SAFETY DATA SHEET

1. Identification

Product identifier **ProChlo, Calcium Hypochlorite**

Other means of identification

SDS number -

Recommended use Disinfection is swimming pools and drinking water, treatment of industrial cooling water, slime control, odor control, sewage and waste water treatment.

Recommended restrictions Use in accordance with supplier's recommendations.

Manufacturer/Importer/Supplier/Distributor information

Company name F2 Industries, LLC

Address 5543 Edmondson Pike # 156,
Nashville, TN, 37211 USA

Telephone 615-459-4620

E-mail reb@f2ind.com

Website www.f2ind.com

Contact person William "Reb" Ferrell

Emergency Telephone For Hazardous Materials [or Dangerous Goods] Incidents ONLY
(spill, leak, fire, exposure or accident), call CHEMTREC at
CHEMTREC®, USA: 001 (800) 424-9300
CHEMTREC®, Mexico (Toll-Free - must be dialed from within country):
01-800-681-9531
CHEMTREC®, Other countries: 001 (703) 527-3887

2. Hazard(s) identification

Physical hazards	Oxidizing solids	Category 2
Health hazards	Acute toxicity, oral	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Specific target organ toxicity, single exposure	Category 3 (Respiratory Tract irritation)
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 1
	Hazardous to the aquatic environment, long-term hazard	Category 1

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement May intensify fire; oxidizer. Harmful if swallowed. Causes severe skin burns and eye damage. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Keep away from heat. Keep/Store away from clothing and other combustible materials. Take any precaution to avoid mixing with combustibles. Use only outdoors or in a well-ventilated area. Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Do not eat, drink or smoke when using this product. Avoid release to the environment.

Response In case of fire: Use water for extinction. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If inhaled: Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor. If exposed: Call a poison center/doctor. Collect spillage.

Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Substances

Chemical name	CAS number	%
Calcium Hypochlorite	7778-54-3	>65
Calcium Chlorate	10137-74-3	<2
Calcium Carbonate	471-34-1	<2
Calcium Hydroxide	1305-62-0	<2
Sodium Chloride	7647-14-5	<17

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove source of contamination or move victim to fresh air. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped start CPR (cardiopulmonary resuscitation). Get medical attention immediately.

Skin contact Take off immediately all contaminated clothing. Immediately flush skin with plenty of water. Wash contaminated clothing before reuse.

Eye contact Immediately flush with plenty of lukewarm water for up to 20 minutes. Remove any contact lenses and open eyelids wide apart. Continue rinsing. Take care not to raise contaminated water into affected eye. Get medical attention immediately.

Ingestion Never give anything by mouth if victim is rapidly losing consciousness, or if unconscious or convulsing. Have victim rinse mouth thorough with water. Have victim drum one cup (240-300ml 8-10 oz) to dilute material in stomach. Do not induce vomiting. If vomiting occurs naturally, rinse mouth and repeat administration of water. If breathing has stopped, trained personnel should begin artificial respiration or, if the heart has stopped cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.

5. Fire-fighting measures

Means of Extinction: Drench with water and cool surrounding products with water. Water in contact with hot hypochlorite can release hydrochloric acid or chlorine gas. Use appropriate self-fire extinguishing agents – Use water only.

Flash Point and Methods of Determination: Not combustible (does not burn). Be aware that Calcium Hypochlorite can decompose violently at temperatures above 150° C. Releasing heat and oxygen gas.

Upper Flammable Limit: Not applicable.
Lower Flammable Limit: Not applicable.
Auto Ignition temperature: Not applicable.
Hazardous combustions products: Oxygen, Chlorine and Chlorine Monoxide
Protective Equipment: In case of fire wear self-contained breathing apparatus. Use personal protective.

6. Accidental release measures

Personal precautions:	In case of violent reaction and ignition, ensure proper and adequate ventilation and remove all the resources of ignition. Use personal protective requirement and evacuate people to safe areas.
Environmental Precautions:	Ensure the production does not enter the drains and do not allow the material to contaminate ground water systems.
Methods of Clean up:	Protect from contamination and ensure the disposal is done promptly into the suitable containers.

7. Handling and storage

Precautions for safe handling:	Avoid generation dust. Avoid mixing pure material with contaminated material. Use smallest possible amounts in designated areas with adequate ventilation.
Conditions for safe storage:	Store in original containers. Keep container tightly closed in a clean, cool, open and well-ventilated place. Keep out of sun.

8. Exposure controls/personal protection

Engineering Controls:	Local exhaust ventilation required when exposure to dust occurs.
Precautions/Procedure In case of spill:	Restrict access to area until completion of clean up.

Personal Protective Equipment:

Respiration Protection:	Wear dust mask or NIOSH approved type canister type respirator suitable for chlorine.
Eye/Face Protection:	Chemical safety goggles, face shields are necessary.
Skin Protection:	Use impervious gloves, body suite, boots, and/or other resistant protective clothing. Have safety shower/eye wash fountain readily available in the immediate work area.
Materials for Protective Clothing:	Butyl rubber, natural rubber, neoprene, nitrile/polyvinyl chloride, polyurethane, polyvinyl chloride.

9. Physical and chemical properties

Physical state	Solid granules
Appearance Form	White, free flowing granules with a strong chlorine odor.
Odor threshold	Not available.
pH	11.5 (5% Solution)
Specific gravity	2.050 – 2.20 @ 20°C (Water = 1@4 °C)
Melting point/freezing point	Decomposes at temperature above 150°C
Boiling point	Not available.
Vapor Pressure	Not available.
Vapor Density	Not available.
Evaporation Rate	Not available.

10. Stability and reactivity

Reactivity	Calcium Hypochlorite should be kept away from household soap, paint products, sustain lotions, solvents, acid, beverages, lighted cigarettes, combustible material, garbage, dirt, rags, organic material and other pool chemicals. Mixing with any of the above material can initiate a hazardous decomposition of Calcium Hypochlorite. Calcium Hypochlorite should not be mixed with anything but water.
Chemical Instability	Heat, acids, and organic compounds may cause hazardous decomposition of Calcium Hypochlorite. Water added to container to container of Calcium Hypochlorite may generate enough heat to initiate the hazardous decomposition of material.
Ammonia, Urea and conditions of reactivity	From reactive and toxic chloramines
Acids	Release Chlorine gas
Metal Oxides	Can react violently
Hazardous decomposition	Chlorine and Oxygen

Hazardous Polymerization: Does not occur.

Comments: Calcium Hypochlorite is a strong oxidizing agent. Mix only into water contamination of the product may result in chemical reaction with generation of heat, liberation of hazardous gases and possible fire and explosion.

11. Toxicological information

Local effects: When contacted with skid and eyes, causes services caustic burns. If inhaled the corrosive and substances can load to a toxic edema of lungs. Symptoms may be delayed causes throat pain and cough. Ingestion cause burns of the upper digestive and respiratory tracts if swallowed.

Acute Inhalation LC50: (rat) no mortality at 3.5 mg/l (1 hour). Slight to very low toxicity
Acute Dermal LD50: (rabbit) >1000 mg/kg. Slight to very low toxicity
Acute Oral LD50: (rat) 850 mg/kg. Slight to very low toxicity
Carcinogencity Toxicity: Not available.
Reproductive Toxicity: Not available.
Mutagencity: Not available.

12. Ecological information

Ecotoxicity LC50: 0.088mg/L996hr bluegill sunfish – very toxic to aquatic organisms. Make sure not to allow the material contaminate the ground water system.

Environmental fate:
Mobility: Soluble.
Biodegradation: Not available.
Bioaccumulation: Not available.

Physical / Chemical:
Hydrolysis: Not available.
Photolysis: Not available.
Additional information: Not availalble.

13. Disposal considerations

Clean-up: Do not touch spilled material. Prevent material from entering sewers or confined place. Shovel into clean, dry, labeled containers. Flush area with water. Contaminated materials may be dissolved in water, then treated with a reducing agent such as sodium sulphite. Care should be taken while handling contaminated material due to fire risk.

Waste Disposal: Consult appropriate Federal, State/Provincial and local regulatory authorities to ascertain proper disposal procedures. Care should be taken not to mix waste Calcium Hypochlorite with incompatible material. Calcium Hypochlorite should be dissolved in water and the available chlorine should be treated using a reducing agent such as Sodium Sulphite.

14. Transport Information

DOT

UN number: UN3487
UN proper shipping name: Calcium Hypochlorite, Hydrated
Hazard Class: 5.1
Subsidiary risk: 8
Packing group: II
USA – RQ, Hazardous Substance and Quantity: 10 lbs. / 4.5 kg. (Calcium Hypochlorite)
Marine Pollutant: Regular

ICAO/IATA:

UN number: UN3487
UN proper shipping name: Calcium Hypochlorite, Hydrated
Hazard Class: 5.1
Subsidiary risk: 8
Packing group: II

IMDG:

UN number UN3487
UN proper shipping name Calcium Hypochlorite, Hydrated
Class 5.1
Subsidiary risk 8
Packing group II

15. Regulatory information:

EC Labeling Requirements: The product is classified and labeled in accordance with EC directives or respective national laws.

Contains: Calcium Hypochlorite (231-908-7)

Danger Indications:
O – Oxidizing **C – Corrosive** **N – Dangerous Environment**



R8 – Contact with combustible material may cause fire.
R22 – Harmful if swallowed
R31 – Contact with acids liberates toxic gas
R34 – Causes burns
R50 – Very toxic to aquatic organisms

Safety Phrases:
S26 – In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45 – In case of accident or if you feel unwell, seek medical advice immediately
S61 – Avoid release to the environment. Refer to special instructions.
S36/37/39 – Wear suitable protective clothing, gloves, and eye/face protection.
S ½ – Keep locked-up and out of the reach of children.

16. Other Information:

Other Information:
UL Drinking Water Treatment Chemicals Listing- calcium hypochlorite is certified for maximum use at 13mg/L under ANSI/NSF Standard 60.

Risk Phrases:
R8 – Contact with combustible material may cause fire.
R22 – Harmful if swallowed
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