MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

GP Rose
8-14-12

Manufacturer / Supplier
Terralink Horticulture Inc.
464 Riverside Road,
Abbotsford, BC. Canada V2S 7M1
Ph: 604-864-9044
Fax: 604-864-8418

CEDA Emergency Response Team
24 Hr. Emergency Telephone Numbers
604-540-4100 Chemical Spills: 1-800-663-3456

2. HAZARDOUS INGREDIENTS

Hazardous Ingredients		CAS#	TLV	LD_{50} (oral)	LC_{50}
Sipernat	0.5				
Quartz silica		14808-60-7	0.025 mg/m^3	N/AV	N/AV
Terra Green	1.0				
Montmorillonite		1302-78-9	3 mg/m^3	N/AV	N/AV
Quartz (crystalline silica)		14808-60-7	0.025 mg/m^3	N/AV	N/AV
Frit 503G Micro Mix	3.0				
Lead Sulfate		7446-14-2	0.05mg/m^3	N/AV	N/AV
Sodium Borate		11130-12-4	2mg/m^3	(rat) 2330MG/KG	N/AV
Copper Dioxide		1317-39-1	N/AV	(rat) 470mg/m3	N/AV
Copper Sulfate		7758-98-7	1mg/m^3	(rat) 300mg/kg	N/AV
Iron Oxide		1332-23-7	Not est.	(rat) 5500mg/kg	N/AV
Iron Sulfate		7720-78-7	1mg/m^3	(rat) 319mg/kg	N/AV
Manganese Oxide		1344-43-0	0.2mg/m^3	(rat) 1000mg/kg	N/AV
Manganese Sulfate		7785-87-7	0.2mg/m^3	(rat) 332mg/kg	N/AV
Molybdic Oxide		1313-27-5	N/AV	(rat) 125mg/kg	N/AV
Zinc Oxide		1314-13-2	2mg/m^3	(rat) 7950mg/kg	N/AV
Zinc Sulfate		7733-02-2	Not est.	(rat) 2949mg/kg	N/AV

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Non-hazardous Ingredients				
46-0-0 Urea	57-13-6	Not est.	(rat) 14,300mg/kg	N/AV
K-Mag				
Potassium Magnesium Sulphate	14977-37-8	3mg/m^3	(rat) 3000mg/kg	(rat) >42g/m^3/hr
Sodium Chloride	7647-14-5			
Mono-ammonium Phosphate	7722-76-1	10 mg/m^3	(rat) >5,000 mg/kg	N/AV
Ammonium Sulphate	7783-20-2	10 mg/m^3	(rat): 2,840 mg/kg	(guinea pig) >1800mg/m^3 (4hr.)
Limestone	471-34-1	5mg/m^3	6450mg/kg	N/AV
UFLEXX				
N-(n-Butyl)-thiophosphoric triamide	94317-13-6	not est.	N/AV	N/AV
Urea	57-13-6	not est.	(rat) 14,3000mg/kg	N/AV
Organic nitrogen	461-58-5			
Muriate of Potash				
Potassium Chloride	7447-40-7	3mg/m^3	(rat) 2.6g/kg	N/AV
Sodium Chloride	7647-14-5	5mg/m^3	(rat) 3g/kg	(rat) >42g/m^3
Dried Marine Algae	N/AV	N/AV	N/AV	N/AV
3.5-5.5-0.5	N/AV	N/AV	N/AV	N/AV
Feather Meal	N/AV	N/AV	N/AV	N/AV
Potassium sulphate	7778-80-5	N/AV	(rat)6600mg/kg	N/AV
Bone Meal	N/AV	N/AV	N/AV	N/AV
Bentonite	N/AV	N/AV	N/AV	N/AV
Limestone	471-34-1	not est.	(rat) 6450mg/kg	N/AV

3. PHYSICAL DATA

Physical state: Solid
Specific gravity: N/AV
Boiling point: N/AV
Melting point: N/AV
Appearance and Odour: brown, beige, white and blue granules
Odour Threshold (ppm): N/AV
Vapour Density: N/AV
Vapour Pressure (mmHg): Negligible
pH: N/AV
Evaporation Rate: Solid
Coefficient of Water/Oil Distribution: N/AV

4. FIRE AND EXPLOSION DATA

Flammability under which conditions: N/AV
Means of Extinction: Use extinguishing media appropriate for surrounding fire.
Flashpoint: N/AP
Autoignition Temperature: N/AV
Hazardous Combustion Products: N/AV
Upper Flammable Limit (% by volume): N/AV
Lower Flammable Limit (% by volume): N/AV
Explosion Data – Sensitivity to Impact: N/AV
Explosion Data- Sensitivity to Static Discharge: N/AV

5. REACTIVITY DATA

Chemical Stability: Sipernat and Terragreen are stable below 870^{o}C (1598^{o}F). Above 870^{o}C, quartz transforms into tridymite. NOTE: silica combines chemically with most metallic oxides at elevated temperatures to form “glass”.
Incompatibility with Other Substances: STRONG OXIDIZING AGENTS (e.g. sodium hypochlorite or sodium chlorate) – causes decomposition to occur. Risk of fire and explosion. HYDROFLOURIC ACID – attacks silica. MAGNESIUM – heating a mixture of powdered magnesium with slightly wet silica caused a violent explosion. MANGANESE TRIFLOURIDE – a violent reaction may result. SODIUM – finely divided silica (sand) will often react with burning sodium.
Hazardous Decomposition Products: Thermal decomposition of Potassium sulfate at high temperatures may produce very toxic or corrosive sulfur dioxide or other sulfur oxides.

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6. TOXICOLOGICAL PROPERTIES

Routes of Entry
Skin Contact: Y Skin Absorption: N Eye Contact: Y Inhalation: N Ingestion: N

Effects of Acute Exposure to Product: In general, high concentrations of dust may cause coughing and mild, temporary irritation following short-term exposure. Quartz can have potentially serious respiratory effects following long-term inhalation (one year or more). See chronic below.

Effects of Chronic Exposure to Product: Repeated exposure may cause Silicosis, which usually develops gradually over 20 years or more of exposure. Prolonged or repeated exposure to fine airborne crystalline silica dust may cause severe scarring of the lungs. Inhalation of quartz has also bee associated with a number of other, less well characterized harmful effects on the kidney, liver, spleen and immune system disorders.

Exposure Limits: N/AV
Irritancy: YES: contact with eyes / skin, respiratory system.
Sensitization: No
Carcinogenicity: Silica quartz and Terragreen: the International Agency for Research on Cancer (IARC) has concluded that crystalline silica in the form of quartz or cristobalite from occupational sources should be classified as carcinogenic to humans. This conclusion was drawn on the basis of a relatively large number of human population studies that together, provide sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz or cristobalite. In many of these studies, lung cancer risks were elevated and could not be explained by other factors.
Reproductive Toxicity: No
Teratogenicity: No
Mutagenicity: No
Synergistic Products: N/AV

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7. PREVENTIVE MEASURES

Personal Protective Equipment
Gloves: Y Respirator: N Eye: Y Footwear: Y Clothing: Y Other
If Y above specify

Gloves: Rubber, Nitrile

Eye: Dust or splash-proof chemical safety goggles or face shield

Respirator: For operations where the exposure limit may be exceeded, a NIOSH/MSHA approved high efficiency particulate respirator is recommended.

Clothing: Rubber or Nitrile gloves, long sleeve shirts and pants or coveralls, boots, and/or other resistant protective clothing. Have a safety eyewash fountain readily available in the work area.

Engineering Controls: Use local exhaust ventilation to control dust or mist. Supply sufficient replacement air to make up for air removed by exhaust system, process of personnel enclosure and control of process conditions.

Leak and Spill Procedures: DO NOT dry-sweep crystalline silica. Whenever possible, wet down with a water spray to minimize the amount of dust or use a vacuum equipped with HEPA filters. Restrict access to area until completion of clean-up. Provide adequate personal protective equipment and ensure clean-up is conducted by trained personnel only. Ventilate area. Remove any reactive chemicals from the area.

Waste Disposal: According to local, provincial and federal government requirements

Handling Procedures and Equipment: Avoid inhalation and eye contact. Wear rubber or Nitrile gloves, chemical splash goggles and dust mask. Do not mix with incompatible materials. (see Section 5)

Storage Requirements: Keep in a cool, dry and well-ventilated area. Store away from incompatible materials

Special Shipping Information: Normal shipping procedures **PIN:** N/AV

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8. FIRST AID MEASURES

Inhalation: Silica quartz and Terragreen are cancer hazards. If high airborne concentrations are present, take proper precautions to ensure your own safety before attempting to rescue (e.g. wear appropriate protective equipment). Remove source of contamination or have victim move to fresh air. Obtain medical advice immediately

Ingestion: Not normally ingested. If irritation or discomfort occurs, obtain medical advice immediately.

Skin Contact: Flush with lukewarm, gently flowing water until the chemical is removed. Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts, etc.). Obtain medical attention if pain or irritation develops or persists. Completely decontaminate clothing, shoes and leather goods before re-use or discard.

Eye Contact: Do not let victim rub eyes. Immediately flush eye(s) with lukewarm, gently running water for at least 20 minutes, while holding the eyelid(s) open. If irritation persists, obtain medical advice.

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9. PREPARATION INFORMATION

Prepared by:

Regulatory Affairs
Terralink Horticulture Inc.

Telephone Number(s):
604-864-9044
800-661-4559

Date: December 23, 2008.

Class D, Div. 2 – Materials Causing Other Toxic Effects

Disclaimer: