

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cal-Plex 12
Product Number: FFN-0066
Product Use: Plant Nutrient

Supplier Information: Verdesian Life Sciences, U.S., LLC
1001 Winstead Drive, Suite 480
Cary, NC 27513
1-800-868-6446

Emergency Number: 1-800-535-5053 INFOTRAC

2. HAZARDS IDENTIFICATION**CLASSIFICATION**

HEALTH HAZARDS:
Serious eye irritation Category 2A

SIGNAL WORD:
WARNING

HAZARD STATEMENTS:
Causes serious eye irritation.

**PRECAUTIONARY STATEMENTS**

Causes serious eye irritation. Wash thoroughly after handling. Wear eye protection/face protection. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENTS	CAS NO.	% BY WEIGHT
Calcium chloride	10043-52-4	15-40
Sodium chloride	7647-14-5	0-2
Potassium chloride	7447-40-7	0-3
Calcium bromide	7789-41-5	0-2.6
Water	7732-18-5	60-85

If Chemical Name/CAS No is "Proprietary" and/or Weight % is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES**First Aid Measures:**

General Advice: Provide this SDS to medical personnel for treatment.

If in Eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

If Swallowed: Call a poison control center or doctor for treatment advice. Wash out mouth with water and give plenty of water to drink. DO NOT induce vomiting. Do not give anything by mouth to an unconscious person.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Most important symptoms and effects: May eye irritation.

Recommendations for immediate medical care and special treatment, if needed:

Note to Physician: Treat symptomatically

5. FIRE FIGHTING MEASURES

Extinguishing Media: Use extinguishing media suitable for surrounding materials. Dry chemical, carbon dioxide, foam, water spray or fog.

Specific Hazards Arising from the substance/mixture during a fire: No special hazards.

Protective equipment and precautions for firefighters: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Clean-Up: Avoid creation of dusty conditions. Sweep or scoop up material and place into container for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

7. HANDLING AND STORAGE

Precautions for Safe Handling:

Handling: Irritating to eyes. Avoid contact with eyes and skin. Avoid inhalation of dust. Wash contaminated skin or clothes immediately after contact with the product. Wash hands after finishing working with the product. Do not eat, drink or smoke when handling the product. Report any skin problems that may develop.

Conditions for safe storage, including any incompatibilities:

Storage: Keep container tightly closed in a dry and well-ventilated place. Do not store with acids, strong oxidizing or reducing agents.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines:

No exposure limits noted for ingredient(s). The following information is given as general guidance.

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear safety glasses with side-shields or face shield. An emergency eyewash or water supply should be readily accessible to the work area.

Skin and Body Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes plus socks, and chemical-resistant gloves (neoprene or nitrile rubber). An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Not normally required. If dusts or vapors exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless to light yellow liquid
Odor:	Odorless
Odor threshold:	No data available
pH:	7-11 in 10% water solution
Melting point/freezing point:	782° C
Initial boiling point and boiling range	>1600° C
Flash point:	Not applicable due to aqueous solution
Evaporation rate:	No data available
Flammability (solid, gas):	Non-flammable
Upper/lower flammability or explosive limits:	Not applicable
Vapor pressure:	0.1 Pa @ 20° C
Vapor density:	Not applicable
Relative density:	2.15 @ 25° C
Solubility(ies):	756 g/L @ 20° C
Partition coefficient: n-octanol/water:	Not applicable
Autoignition temperature:	Not applicable
Decomposition temperature:	Not applicable
Viscosity:	Not data available

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY**Reactivity:**

Chemical Stability: This material is stable under recommended storage and handling conditions.

Possibility of Hazardous Reactions: Calcium chloride is stable under recommended storage and handling conditions.

Conditions to Avoid: Acids, strong oxidizing or reducing agents.

Incompatible Materials: Calcium chloride can cause pitting of and corrosion of some grades of stainless steel. High temperature and stress conditions can promote stress corrosion cracking.

Hazardous Decomposition Products: None when used according to identified uses.

11. TOXICOLOGICAL INFORMATION**Potential Health Effects:**

Likely Routes of Exposure: Inhalation, ingestion, eye and skin contact.

Eye Contact: Causes serious eye irritation.

Skin Contact: Slightly toxic and non-irritating based on toxicity studies. Overexposure by skin absorption may cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.

Ingestion: Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.

Inhalation: Low inhalation toxicity. May cause symptoms similar to those from ingestion.

Medical Conditions Aggravated by Exposure: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Toxicological Data:

Data from laboratory studies on calcium chloride:

Oral, Rat LD₅₀: 2301 mg/kg

Dermal, Rat or Rabbit LD₅₀: >2,000 mg/kg

Inhalation, Rat 4-hr LC₅₀: No data available

Eye Irritation, Rabbit: Causes serious eye irritation

Skin Irritation, Rabbit: Non-irritating

Skin Sensitization, Guinea Pig: Not considered a sensitizer

Subchronic (Target Organ) Effects: No chronic effects shown.

Carcinogenicity / Chronic Health Effects: No effects shown.

Reproductive Toxicity: No impairment of reproductive function attributable to calcium chloride have been noted in laboratory animal studies.

Developmental Toxicity: No effects shown.

Germ Cell Mutagenicity: Calcium chloride is considered not to have a genotoxic potential. Calcium and chloride are normal constituents of the body.

Description of Symptoms: Please see Section 4 of this SDS for symptoms.

Assessment Carcinogenicity: None listed with ACGIH, IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Calcium chloride is not classified as hazardous for the environment. Calcium and chloride are normally occurring ions in the entire ecosystem and release to the environment does not have any long term negative effects. High amounts of chloride ions however cause local disturbance and damage in a sensitive environment.

Fathead Minnow 96-hour LC ₅₀ :	4630 mg/L
Algae 48-hour EC ₅₀ :	2900 mg/l
Daphnia 48-hour EC ₅₀ :	2400 mg/l

Persistence and Degradability: Not required

Bioaccumulation: Calcium chloride is easily dissociated into calcium and chloride ions. Both ions are essential constituents of the body of all animals. No bioaccumulation or biomagnifications are expected for calcium chloride.

Mobility in Soil: Calcium chloride is easily dissociated into calcium and chloride ions. Chloride ions will not absorb on particulate matter. The calcium ion may bind to soil particulate or may form stable inorganic salts with sulphate and carbonate ions, but calcium is naturally present in soil.

Other Adverse Effects: None identified

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

If recycling or re-use is not practical, then the product must be disposed of in accordance with local, state and federal regulations. A suitable way of disposal is landfill or controlled emission to a large recipient with naturally occurring levels of calcium and chloride ions, like the sea. Do not dispose of with acids or strong reducing or oxidizing agents.

Container Disposal Method:

Dispose of container in accordance with local, state and federal regulations.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this SDS.

DOT:

Non Regulated

IMDG:

Non Regulated

IATA:

Non Regulated

15. REGULATORY INFORMATION**U.S. FEDERAL REGULATIONS**

TSCA Inventory: All components listed

SARA Hazard Notification/Reporting:

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370.66):

Immediate and Delayed

Section 313 Toxic Chemical(s):

This material does not contain any chemical components with known CAS numbers that exceed the threshold (de minimis) reporting levels established by SARA Title III, Section 313.

Reportable Quantity (RQ) under U.S. CERCLA:

None

RCRA Waste Code:

Under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste.

State Information:

Other state regulations may apply. Check individual state requirements.

California Proposition 65: Not Listed.

16. OTHER INFORMATION

National Fire Protection Association (NFPA) Hazard Rating:

Health Hazards: 2 **Flammability:** 0 **Instability:** 0 **Special Hazards:** NDA

Key to abbreviations:

NDA = No data available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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