Soil & Plant Solutions LLC

23 East 675 South• Ivins, Utah 84738

SAFETY DATA SHEET
PRODUCT: PHOENIX GREEN

1. IDENTITY/DESCRIPTION

Identity:	PHOENIX
Manufacturer:	Soil & Plant Solutions LLC 23 East 675 South Ivins, UT 84738 Internet: www.soilplantsolutions.com
Emergency Phone Number:	Tel: (608) 795-4266; (608) 628-2654 Date: 2/7/2019 Supersedes: 4/19/2018
Material Description:	Calcium Carbonate Suspension

2. HAZARDS IDENTIFICATION

Note: Crystalline silica is present as an impurity in natural limestone. In the respirable form and size range, crystalline silica is a carcinogen and may cause silicosis. However, this product is a liquid suspension and crystalline silica is not available for inhalation. Under all anticipated uses, the crystalline silica would remain in suspension and would not be inhaled.

Hazard Classification: Reproductive Toxicity Category 2

Signal Word: Warning

Hazard Statements: H361: Suspected of damaging fertility or the unborn child.

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P501: Dispose of contents/container in accordance with local regulation.

Other hazards which do not result in classification: None.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

Components	CAS Number	Weight %
Limestone	1317-65-3	54.6%
Crystalline Silica, Quartz (impurity; wet, not respirable)	14808-60-7	0.05-1.1%
Disodium octaborate tetrahydrate	12280-03-4	0.2%
Other*	----------	Balance
*Balance of ingredients are present at less than 1% in concentration (or 0.1% for carcinogens, reproductive toxicants, or respiratory sensitizers).		

4. FIRST AID MEASURES

Eye Contact:	In case of contact, immediately flush eyes with water for a minimum of 15 minutes. If irritation persists, seek medical attention.
Skin Contact:	Exposure may cause skin irritation. Flush skin with water. If irritation persists, seek medical attention.
Ingestion:	No adverse effect is expected. If ingested, seek medical advice.
Inhalation:	This product is a liquid suspension and not anticipated to form a dust or vapor. If inhalation of liquid occurs, seek medical attention.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Material is non-combustible. All extinguishing media can be used. Use suitable media appropriate to the surrounding fire.
Unsafe extinguishing media:	None
Special exposure hazards:	None
Special protective equipment	Firefighters should wear protective clothing and use equipment that is suitable for the materials involved in the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

Environmental precautions:	This product does not present any particular risk to the environment. Refer to applicable national, state and local regulations prior to disposal.
Clean up methods:	Materials can be swept, scooped or vacuumed into an appropriate container for safe disposal.

7. HANDLING AND STORAGE

Handling:	Product has a high specific gravity. Use caution when lifting.
Storage:	Store in water tight containers and avoid freezing temperatures. Do not store in direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls:	Use mechanical ventilation
Eye protection:	Safety glasses with side shields
Skin and Body protection:	Light weight protective clothing and gloves
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practices.

Components	OSHA PEL	ACGIH TLV
Calcium Carbonate (limestone)	5 mg/m^3 Respirable Fraction 15 mg/m^3 Total Dust	10 mg/m^3 Total Dust
Crystalline Silica, Quartz (impurity)	(10 mg/m^3)/(%SiO_2 + 2) Respirable Fraction (30 mg/m^3)/(SiO_2 + 2) Total Dust	0.05 mg/m^3 Total Dust
Disodium octaborate tetrahydrate	5 mg/m^3 Respirable Fraction 15 mg/m^3 Total Dust	10 mg/m^3 Total Dust

Unless otherwise noted, all Pesonal Exposure Limits (PEL) and Threshhold Limit Values (TLV) are reported as 8 hour time weighted averages.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	White liquid suspension
Density:	1.10 g/mL
pH (5% w/w suspension):	8.4 – 10.2
Odor:	NA
Odor Threshold:	NA

Boiling point:	NA
Melting Point/ Freezing Point:	NA
Evaporation Rate:	NA
Flammability:	NA
Flash point:	NA
Specific Gravity (H_2O = 1):	9.14 lbs/gallon
Solubility in Water:	1.3 mg/L
Formulation:	Liquid
Vapor Pressure:	NA
Vapor Density:	NA
Relative Density:	NA
Partition Coefficient:	NA
Auto-Ignition Temperature:	NA
Decomposition Temperature:	NA
Viscosity:	NA
Explosive Properties:	NA
Oxidising Properties:	NA
Molecular Weight:	NA

10. STABILITY AND REACTIVITY

Stability:	Stable, however, if separation occurs, suspension can be mixed
Conditions to avoid:	Do Not Freeze
Materials to avoid:	Do Not Mix with materials that will lower the pH of suspension (acids)
Hazardous decomposition products:	None

11. TOXICOLOGICAL INFORMATION

Routes of exposure: Inhalation is not a significant route of exposure in occupational and other settings. Dermal exposure should be minimal with recommended personal protective equipment (see section 8). This product is not intended for ingestion.

Symptoms related to the physical, and chemical and toxicological characteristics: None anticipated.

Delayed and immediate effects as well as chronic effects from short and long-term exposure: Skin contact may result in dryness and moderate local irritation.

Acute health hazards

Calcium Carbonate

Oral LD_{50}: 6,450 mg/kg of body weight
Dermal LD_{50}: No information found
Inhalation LC_{50} (rat): No information found
Dermal irritation/corrosivity: Nonirritating, noncorrosive
Eye irritation: Minimal irritation, reversible by 72 hours
Mutagenicity: No information found

Disodium octaborate tetrahydrate

Oral LD_{50}: 3,450 mg/kg of body weight
Dermal LD_{50}: >2,000 mg/kg of body weight
Inhalation LC_{50} (rat): >2.0 mg/L
Dermal irritation/corrosivity/sensitization: Nonirritating, noncorrosive, nonsensitizing
Eye irritation: Minimal irritation, reversible by 7 days
Mutagenicity: Not mutagenic

Chronic health hazards: No chronic effects have been reported in the literature.

Reproductive effects: In pregnant rats exposed orally to 625 mg/kg-d of calcium carbonate, there were no adverse effects reported. There was no information available on disodium octaborate tetrahydrate, however, in studies of boric acid, the NOAEL in rats for developmental effects on the fetus including fetal weight loss and minor skeletal variations is 55 mg/kg bw. In adult male rats, the NOAEL for effects on the testes is 100 mg/kg-d. In occupational studies in humans, no adverse fertility effects have been reported. Epidemiological studies of human developmental effects have shown an absence of effects in exposed borate workers and populations living in areas with high environmental levels of boron.

Carcinogenicity: Calcium carbonate and disodium octaborate tetrahydrate are not listed as a known or suspected carcinogen by OSHA, NTP, or IARC. Respirable crystalline silica, a component of limestone, is classified as carcinogenic by IARC, NTP, and ACGIH. These classifications are based on sufficient evidence of carcinogenicity in certain experimental animals and on selected epidemiological studies of workers exposed via inhalation to crystalline silica. This product is a liquid suspension and silica would not be available for inhalation; therefore this exposure route is not relevant for this product.

12. ECOLOGICAL INFORMATION

Biodegradability: Readily biodegradable

Aquatic toxicity:

Calcium carbonate (Western mosquitofish, *Gambusia affinis*) LC_{50} (24-96-hr) >56,000 mg/L

No information specific to boric acid was found in the literature. The following information is based on other boron compounds and normalized for boron.

LC_{50} (Water flea, *Daphnia magna*): 101.2 mg/L (48-hr)
NOEC (Water flea, *D. magna*): 5.7 mg/L (21-d)
LC_{50} (Rainbow trout, *O. mykiss*): 351.7 mg boron/L (96-hr)
LC_{50} (Bluegill, *L. macrochirus*): 4.6 mg boron/L (24-hr)

Phytotoxicity: No information found
Mobility in soil: No information found
Persistence/Degradability Non-degradable
Bio-accumulative potential None

13. DISPOSAL CONSIDERATIONS

Disposal: Dispose in accordance with local, state and national regulations. Under the Resource Conservation and Recovery Act (RCRA, 40 CFR 261) ground limestone is a non-hazardous waste.

14. TRANSPORTATION INFORMATION

DOT: Not Regulated

15. OTHER INFORMATION

The information contained in this Safety Sheet is to the best of Soil & Plant Solution's (SPS's) knowledge, as of the date indicated, believed to be accurate and reliable. However, no representation, warranty or guarantee is implied or expressed regarding the accuracy, reliability or completeness of this information of the use of the product. Nothing contained herein should be construed as a recommendation to use the product in conflict with national or local regulations or existing patents covering any material or its use.