

# MATERIAL SAFETY DATA SHEET

## SECTION 1 – PRODUCT IDENTIFICATION AND USE

<b>PRODUCT IDENTIFIER:</b>	Calmax		
<b>PRODUCT USE:</b>	Liquid fertilizer	<b>WHMIS CLASSIFICATION:</b>	Class D2-B
<b>MANUFACTURER'S NAME:</b>	Grotek Manufacturing Inc.	<b>SUPPLIER'S NAME:</b>	Same as manufacturer
<b>ADDRESS:</b>	284,505 8840 210 <sup>th</sup> Street, Langley, BC V1M 2Y2	<b>ADDRESS:</b>	Same as manufacturer
<b>IN CASE OF EMERGENCY:</b>	(604) 882-7686		

## SECTION 2 – HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	%	CAS #	LD <sub>50</sub> OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LC <sub>50</sub> OF INGREDIENT (SPECIFY SPECIES)
Calcium Chloride	10-15	10035-04-8	Mouse Oral 20 500 mg/Kg	NAV
Magnesium Nitrate	10-15	10377-60-3	Oral Rat 5 440 mg/Kg	NAV
Fulvic Extracts	1-5	NAV	NAV	NAV
Iron EDTA	0.5-1.5	15275-07-7	NAV	NAV

## SECTION 3 – PHYSICAL DATA

<b>PHYSICAL STATE:</b>	Light Amber color liquid	<b>ODOUR &amp; APPEARANCE</b>	Odorless, light amber color liquid
<b>ODOUR THRESHOLD (ppm):</b>	NAV	<b>VAPOUR PRESSURE (mmHg):</b>	NAV
<b>VAPOUR DENSITY (air=1):</b>	NAV	<b>SPECIFIC GRAVITY:</b>	1.1469 g/cm <sup>3</sup>
<b>pH:</b>	2.8	<b>BOILING POINT (°C)</b>	NAV
<b>FREEZING POINT (°C)</b>	NAV	<b>EVAPORATION RATE:</b>	NAV
<b>COEFF. WATER/OIL DIST</b>	NAV	<b>SOLUBILITY (in water):</b>	Soluble in water

## SECTION 4 – FIRE AND EXPLOSION DATA

<b>FLAMMABLE:</b>	NAP		
<b>IF YES, UNDER WHAT CONDITIONS?</b>	Even though product is not combustible, it can contribute to combustion as a source of fuel.		
<b>MEANS OF EXTINCTION:</b>	Water, Fog, Foam, Dry Chemical, CO <sub>2</sub>		
<b>SPECIAL PROCEDURES:</b>	If possible remove containers from fire area without risk. Spray water from as far a distance as possible.		
<b>FLASHPOINT (°C) &amp; METHOD:</b>	NAV	<b>AUTOIGNITION TEMPERATURE (°C)</b>	NAV
<b>LOWER FLAMMABLE LIMIT (% by volume):</b>	NAV	<b>UPPER FLAMMABLE LIMIT (% by volume):</b>	NAV
<b>SENSITIVITY TO IMPACT:</b>	Some evidence	<b>SENSITIVITY TO STATIC DISCHARGE:</b>	No evidence
<b>HAZARDOUS COMBUSTION PRODUCTS:</b>	Iron Oxides, Magnesium Oxides, Ammonia, Nitrogen Oxides, Carbon Oxides, Calcium Oxides, Chlorine, Potassium Oxide		

## SECTION 5 – REACTIVITY DATA

<b>CHEMICAL STABILITY:</b>	Stable at room temperature in closed containers and under normal storage and handling conditions.		
<b>INCOMPATIBILITY:</b>	Oxidizable substances, ammonia, hydrazine, reducing agents, strong acids and bases, alkyl esters.	<b>CORROSIVE BEHAVIOUR:</b>	Corrosive
<b>REACTIVITY AND UNDER WHAT CONDITIONS:</b>	Keep away from ignition sources, shock, water/moisture, heat and incompatible materials.		
<b>HAZARDOUS DECOMPOSITION PRODUCTS:</b>	Please see Hazardous combustion products.		

**SECTION 6 – TOXICOLOGICAL PROPERTIES**

**ROUTES OF ENTRY:**

<b>SKIN CONTACT:</b>	Yes	<b>SKIN ABSORPTION:</b>	Yes	<b>EYE CONTACT:</b>	YES	<b>INHALATION:</b>	Yes	<b>INGESTION:</b>	YES
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**EFFECTS OF ACUTE EXPOSURE TO PRODUCT:**

**INGESTION:** Ingestion of large amounts may cause gastrointestinal irritation characterized by abdominal cramps, nausea and vomiting. Ingestion may also cause headaches, laboured breathing, confusion and dizziness. Other symptoms may include blue lips or fingernails and blue skin. The product may also cause effects on the blood resulting in the formation of methaemoglobin. weight loss or decreased weight gain.

**INHALATION:** Repeated exposure to this product can cause respiratory track irritation.

**EYE CONTACT:** Cause eye irritation

**SKIN CONTACT:** Contact with skin may cause skin irriations

**EFFECTS OF CHRONIC EXPOSURE: NAV**

**EXPOSURE STANDARDS:**

<b>COMPOUND:</b>	<b>STANDARD:</b>	<b>REGULATORY AGENCY:</b>	
Calcium Chloride	NAV	NAV	
Magnesium Nitrate	NAV	NAV	
Fulvic Extracts	NAV	NAV	
Iron EDTA	NAV	NAV	
<b>CARCINOGENICITY:</b>	No evidence	<b>MUTAGENICITY:</b>	No evidence
<b>REPRODUCTIVE HAZARD:</b>	Some evidence	<b>TERATOGENICITY:</b>	Some evidence in rats
<b>IRRITANCY:</b>	Mild irritancy	<b>SENSITIZATION:</b>	Possible skin redening if not washed off affected area
<b>SYNERGISTIC PRODUCTS:</b>	NAV		

**SECTION 7 – PREVENTIVE MEASURES**

**PERSONAL PROTECTIVE EQUIPMENT:** **Hands wear:** water resistant rubber type gloves (latex, nitrile, PVC). **Respirator:** wear- NIOSH approved dust filter cartridge to remove spray dust where dust is visually airborne, **Eye** – wear goggles, **Foot**-wear work boot/rubber boots, **Clothing** – Long sleeve and pants - no special clothing required.

**ENGINEERING CONTROLS:** General mechanical ventilation is adequate.

**HANDLING PROCEDURES:** Do not handle unless safety precaution have been read and understood, avoid eye and skin contact. Avoid inhalation of dust or vapours. Do not puncture, drag or slide container.

**STORAGE REQUIREMENTS:** Should be stored in its original containers in a cool dry location to minimize product expansion and possible leakage

**LEAK AND SPILL PROCEDURE:** Cleanup personnel should wear personal protective equipment as necessary to prevent skin/eye contact. Place into suitable container for reclamation or disposal. Damp mop any residues

**WASTE DISPOSAL:** Dispose of this product as an industrial fertilizer. Reclaim waste where possible. Dispose of insalvagable waste as required by applicable federal, state, and local regulations. Contact your supplier or a licenced chemical waste disposal contractor for treatment and disposal services

**SHIPPING INFORMATION:** Not regulated by TDG

**SECTION 8 – FIRST AID MEASURES**

<b>INHALATION:</b>	Move victim to fresh air. Give artificial respiration ONLY if breathing has stopped, assist breathing with oxygen. Obtain medical assistance immediately.
<b>SKIN CONTACT:</b>	Thoroughly wash the affected area with mild soap and water for fifteen (15) minutes. Seek medical attention if irritation persists.
<b>EYE CONTACT:</b>	Flush eyes, including under the eyelids, with clean running water for at least fifteen (15) minutes. Seek medical attention if irritation persists.
<b>INGESTION:</b>	Do not attempt to give anything by mouth to unconscious victim. If victim is alert and not convulsing, rinse mouth and give water to dilute material. Do not induce vomiting. If vomiting occurs, have victim lean forward with head down to avoid breathing in vomit, rinse mouth. Obtain medical attention immediately.

**SECTION 9 – PREPARATION DATE OF MSDS**

<b>PREPARED BY:</b> Grotek Manufacturing Inc.	<b>ADDITIONAL INFORMATION:</b> At the time of preparation, the information and data contained in this MSDS are believed to be accurate and have been compiled from sources that are believed to be reliable.
<b>BUSINESS NUMBER:</b> 604-882-7686	
<b>DATE:</b> November 24th, 2005	