brown, earthen granules and powders. Mild odor.

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## Section IV -- Fire and Explosion Hazard Data

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

**Extinguishing Media:** Water, fog, foam

**Special Fire Fighting Procedures:** Wear respiratory protection to avoid breathing smoke and dust.

**Unusual Fire and Explosion Hazards:** During production of product, avoid build-up of hazardous dust concentrations. Humate dust, as any dust from a burnable material, can be ignited if excessive confined buildup is permitted.

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## Section V -- Reactivity Data

**Stability:** Chemically stable      **Conditions to Avoid:** Product will biodegrade if it gets wet.

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**Incompatibility (Materials to avoid):** None Known

**Hazardous Decomposition or Byproducts:** When burned: normal combustion byproducts are produced: 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 (dust)    Skin--Yes    Ingestion--Yes    Eyes--Yes

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

**Acute:** None known. Avoid contact with open wounds.

**Chronic:** This product contains common bacteria. Watch for allergic responses (e.g., hayfever symptoms) in highly sensitive individuals (rare). This product contains a small amount (0.015% by weight) of an insoluble isoflavanoid compound classed as a phytoestrogen, which can mimic the effects of the hormone estrogen in mammals. Avoid prolonged skin contact to preclude the possibility of skin absorption of the hormonal compound. Wash hands after handling.

**Carcinogenicity:** This product may contain a small amount of crystalline silica (sand mineral), which is common in mined mineral ingredients, like humate. IARC Monographs concludes that there is "limited evidence" of the carcinogenicity of crystalline silica to humans. IARC Classification 2A. See above under "Health Hazards, Chronic". Dust inhalation should be avoided or limited, particularly by persons who handle such products daily, such as manufacturing personnel.

**Signs and Symptoms of Exposure:** None known.

**Medical Conditions Generally Aggravated by Exposure:** Persons with seriously compromised immune systems, such as those with AIDS, or those undergoing chemotherapy, or receiving anti-rejection drugs should consult with their physician before handling any microbial products.

**Emergency and First Aid Procedures:** Product is not toxic, but is not intended to be ingested. If ingested, treat symptoms and contact a physician. 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 external antiseptic. See physician if infection develops. If material gets into eyes, flush with water, see physician if discomfort occurs or if infection develops.

**Other Health Related Data:** This product contains a very small amount (0.015% by weight) of an insoluble isoflavanoid compound, formononetin, classed as a phytoestrogen, which can mimic the effects of the hormone estrogen in mammals, although it is 10,000 times weaker than estrogen. Specific affects either on an adult or fetus are not known, but are not expected with occasional use of this product, because this same phytoestrogen commonly occurs naturally in significant quantities in many foods, such as soy beans and various grains. However, personnel who handle the product daily or frequently, such as manufacturing personnel, should avoid prolonged skin contact to preclude the possibility of continual skin absorption of the hormonal compound. Similarly, pregnant women should avoid exposure as a precaution.

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

**Steps to be Taken in Case Material is Released or Spilled:** Sweep up and collect excess material, and use the product as directed. Avoid stirring up excessive dust. Then rinse area with soap and water. Residue will not harm drains or sewers or the environment.

**Waste Disposal Method:** Sweep up excess material and apply to grass, trees, or ornamental plants as originally intended. Material is biodegradable, and does not contain pesticides.

**Precautions to be Taken in Case Material is Released or Spilled:** Avoid stirring up excessive dust. Avoid ignition of dust. Avoid inhaling dust.

**Other Precautions:** Cover all open wounds with a sterile dressing and protective cover prior to handling. Wash hands after handling. Use normal hygiene practices.

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### *Section VII -- Control Measures*

**Respiratory Protection:** Dust mask.

**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:** Gloves recommended.

**Eye Protection:** Safety goggles recommended if eye contact is likely.

**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. Follow good hygiene practices. Handle as you would rich, dark soil or compost: keep it out of your mouth, eyes, lungs, and broken skin. Wash hands after handling. Wash clothes that are heavily soiled with product.

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