MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company Information

Tianjin Pool & Spa Corporation
2522 Malt Avenue
Commerce, CA 90040

Emergency Telephone Number: 800-535-5053
Company Tel: 626-571-1885

EPA Registration No.: 88346-7
Product Brand Name: Superchlo, Dry Chlorinating Granules
Supply Item Manager: Sherman Wang
MSDS Serial Number: CHDHD
Type of Container: Plastic Drums and Pails
Net Unit Weight: 1 lb, 4 lb, 8 lb, 15 lb, 25 lb, 40 lb, 88 lb and 100 lb

Section 2 - Hazards Identification

Emergency Overview

DANGER. Highly corrosive. Causes skin and eye damage. May be fatal if swallowed. Do not get in eyes, on skin or on clothing. Wear goggles or face shield and rubber gloves when handling this product. Irritating to nose and throat. Avoid breathing dust. Remove and wash contaminated clothing before reuse.

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, or of inhalation. Irritating to nose, mouth, throat, lungs, and burns respiratory tract. Severe eye irritation and/or burns, impairment of vision, corneal damage. Inflammation of the eye is characterized by redness, watering, and itching. Severe skin irritation and/or burns. Over exposure can cause destruction of dermis with impairment of skin at contact site. Skin inflammation is characterized by itching, scaling, reddening, or occasionally, blistering. Ingestion will produce irritation to gastro-intestinal or respiratory tract which is characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulcer. Over exposure by inhalation may cause respiratory irritation. Inhalation is characterized by shortness of breath, wheezing, choking, chest pain, impairment of lung function, permanent lung damage.
**Potential Chronic Health Effects:**
Harmful if inhaled or ingested. The substance is toxic to lungs, mucous membranes.
Explanation Carcinogenicity: Product not known or reported to be carcinogenic by any reference source including IARC/OSHA/NTP/EPA.

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**Section 3 - Composition Information**

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<tr>
<th>Component</th>
<th>CAS #</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Calcium Hypochlorite</td>
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<tr>
<td>Sodium Chloride</td>
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<td>Calcium Chloride</td>
<td>3 10043-</td>
<td>0.6</td>
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<td>Calcium Carbonate</td>
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<td>18</td>
</tr>
<tr>
<td>Water</td>
<td>34-1 7732-</td>
<td>18-5</td>
</tr>
</tbody>
</table>

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**Section 4 - First Aid Measures**

**Emergency/First Aid Procedure:**

**General Advice:** First Aid responders should pay attention to self-protection and use the recommended protective clothing if potential for exposure exists (See Section 8).

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

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

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. 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 person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.
Have the product container, label, or Material Safety Data Sheet with you when calling a poison control center or doctor, or going for treatment.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable. Auto-Ignition Temperature: Not applicable. Flash Points: Not applicable.
Flammable Limits: Not applicable.
Products of Combustion: Not available.
Fire Hazards in Presence of Various Substances: Not applicable.
Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
Fire Fighting Media and Instructions: Not applicable. Do not use dry extinguishers containing ammonium compounds. Use water to cool containers exposed to fire.
Special Remarks on Fire Hazards: Not available.
Special Remarks on Explosion Hazards: Not available.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.
Large Spill:
Oxidizing material. Corrosive solid. Stop leak if without risk. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing, etc.). Keep substance damp using water spray. Do not touch spilled material. Clean up spills in a manner that does not disperse dust into the air. Prevent entry into sewers, basements or confined areas. Call for assistance on disposal.

Hazardous concentration in air may be found in local spill area. Remove all ignitable source. Stop spill immediately. Notify appropriate persons. Neutralizing Agent: None specified by manufacturer.
Precautions-Handling/Storing: Don't take internally. Avoid, eye, skin, clothing contact. Upon contact with skin or eyes, wash off with water. Keep container tightly sealed. Store in cool dry well ventilated area.
Other Precautions: Don't store at temperatures >52°C (125°F).
**Shelf Life:** Approximately 2 years at temperatures <52°C/Low humidity. Containers must be clean, free of organic residues. Incompatible material for storage/transportation: acids, other organic materials, oxidizers, all corrosive liquid.

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**Section 7: Handling and Storage**

**Precautions:**
Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, acids, moisture.

**Storage:**
May corrode metallic surfaces. Store in a metallic or coated fiberboard drum using a strong polyethylene inner package. Corrosive materials should be stored in a separate safety storage cabinet or room.

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**Section 8: Exposure Controls/Personal Protection**

**Engineering Controls:**
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Personal Protection:**
Splash goggles. Lab coat. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

**Personal Protection in Case of a Large Spill:**
Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

**Exposure Limits:** Not available.

**Respiratory Protection:** Wear NIOSH/MSHA approved respirator. NIOSH/MSHA approved full face-piece with chlorine cartridges and dust/mist filter.

**Ventilation:** Use local exhaust ventilation to minimize dust and chlorine levels.

**Protective Gloves:** Gloves - Neoprene or PVC
Eye Protective Equipment: Chemical goggles

Other Protection Equipment: Boots, aprons, or impermeable suit to avoid skin and eye contact (Neoprene or PVC material).

Work Hygienic Practices: Launder contaminated clothing before reuse.

Section 9: Physical and Chemical Properties

Physical State: Solid
Odor: Chlorine-Like
Color: White
Boiling Point: Does not boil due to its solid state
Melting Point: Decomposes above 177°C
Bulk Density: 1 Tonne/M3
Solubility in Water: 21.5g/100ml at 0°C; 23.4g/100ml at 40°C
Stability (Temperature, Metals): rapidly decomposes on exposure to air. May decompose violently if exposed to heat or direct sunlight (thermally unstable); decomposes at 177°C (350°F)
Storage Stability Data: less than 3% loss of available chlorine per year under warehouse conditions

Section 10: Stability and Reactivity Data

Conditions to avoid (Stability): Unstable at temperatures above 177°C, high temperatures > 125°F, high humidity.
Materials to avoid: acids, organics, nitrogen containing compounds, dry powder extinguishers (contains mono-ammonium phosphate).
Hazardous Decomposition Products: Chlorine gas
Hazardous Polymerization Occurrence: None known.
Conditions to avoid (Polymerization): Not Applicable.
Special Remarks on Reactivity: Not available.
Special Remarks on Corrosivity: Not available.
Polymerization: None known.
Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Skin. Ingestion. **Toxicity to Animals:**
Acute oral toxicity: 850 mg/kg [Rat]
**Chronic Effects on Humans:** Harmful if inhaled or ingested. The substance is toxic to lungs, mucous membranes.
**Other Toxic Effects on Humans:** Very hazardous in case of skin contact (irritant), of ingestion, or of inhalation. Irritating to nose, mouth, throat, lungs, burns respiratory tract, lung edema.
**Eye:** Severe irritation and/or burns, impairment of vision, corneal damage.
**Skin:** Severe irritation and/or burns.
**Explanation Carcinogenicity:** Product not known or reported to be carcinogenic by any reference source including IARC/OSHA/NTP/EPA.
**Signs/Symptoms of Overexposure:** Causes destruction of dermis with impairment of skin at contact site.
**Ingestion:** Irritating and/or burns entire gastro intestinal tract including stomach, intestines. Nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulcer.
**Inhalation:** Shortness of breath, wheezing, choking, chest pain, impairment of lung function, permanent lung damage.
**Skin:** Red, swell, scab formation
**Medical Conditions Aggravated by Exposure:** Asthma, respiratory, and cardiovascular disease.

Section 12: Ecological Information

**Ecotoxicity:** Not available.
**Environmental Fate:** Not available.

Section 13: Disposal Considerations

Waste material must be disposed of in accordance with federal, state, provincial and local environmental control regulations. Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

Section 14: Transport Information

DOT PSN CODE: CQT
DOT proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED
DOT Class: 5.1
DOT ID Number: UN2880
DOT Pack Group: II
DOT Label: OXIDIZER
IMO PSN Code: DKN
IMO Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
IMO Regulations Page Number: 5138
IMO UN Number: 2880
IMO UN Class: 5.1
IMO Subsidiary Risk Label: -
IATA PSN Code: EZD
IATA UN ID Number: 2880
IATA Proper Shipping Name: CALCIUM HYPOCHLORITE, HYDRATED MIXTURE
IATA UN Class: 5.1
IATA Label: OXIDIZER
AFI PSN Code: EZD
AFI Prop. Shipping Name: CALCIUM HYPOCHLORITE HYDRATED
AFI Class: 5.1
AFI ID Number: UN2880
AFI Pack Group: II
AFI Special Prov: P5
AFI Basic Pac Ref: A9.8
Additional Trans Data: LAND(DOT)/WATER(IMO)/AIR(IATA/ICAO)

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Section 15: Other Regulatory Information


Other Classifications:

HMIS (U.S.A.):
  Health Hazard: 3
  Fire Hazard: 0
  Reactivity: 2

National Fire Protection Association (U.S.A.):
  Health: 3
  Flammability: 0
  Reactivity: 1

Protective Equipment: Gloves. Lab coat. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation
is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.
Other Special Considerations: Not available.
Last Updated: Dec. 26, 2012