

# SAFETY DATA SHEET

GROW-CAL

MSDS DATE: 01/14/2015  
SUPERSEDES: NONE

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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

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**PRODUCT NAME:** GROW-CAL

**DISTRIBUTOR:** Growing Solutions, Inc.  
**ADDRESS:** 21719 S. Center Ave, Unit D, New Lenox, IL 60451

**24hr Emergency:** US: 1-800-356-3129; 1-800-424-9300 International: 1-415-821-5338; 1-703-527-3887

**PRODUCT USE:** Liquid formulation for application as an immediate source of calcium for plant nutrition, and as a soil amendment for turf grass and many different crops.

**SECTION 1 NOTES:** None

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## SECTION 2: HAZARDOUS INGREDIENTS

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<u>INGREDIENT</u>	<u>CAS NO.</u>	<u>% WT/% VOL</u>	<u>SARA 313 REPORTABLE</u>	<u>TWA</u>	<u>OSHA STEL</u>	<u>Ceiling</u>	<u>TWA</u>	<u>ACGIH STEL</u>	<u>Ceiling</u>
None									

**SECTION 2 NOTES:** None

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## SECTION 3: HAZARDS IDENTIFICATION

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**ROUTES OF ENTRY:** Eyes, skin, ingestion, inhalation

### POTENTIAL HEALTH EFFECTS

**EYES:** For dust: May cause severe eye irritation. May cause corneal injury. Effects may be slow to heal.

**SKIN:** Brief contact is essentially nonirritating to skin. May cause more severe response if skin is abraded (scratched or cut). May cause more severe response on covered skin (under clothing, gloves). Prolonged contact may cause skin irritation, even a burn.

**INGESTION:** Not harmful if ingested in small quantities. May cause stomach upset.

**INHALATION:** Vapors are unlikely due to physical properties. Mist may cause irritation to upper respiratory tract (nose and throat).

**ACUTE HEALTH HAZARDS:** None known beyond above

**CHRONIC HEALTH HAZARDS:** None known

**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** None known.

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### CARCINOGENICITY

**OSHA:** No      **ACGIH:** No      **NTP:** No      **IARC:** No      **OTHER:** No

**Color:** Clear  
**Physical State:** Liquid  
**Odor:** Odorless  
**Signal Word:** WARNING

**Major Health Hazards:** Causes Eye and Skin Irritation. Harmful if swallowed.  
**Precautionary Statements:** Isolate area. Slipping hazard

**SECTION 3 NOTES:** None

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## SECTION 4: FIRST AID MEASURES

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**If in Eyes:** Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

**If on Skin or Clothing:** Wash skin with plenty of water.

**If Swallowed:** Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** Move person to fresh air; if effects occur, consult a physician

**If Ingested:** If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personal.

**NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:** If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

**SECTION 4 NOTES:** None

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## SECTION 5: FIRE-FIGHTING MEASURES

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**FLAMMABLE LIMITS IN AIR, UPPER:** Unknown  
**(% BY VOLUME) LOWER:** Unknown

**FLASH POINT:** Unknown

**METHOD USED:** Not Applicable.

**AUTOIGNITION TEMPERATURE:** Unknown

**NFPA HAZARD CLASSIFICATION**

**HEALTH:** 0      **FLAMMABILITY:** 0      **REACTIVITY:** 0      **OTHER:** -

**HMS HAZARD CLASSIFICATION**

**HEALTH:** 0      **FLAMMABILITY:** 0      **PHYSICAL HAZARD:** 0      **PROTECTION:** -

**EXTINGUISHING MEDIA:** This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire. Keep people away. Isolate fire and deny unnecessary entry. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear positive-pressure self-contained apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Not applicable.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Not applicable.

**SECTION 5 NOTES:** None.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**ACCIDENTAL RELEASE MEASURES:** Small and large spills: Contain spilled material if possible. Absorb with materials such as sand. Collect in suitable and properly labeled containers. Flush residue with plenty of water.

**Personal Precautions:** Spilled material may cause a slipping hazard. Isolate area. Keep unnecessary and unprotected personnel from entering the area. Use appropriate safety equipment.

**Environmental Precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

**SECTION 6 NOTES:** None

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## SECTION 7: HANDLING AND STORAGE

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**HANDLING:** Product shipped/handled hot can cause thermal burns. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

**STORAGE:** Keep container closed. Product may become a solid at temperatures below 0 C (32 F) (concentrations above 36% calcium chloride).

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**VENTILATION :** Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

### OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

**Eye/Face Protection:** Use chemical goggles.

**Skin Protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly.

**Hand Protection:** If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Polyethylene, Neoprene, Natural Rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Avoid gloves

**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: Particulate filter.

**WORK HYGIENIC PRACTICES:** Wash thoroughly with soap and water after handling product and before eating, drinking, or using tobacco products. Clean affected clothing, shoes, and protective equipment before reuse.

### EXPOSURE GUIDELINES:

Component	List	Type	Value
Calcium chloride	DOW IHG	TWA	10/mg/m3
Sodium chloride	DOW IHG	TWA	10 mg/m3

**SECTION 8 NOTES:** None

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Clear

**ODOR:** Odorless

**PHYSICAL STATE:** Liquid

**pH AS SUPPLIED:** 9.2 Estimated (10% dilution in water)

**pH (Other):**

**BOILING POINT:**

F: 230 – 252<sup>F</sup>

C: 110 – 122<sup>C</sup>

**MELTING POINT:** Not Applicable

F:

C:

**FREEZING POINT:** Varies

F:

C:

**VAPOR PRESSURE (mmHg):** 9 – 15 mmHg

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F:

C: 25<sup>C</sup>

**VAPOR DENSITY (AIR = 1):** Same as water

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F:

C:

**SPECIFIC GRAVITY (H<sub>2</sub>O = 1):** 1.275 – 1.439 Literature

**BULK DENSITY (FOR SOLIDS):** Not Applicable

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F:

C:

**EVAPORATION RATE:**

**BASIS (butyl acetate=1):**

**SOLUBILITY IN WATER:** Completely miscible with water

**VISCOSITY:**

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F:

C:

**SECTION 9 NOTES:** None

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## SECTION 10: STABILITY AND REACTIVITY

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STABILITY:      Stable          Unstable   

CONDITIONS TO AVOID (STABILITY):      None known

INCOMPATIBILITY (MATERIAL TO AVOID):      Avoid contact with: Sulfuric acid. Corrosive to some materials. Avoid contact with materials such as: Brass, Ferrous metal, Mild steel. Flammable hydrogen may be generated from contact with metals such as Zinc, Sodium

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:      None

HAZARDOUS POLYMERIZATION:      Will not occur

CONDITIONS TO AVOID (POLYMERIZATION):      None known.

SECTION 10 NOTES:      None

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### TOXICOLOGICAL INFORMATION:

**Ingestion:**      For the major component(s): LD50, Rat: 900 – 2,100 - mg/kg

**Skin Absorption:**      For the major component(s): LD50, Rabbit: >5,000 mg/kg

**Genetic Toxicology:**      The data presented are for the following material calcium chloride or CaCl<sub>2</sub>. In vitro genetic toxicity studies were negative. The data presented are for the following material potassium chloride. In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown.

SECTION 11 NOTES:      None

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## SECTION 12: ECOLOGICAL INFORMATION

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### ECOLOGICAL INFORMATION:

#### CHEMICAL FATE

Data for Component: Calcium chloride

##### **Movement & Partitioning:**

No bio-concentration is expected because of the relatively high water solubility. Partitioning. From water to n-octanol is not applicable.

##### **Persistence and Degradability:**

Biodegradation is not applicable.

Data for Component: Potassium chloride

##### **Movement & Partitioning:**

Partitioning from water to n-octanol is not applicable.

Data for Component: Sodium chloride

##### **Movement & Partitioning:**

No bio-concentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (Koc between 0 and 50). Partitioning from water to n-octanol is not applicable.

##### **Persistence and Degradability:**

Biodegradation is not applicable.

### EXOTOXICITY

Data for Component: Calcium chloride

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50>100mg/L in the most sensitive species tested).

#### **Fish Acute & Prolonged Toxicity**

LC50, bluegill (*Lepomis macrochirus*); 8,350 – 10,850 mg/l

LC50, mosquito fish (*Gambusia affinis*); 13,400 mg/l

#### **Aquatic Invertebrate Acute Toxicity**

LC50, water flea *Daphnia magna*: 759-3,005 mg/l

#### **Toxicity to Micro-organisms**

EC50L activated sludge, respiration inhibition: > 1,000 mg/l

Data for Component: Potassium chloride

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50>100 mg/l in the most sensitive species tested).

SECTION 12 NOTES:      None

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## SECTION 13: DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL METHOD:** Treatment, storage, transportation and disposal must be in accordance with applicable federal, state/provincial, and local regulations.

**RCRA HAZARD CLASS:** Not regulated

**SECTION 13 NOTES:** None

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## SECTION 14: TRANSPORT INFORMATION

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**U.S. DEPARTMENT OF TRANSPORTATION:** Not regulated. No special requirements.

**SECTION 14 NOTES:** None

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## SECTION 15: REGULATORY INFORMATION

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### U.S. FEDERAL REGULATIONS

**TSCA (TOXIC SUBSTANCE CONTROL ACT):** All components of this product are listed or excluded from listing on the US Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

### CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):** Does not contain any chemicals subject to the reporting requirement of SARA 313

**Section 302/304 Extremely Hazardous Substances** None present

**311/312 HAZARD CATEGORIES:** None

**313 REPORTABLE INGREDIENTS:** None

**STATE REGULATIONS:** No substances on the state hazardous substances list, for the states indicated, are used in the manufacture of products on this Material Safety Data Sheet, with the exceptions indicated. While we have not specifically analyzed these products, the raw materials used in their manufacture or for substances on various state hazardous substances lists, to the best of our knowledge, the products on this Material Safety Data Sheet contain no such substances except for those specifically listed.

Substances known to the state of Arizona to cause cancer: None.

Substances known to the state of Arizona to cause birth defects or other reproductive harm: None.

**SECTION 15 NOTES:** None

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## SECTION 16: OTHER INFORMATION

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**OTHER INFORMATION:** NPCA-HMIS rating  
Health: 0  
Flammability: 0  
Reactivity: 0

**PREPARATION INFORMATION:** Prepared on 11/11/2015

### DISCLAIMER:

The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.

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