SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Pool Season Calcium Increaser

Alternate Product: Calcium Chloride, Calcium Chloride Flake,

Chemical Formula: Na_2CO^3

General Use: Increase hardness level in swim pool water

Manufacturer:	**Emergency Telephone Numbers:**	**Supplied by:**
QUALCO, INC. 225 Passaic Street Passaic, NJ 07936	800-424-9300 (CHEMTREC – US) 973-473-1222 (Qualco, Inc.)	Alliance Trading Corp. 109 Northpark Blvd., 4th Floor Covington, LA 70433

2. Hazards Identification

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Emergency Overview:

White odorless, granular solid

Signal Word: Warning

Major Health Hazards:

Causes eye and skin irritation. Harmful if swallowed.

Physical Hazards: Heat is generated when mixed with water or aqueous acid solutions.

Precautionary Statements: Wash thoroughly after handling.

GHS Classification:

GHS Contact Hazard – Skin: Category 2 – Causes skin irritation

GHS Contact Hazard – Eye: Category 2B – Causes eye irritation

GHS Acute Toxicity – Inhalation: No data available. Not classified.

GHS Acute Toxicity – Oral: Category 4 – Harmful if swallowed.

GHS: Acute Toxicity – Dermal: Not classified as acutely toxic for dermal exposure.

GHS Carcinogenicity: Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.

Unknown Acute Toxicity: A percentage of this product consists of ingredient(s) of unknown acute toxicity

Unknown Acute Dermal Toxicity: 3% of this product consists of ingredient(s) of unknown acute dermal toxicity.

GHS Hazard Statements:

GHS Health Hazard: Causes skin irritation. Causes eye irritation. Harmful if swallowed.

GHS Precautionary Statement(s) – Prevention:

Wear eye and face protection. Wear protective gloves. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

GHS Signal Word: Warning

GHS Precautionary Statement(s) – Response:
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 on Skin: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
If Swallowed: Call a Poison Center or doctor/physician if you feel unwell. Rinse mouth.
For specific treatment see first aid on product label and/or Section 4 of SDS
GHS – Precautionary Statement(s) – Storage:
There are no Precautionary Storage phrases assigned.
GHS – Precautionary Statement(s) – Disposal:
Dispose of contents and container in accordance with applicable local, regional, national and/or international regulations.
Hazards Not Otherwise Classified (HNOC):
None known.

3. Composition/Information on Ingredients

Synonyms: Calcium dichloride, calcium chloride, calcium chloride flake

Component	Percent	CAS Number
Calcium Chloride	>83 - <87	10043-52-4
Water	>8 - <14	7732-18-5
Potassium Chloride	>2 - <3	7447-40-7
Sodium Chloride	>1 - <2	7647-14-5

Notes: Potassium chloride and sodium chloride are impurities from the naturally occurring source material, brine solution.

4. First Aid Measures

Inhalation: If inhalation of dust occurs and adverse effects result, remove to uncontaminated area. Call a poison control center or doctor/physician if you feel unwell.
Skin Contact: If on skin, wash with plenty of water. If skin irritation occurs, get medical advice/attention. Take off contaminated clothing and wash before reuse. Specific Treatment: Wash with lots of water.
Eye Contact: If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs, get medical advice/attention.
Ingestion: If swallowed, rinse mouth. Contact a poison center or doctor/physician, if you feel unwell.
Most Important Symptoms/Effects (Acute and Delayed):
Acute Symptoms/Effects: Listed below.
Inhalation (breathing): Inhaling dust may cause irritation to upper respiratory tract (nose and throat). Nasal mucosal and oropharyngeal eythema.
Skin: Skin irritation. Direct abrasion of skin from solid, erythema and burn from reaction with water. Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.

Eye: Eye irritation. Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjunctival swelling and cornea opacification from hypertonic solution and heat. Corneal eye pain, redness, acute corneal thickening or whitening.

Ingestion (Swallowing): Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.

Delayed Symptoms Effects:

Chronic exposures to skin and mucus membranes that cause irritation may cause a chronic dermatitis or mucosal membrane problem.

Interaction with Other Chemicals Which Enhance Toxicity: None known

Medical Conditions Aggravated by Exposure: Any skin condition that disrupts the skin, such as abrasions, cuts, psoriasis, fungal infections, etc. Any upper respiratory conditions that compromise mucosa can increase local damage from dust contact. Any eye condition that compromises tear production, conjunctiva, or normal corneal homeostasis.

Protection of First Aiders: At minimum, treating personnel should utilize PPE sufficient for prevention of bloodborne pathogen transmission. If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to Physician: Due to irritant properties, resulting from heat created as solid material dissolves in water, swallowing may result in burns/ulceration of mucus membranes. If burn is present, treat as any thermal burn, after decontamination. No specific antidote. Treatment of exposure should be directed at the control of symotoms and the clinical condition of the patient.

5. Fire Fighting Measures

Fire Hazard: This material does not burn.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

Fire/Explosion Hazards: Not applicable

Fire Fighting Procedures: Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting 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.

Hazardous Combustion Products: Formed under fire conditions: hydrogen chloride gas, calcium oxide

Sensitivity to Impact: None

Sensitivity to Static Discharge: None

Lower Flammability Level (air): Not applicable

Upper Flammability Level (air): Not applicable

Flash Point: Not applicable

Auto-ignition Temperature: Not applicable

6. Accidental Release Measures

Personal Precautions: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard on some surfaces. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to Section 7, handling for additional precautionary measures.

Methods and Materials for Containment and Cleaning Up: Small and large spills. Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13. Disposal considerations for additional information.

Environmental Precautions: Prevent large spills from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. Handling and Storage

Handling: Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80^{o}F, 27^{o}C). Avoid contact with eyes, skin and clothing. Do not swallow. Wash thoroughly after handling. See Section 8. Exposure controls and personal protection.

Storage: Store in a cool dry place. Protect from atmospheric moisture. Keep container tightly closed. Keep separated from incompatible substances (see below or Section 10 of the SDS)

Incompatibilities/Materials to Avoid: Heat is generated when mixed with water or aqueous acids. Spattering and boiling can occur. Avoid contact with bromide trifluoride 2-furan percarboxylic acid because calcium chlorie is incompatible with those substances. Contact with zinc forms flammable hydrogen gas, which can be explosive. Catalyzes exothermic polymerization of methyl vinyl ether. Attacks metals in the presence of moisture, and may release flammable hydrogen gas. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates.

8. Exposure Controls / Personal Protection

Regulatory Exposure Limits: Listed below for the product components that have regulatory occupational exposure limits (OEL's) established.

Component	**OSHA Final PEL TWA**	**OSHA Final PEL STEL**	**OSHA Final PEL Ceiling**
Particles Not Otherwise Regulated (PNOR) 00-00-001	15 mg/m3 (Total) 5 mg/m3 (Respirable	-----	-----

OEL: Occupational Exposure Limit; OSHA: United States Occupational Safety and Health Administration

PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL; Short Term Exposure Limit

Non-Regulatory Limit(s): Listed below for the product components that have advisory (non-regulatory) occupational exposure limits (OEL's) established

Component	**CAS No.**	ACGIH/TWA	ACGIH/STEL	ACGIH/Ceiling	OSHA/TWA	OSHA/STEL
Particulates Not Otherwise Specified (PNOS)	Not Assigned	10 mg/m3 (Inhalable) 3 mg/m3 (respirable)	-------	-------	------	------

Additional Advice: Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

Engineering Controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Personal Protective Equipment:

Eyes Protection: Wear safety glasses with side-shields. For dusty operations or when handling solutions of the material, wear chemical goggles.

Skin and Body Protection: Wear clean, body-covering clothing.

Hands, Arms, and Body: Use gloves chemically resistant to this material. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: Neoprene, Polyvinyl chlorie ("PVC" or "vinyl"), Nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such, but not limited to: Other chemicals which may be handled, physical requirements. (cut/puncture protection, dexterity, thermal protection), potential body reations to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Respiratory protection should be work when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have bee experienced or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators. High efficiency particulate air (HEPA) N95. A respiratory protection program that meets 29 CFR 1910.134 must be followed whenever workplace conditions warrant use of a respirator.

9. Physical and Chemical Properties

Appearance and Color: White, granular solid
Odor: Odorless
Odor Threshold: Not applicable
Molecular Formula: $CaCl_2$
Decomposition Temperature: Not applicable
Auto ignition Temperature: Not applicable
Boiling Point: Not applicable
Freezing Point: Not applicable
Melting Point: 772^{o}C (1422^{o}F)
Vapor Pressure: Negligible at ambient temperature
Vapor Density (air=1): Not applicable
Density/Weight per Volume: 51-61 lb/ft^3
Evaporation Rate: Not applicable
pH: Not applicable
Volatility: Not applicable
Evaporation Rate: Not applicable
Partition Coefficient in Water: Not data available

Flash Point: Not applicable
Flammability: Not applicable
Lower Flammability Level (air): Not applicable
Upper Flammability Level (air): Not applicable
Auto ignition Temperature: Not applicable
Viscosity: Not applicable
Hygroscopic: Yes

10. Stability and Reactivity

Reactivity: Hygroscopic. Liberates large amounts of heat when dissolving in water or aqueous acids.
Chemical Stability: Stable at normal temperatures and pressures.
Possibility of Hazardous Reactions: Avoid moisture.
Conditions To Avoid: None known
Polymerization: Will Not Occur
Incompatible Materials: Heat is generated when mixed with water or aqueous acids. Spattering and boiling can occur. Avoid contact with bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances. Contact with zinc forms flammable hydrogen gas, which can be explosive. Catalyzes exothermic polymerization of methyl vinyl ether. Attacks metals in the presence of moisture, and may release flammable hydrogen gas. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates.
Hazardous Decomposition Products: Formed under fire conditions, hydrogen chloride gas, calcium oxide

11. Toxicological Information

Product Toxicity Data: Calcium Chloride Flakes
LD50 Oral: 1126 mg/kg – oral acute toxicity estimate (ATE)
LD50 Dermal: 2637 mg/kg – Dermal Acute Toxicity Estimate (ATE)
LC50 Inhalation: No data is available
Component Toxicity Data: May differ from product toxicity data
Calcium Chloride (CAS #100-52-4): LD50 Oral: 1000 mg/kg (rat)
LD50 Dermal: 2630 mg/kg (Rat)
LC50 inhalation: -----

Potential Health Effects:
Eye Effects: For solid: May cause slight eye irritation, mechanical injury only. Dust formation should be avoided as dust can cause severe eye irritation with corneal injury.
Skin Effects: Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation, even a burn. Not classified as corrosive to the skin according to DOT guidelines. May cause more severe response if skin is damp, abraded (scratched or cut) or covered by clothing, gloves, or footwear.
Inhalation: Dust may cause irritation to upper respiratory tract (nose and throat)
Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury, however, swallowing large amounts may cause local mucosal damage to esophagus and stomach. Swallowing may result in gastrointestinal irritation or ulceration.

Chronic Effects: Chronic exposures to calcium chloride that cause irritation may cause a chronic dermatitis or mucosal membrane problem. For the minor component(s): Potassium Chloride: In animals, effects have been reported on the following organs after ingestion. Gastrointestinal tract, heart, and kidney Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.
Sodium Chloride: Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.
Signs and Symptoms of Exposure: Solution and or solids may be visible on the skin or eyes. Localized redness, warmth, and irritation consistent with mechanism of injury; abrasion, burn, hypertonic solution.
Inhalation (breathing): Inhaling dust may cause irritation to upper respiratory tract (nose and throat). Nasal mucosal and oropharyngeal eythema.
Skin: Skin irritation. Direct abrasion of skin from solid, from solid, erythema and burn from reaction with water. Prolonged contact and occlusion may cause more severe symptoms. Damage is localized to contact areas.
Eye: Eye irritation. Direct abrasion of cornea from solid, erythema and burn from reaction with water, conjuctival swelling and cornea opacification from hypertonic solution and heat. Corneal eye pain, redness, acute corneal thickening or whitening.
Ingestion (Swallowing): Consumption of solids or hypertonic solutions causes nausea, vomiting, and increased thirst.
Interaction with Other Chemicals Which Enhance Toxicity: None known.
GHS Health Hazards:
GHS: Acute Toxicity-Dermal: Not classified as acutely toxic for dermal exposure
GHS: Acute Toxicity-Oral: Category 4. Harmful if swallowed.
GHS: Acute Toxicity-Inhalation: No data available. Not classified.
GHS: **Contact Hazard-Eye:** Category 2B – Causes eye irritation
GHS Contact Hazard-**Skin:** Category 2 – Causes skin irritation
GHS-Carcinogenicity: Not classified as a carcinogen per GHS criteria. This product is not classified as a carcinogen by NTP, IARC, or OSHA.
Mutagenic Data: Not classified as a mutagen per GHS criteria. The data presented are for the following material. Calcium chloride (CaCl2) – 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. For the minor component(s): Sodium chloride – invitro genetic toxicity studies were predominantly negative.
Developemental Toxicity: Not classified as a developmental or reproductive toxin per GHS criteria. For the major components. Did not cause birth defects or any other fetal effects in laboratory animals.

12. Ecological Information

Ecotoxicity Data:
Aquatic Toxicity: Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50>100 mg/L in the most sensitive species tested).
Freshwater Fish Toxicity: Calcium Chloride: LC50 bluegill (Lepomis macrochirus): 8,350-10,650 mg/l
Potassium Chloride: EC50, water flea Daphnia magna, 24 h, immobilization: 590 mg/l
LC50, water flea Ceriodaphnia dubia, 96 h: 3,470 mg/l
Sodium Chloride: LC 50, water flea daphnia magna 4,571 mg/;
Fate and Transport:

Biodegradation: This material is inorganic and not subject to biodegradation
Persistence: Calcium chloride is believed not to persist in the environment because it is readily dissociated into calcium and chloride ions in water. Calcium chloride released into the environment is thus likely to be distributed into water in the form of calcium and chloride ions. Caclium ions may remain in soil by binding to soil particulate or by forming stable salts with other ions. Chloride ions are mobile and eventually drain into surface water. Both ions originally exist in nature and their concentrations in surface water will depend on various factors such as geological parameters, weathering and human activities.
Bioconcentration: No bioconcentration 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.
Bioaccumulative Potential: Calcium chloride and its dissociated forms (calcium and chloride ions) are ubiquitous in the environment. Calcium and chloride ions can also be found as constituents in organisms. Considering its dissociation properties, calcium chloride is not expected to accumulate in living organisms
Mobility in Soil: Calcium chloride is not expected to be absorbed in soil due to its dissociation properties and high water solubility. It is expected to dissociate into calcium and chloride free ions or it may form stable inorganic or organic salts with other counter ions, leading to different fates between calcium and chloride ions in soil and water components. Calcium ions may bind to soil particulate or may form stable inorganic salts with sulfate and carbonate ions. The chloride ion is mobile in soil and eventually drains into surface water because it is readily dissolved in water.

13. Disposal Considerations

Waste from Material:
Reuse or reprocess if possible. All disposal practices must be in compliance with all Federal, State and local laws and regulations. Regulations may vary in different locations. Report spills if applicable. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.. There is no control over the management practices or manufacturing processes of parties handling or using this material. The information presented here pertains only to the product as shipped in its intended condition as described in SDS section Composition/Information. For unused and uncontaminated product, the preferred options include sending to a licensed, permitted: Landfill and waste water treatment system.
Container Management:
Dispose of container in accordance with applicable local, regional, national and/or international regulations. Container rinsate must be disposed of in compliance with applicable regulations.

14. Transportation Considerations

Land Transport
US DOT 49 CFR 172.101 Status: Not regulated.
Canadian Transportation of Dangerous Goods: Not regulated
Maritime Transport (IMO/IMDG): Not regulated

15. Regulatory Information

United States

OSHA Regulatory Status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
CERCLA Sections 102a/103 Hazardous Substances (40 CFR 302.4): Not regulated
SARA EHS Chemical (40 CFR 355.30): Not regulated
EPCRA Sections 311/312 Hazard Categories (40 CFR 370.10): Acute Health Hazard
EPCRA Section 313 (40 CFR 372.65): To the best of our knowledge, this product does not contain chemicals at levels which require reporting under this statute.
OSHA Process Safety (PSM)(29 CFR 1910.119): Not regulated
US Inventory Status (Toxic Substance Control Act - TSCA): All components are listed or exempt.
TSCA 12(b): This product is not subject to export notification.
Canadian Chemical Inventory: All components of this product are listed on either the DSL or the NDSL
State Regulations:
California Proposition 65: This product is not listed, but it may contain impurities/trace elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 State Drinking Water and Toxic Enforcement Act. WARNING: This product (when used in aqueous formulations with a chemical oxicizer such as oxone) may react to form calcium bromated, a chemical known to the State of California to cause cancer.

16. Other Information

Prepared by: Qualco, Inc.
Revision Date: Rev. 3, June 2015
Disclaimer: We recommend that you use this product in a manner consistent with the listed use. If your intended use is not consistent with the stated use, please contact your sales or technical service representative. This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

HMIS

Health:	2
Flammability:	0
Reactivity:	0

HMIS: Hazardous Material Identification System
Degree of Hazard Code:
4 = Severe
3 = Serious
2 = Moderate
1 = Slight
0 = Minimal

NFPA

Health:	1
Flammability:	0
Reactivity:	0
Special:	None

No Special Requirements
NFPA: National Fire Protection Association

Degree of Hazard Code:
4 = Extreme
3 = High
2 = Moderate
1 = Slight
0 = Insignificant

Reasons for Revision:
Comply with new SDS format
Updated Hazards Information
Updated first aid measures
Revised Handling/Storage Recommendations

Other Information:
The information given corresponds to the current state of our knowledge and experience of the product, and is not exhaustive. This applies to product which conforms to the specification, unless otherwise stated. In this case of combinations and mixtures one must make sure that no new dangers can arise. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and protection of human welfare and the environment.
The Safety Data Sheet is offered for your information, consideration and investigation as required by Federal Hazardous Products Act and related legislation. The information is believed to be accurate but provides no warranties, either expressed or implied.