

19-2-16+6S+1Mg+1Fe 90% UMAXX

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

19-2-16+6S+1Mg+1Fe 90% UMAXX

Homogenous Greens Grade

Manufacturer / Supplier

Terralink Horticulture Inc.
464 Riverside Road,
Abbotsford, BC. Canada
V2S 7M1
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CEDA Emergency Response Team
24 Hr. Emergency Telephone Numbers
604-540-4100 Chemical Spills: 1-800-663-3456

2. HAZARDOUS INGREDIENTS

<u>Hazardous Ingredients</u>	<u>%</u>	<u>CAS#</u>	<u>TLV</u>	<u>LD₅₀</u> (oral)	<u>LC₅₀</u>
<u>Sipernat</u> Quartz silica	3.0	14808-60-7	0.025 mg/m ³	N/AV	N/AV
<u>Terra Green</u> Montmorillonite	10.0	1302-78-9	3 mg/m ³		
Quartz (crystalline silica)		14808-60-7	0.025 mg/m ³		
<u>Frit 503G Micro Mix</u>	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
Molybdcic 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
<u>Iron 227 40%Fe</u>	3.0				
Iron Oxide		1332-37-2	5mg/m ³	(rat) 5500mg/kg	N/AV
Iron Sulfate		7720-78-7	1mg/m ³	(rat) 319mg/kg	N/AV
<u>Non-hazardous Ingredients</u>					
UMAXX 47-0-0		57-13-6		(rat) 2250 mg/kg	N/AV
Mono-ammonium Phosphate		7722-76-1	10 mg/m ³	(rat) >5,000 mg/kg	N/AV
Methylene 80		9011-05-6	N/AV	(rat) 2250 mg/kg	N/AV
Ammonium Sulphate		7783-20-2	10 mg/m ³	(rat) 2840mg/kg	N/AV
Potassium Sulfate		7778-80-5	Not Est.	(rat) 6600mg/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			

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3. PHYSICAL DATA

Physical state: Solid
Specific gravity: N/AP
Boiling point: N/AP
Melting point: N/AP
Appearance and Odour: N/AV
Odour Threshold (ppm): N/AV
Vapour Density: N/AP
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: Does not burn. Use extinguishing media appropriate to the surrounding fire conditions
Flashpoint: N/AP
Autoignition Temperature: N/AP
Hazardous Combustion Products: None
Upper Flammable Limit (% by volume): N/AP
Lower Flammable Limit (% by volume): N/AP
Explosion Data – Sensitivity to Impact: N/AV
Explosion Data- Sensitivity to Static Discharge: N/AV

5. REACTIVITY DATA

Chemical Stability

Sipernat and Terragreen: stable below 870oC (1598oF). Above 870oC, quartz transforms to tridymite.
NOTE: silica combines chemically with most metallic oxides at elevated temperatures to form “glass”.

Incompatibility with Other Substances

Silica quartz: STRONG OXIDIZING AGENTS (e.g. sodium hypochlorite or sodium chlorate) – cause decomposition to occur. Risk of fire and explosion.

HYDROFLUORIC ACID – attacks silica

MAGNESIUM – heating a mixture of powdered magnesium with slightly wet silica caused a violent explosion

MANGANESE TRIFLUORIDE – a violent reaction may result

SODIUM – finely divided silica (sand) will often react with burning sodium

XENON HEXAFLUORIDE – may for the explosive xenon trioxide

Terra Green: physical contact between this product and turpentine, hydrofluoric acid, vegetable oil or other unsaturated organic compounds (such as fish oil) may generate heat and/or fire. Do not use this product with these compounds.

Mono-Ammonium Phosphate:

STRONG OXIDIZING AGENTS (e.g. sodium hypochlorite or sodium chlorate) – cause decomposition to occur. Risk of fire and explosion.

STRONG ACIDS (e.g. sulphuric acid) – may react violently

MAGNESIUM – release of ammonia occurs

Hazardous Decomposition Products: None

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6. TOXICOLOGICAL PROPERTIES

Routes of Entry

Skin Contact: no **Skin Absorption:** no **Eye Contact:** YES **Inhalation:** YES **Ingestion:** no

Effects of Short-Term (Acute) exposure to Product: Silica quartz: 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 Long-Term (chronic) exposure to Product:

Silica quartz and Terra Green: 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 been associated with a number of other, less well characterized harmful effects including effects on the kidney, the liver, the spleen and immune system disorders.

Irritancy: YES; contact with eyes / skin

Sensitization: No

Carcinogenicity:

Silica quartz and Terra Green: 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

7. PREVENTIVE MEASURES

Personal Protective Equipment

Gloves: Y **Respirator:** Y **Eye:** Y **Footwear:** N **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-seep 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 a NIOSH/MSHA approved high efficiency particulate respirator. 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

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

8. FIRST AID MEASURES

Inhalation: Silica quarts and Terra Green 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.

9. PREPARATION INFORMATION

Prepared by:

Regulatory Affairs
Terralink Horticulture Inc.

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

Date: August 21, 2009.



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

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