

**I - PRODUCT IDENTIFICATION**

Product: DuroKleen 101  
 Chemical Family: Hypochlorite  
 Formula: Not Applicable / Mixture  
 CAS Number: 7778-54-3  
 Synonyms: Calcium Hypochlorite Tablets with Scale Inhibitor

**COMPANY IDENTIFICATION**

AllChem Performance Products  
 6010 NW First Place  
 Gainesville, FL 32607  
 Tel: 352-378-9696

**DISTRIBUTED BY:**

APTech Group, Inc.  
 11411 Williamson Road  
 Blue Ash, OH 45241

**24 HR EMERGENCY TELEPHONE NUMBER**

INFOTRAC (Transportation): (800)535-5053

**II – COMPOSITION, INFORMATION ON INGREDIENTS**

**Available chlorine: 65%**

Chemical or Common Name:		Exposure Limits	
		OSHA PEL:	ACGIH TLV:
Calcium Hypochlorite			
7778-54-3	60-80%		
Sodium Chloride			
7647-14-5	10-20%	NE	NE
Calcium Chlorate			
10137-74-3	0-5%	NE	NE
Calcium Chloride			
10043-52-4	0-5%	NE	NE
Calcium Hydroxide			
1305-62-0	0-4%	None	5mg/m3
Calcium Carbonate			
471-34-1	0-5%		10mg/m3 15mg/m3 (Total Dust)
		5mg/m3 (Respirable fraction)	
Water			
7732-18-5	5.5-10%	NE	NE

**\*NE- none established**

Calcium hypochlorite, calcium chlorate, calcium chloride, calcium hydroxide and calcium carbonate are hazardous per 29 CFR 1910.1200

**III – HAZARDS IDENTIFICATION**

**WARNING STATEMENT AND WARNING PROPERTIES:** May be fatal if swallowed. Avoid breathing dust or fumes. Harmful if product is inhaled in high concentrations. Causes skin, eye, digestive tract and respiratory tract burns.

Primary Route(s) of Entry:

- Ingestion: (X)
- Inhalation: (X)
- Skin Contact: (X)
- Eye Contact: (X)

Primary Health Hazards (Acute and Chronic):

Human Response Data:

Odor Threshold: Approximately 1.4 mg/cubic-meter, based on odor threshold of chlorine.

Irritation Threshold: Approximately 13-22 mg/cubic-meter, based on the irritation threshold of chlorine.

Immediately Dangerous to Life or Health: Approximately 45 mg/cubic-meter, based on IDLH Concentration of chlorine.

Carcinogenity Listings:

- OSHA: ()
- NTP: ()
- IARC: ()

Signs & Symptoms of Exposure (Acute and Chronic):

Ingestion:

Acute: Irritation and/or burns can occur to the entire gastrointestinal tract, including the stomach and intestines, characterized by nausea, vomiting, diarrhea, abdominal pain, bleeding and/or tissue ulceration. Due to the corrosive nature of this product, ingestion may be fatal.

Chronic: There are no known or reported effects from chronic exposure except for effects similar to those experienced from single exposure.

Inhalation:

Acute: Inhalation of dust or vapor from this product can be irritating to the nose, mouth, throat and lungs. In confined areas, mechanical agitation can result in high levels of dust, and reaction with incompatible materials can result in high concentrations of chlorine vapor, either of which may result in burns to the respiratory tract, producing lung edema, shortness of breath, wheezing, choking, chest pains, impairment of lung function and possible permanent lung damage.

Chronic: Chronic (repeated) inhalation exposure may cause impairment of lung function and permanent lung damage.

Skin Contact:

Acute: Dermal exposure can cause severe irritation and/or burns characterized by redness, swelling and scab formation. Prolonged skin exposure may cause permanent damage.

Chronic: Effects from chronic skin exposure would be similar to those from single exposure except for effects secondary to tissue destruction.

Eye Contact: Severe irritation and/or burns can occur following eye exposure. Contact may cause impairment of vision and corneal damage.

Medical Conditions Aggravated By Exposure: Asthma, respiratory and cardiovascular disease.

## **IV – FIRST AID MEASURES**

Emergency and First Aid Procedures:

Ingestion: Immediately drink large quantities of water. Do Not induce vomiting. Call a physician at once. Do Not give anything by mouth if the person is unconscious or if having convulsions.

Inhalation: Remove victim to fresh air. Support respiration if needed. Call a physician.

Skin Contact: Immediately flush with water for at least 15 minutes. Call a physician. If clothing comes in contact with the product, it should be removed immediately and laundered before reuse.

Eye Contact: Immediately flush with large amounts of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Call a physician at once.

Interactions with other chemicals, which enhance toxicity: None known or reported.

## **V – FIRE FIGHTING MEASURES**

FIRE AND EXPLOSION HAZARD DATA

This product is chemically reactive with many substances. Any contamination of the product with other substances by spill or otherwise, may result in a chemical reaction and fire. This product is a strong oxidizer, which is capable of intensifying a fire once started.

Flash Point: (Method Used) Not Applicable

Flammable: No

Combustible: No

Pyrophoric: No

Flammable Limits: At normal atmospheric temperature and pressure (Percent volume in air)

LEL: Not Applicable

UEL: Not Applicable

Auto-ignition Temperature: Not applicable

NFPA Ratings:                      HMIS Rating:

Health:                              3                                      3

Flammability:                      0                                      0

Reactivity:                              1                                      1

Special Hazard Warning: OX (Oxidizer)

Extinguishing Media: Water Only

Special Fire-fighting Procedures: Do Not Use Dry Extinguishers containing ammonium compounds. Use water to cool containers exposed to fire. Personal Protection for Emergency Spill and Fire-Fighting situations: Response to this material requires the use of full encapsulated suit and NIOSH approved positive pressure supplied air respirator.

Unusual Fire and Explosion Hazards:

## **VI – ACCIDENTAL RELEASE MEASURES**

Steps To Be Taken In Case Material Is Spilled Or Released: Spill Mitigation Procedures:

Hazardous concentrations in air may be found in local spill area and immediately downwind. Remove all sources of ignition. Stop sources of spill as soon as possible and notify appropriate personnel.

AIR RELEASE: Vapors may be suppressed by the use of a water fog. All water utilized to assist in fume suppression, decontamination or fire suppression may be contaminated and must be contained before disposal and/or treatment.

WATER RELEASE: This material is heavier than water. This material is soluble in water. Monitor all exit water for available chlorine and pH. Advise local authorities of any contaminated water release.

LAND SPILL: Danger: All spills of this product should be treated as contaminated. Contaminated product may initiate a chemical reaction, which may spontaneously ignite any combustible material present, resulting in a fire of great intensity. In case of a spill, separate all spilled product from packaging, debris and other material. Using a clean broom or shovel, place all spilled product into plastic bags, and place those bags into a clean, dry disposal container, properly marked and labeled. Disposal containers made of

plastic or metal are recommended. Do not seal disposal containers tightly. Immediately remove all product in disposal containers to an isolated area outdoors.

Place all damaged packaging material in a disposal container of water to assure decontamination (i.e. removal of all product) before disposal. Place all undamaged packaging in a clean, dry container properly marked and labeled. Call for disposal procedures.

SPILL RESIDUES: Dispose of per guidelines under section XIII: Waste Disposal.

Personal Protection for Emergency Spill and Fire-Fighting situations: Response to this material requires the use of full encapsulated suit and NIOSH approved positive pressure supplied air respirator.

## **VII – HANDLING AND STORAGE**

Precautions to Be Taken in Handling and Storage:

Do Not Take Internally. Avoid inhalation of dust and fumes. Avoid contact with eyes, skin or clothing. Upon contact with skin or eyes, wash off with water. Remove and wash contaminated clothing before reuse.

Storage Conditions: Keep product tightly sealed in original containers. Store product in a cool, dry, well-ventilated area. Store away from combustible or flammable products. Keep product packaging clean and free of all contamination, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc. Do Not Store At Temperatures above: 35°C (95°F). Storage above this temperature may result in rapid decomposition, evolution of chlorine gas and heat sufficient to ignite combustible products.

Other Precautions:

Shelf Life Limitations: Shelf life (that is, the period of time before the product goes below stated label strength) is determined by storage time and temperature. Do not store product at temperatures above 35°C (95°F). When stored under moderate temperature conditions, product will maintain stated label strength for approximately two years. Prolonged storage at 35°C (95°F) or above will significantly shorten the shelf life. Storage in a climate-controlled storage area or building is recommended in those areas where extremes of high temperatures occur.

Incompatible Materials for Packaging: Product packaging must be clean and free of contamination by other materials, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder, fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

Incompatible Materials for Storage or Transport: Do not allow product to come in contact with other materials, including, e.g., other pool treatment products, acids, organic materials, nitrogen-containing compounds, dry powder fire extinguishers (containing mono-ammonium phosphate), oxidizers, all corrosive liquids, flammable or combustible materials, etc.

## **VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION**

Respiratory Protection: Wear NIOSH approved respirator if dusts are created. NIOSH approved full face-piece respirator with chlorine cartridges and dust/mist pre-filter.

Ventilation: Use local exhaust ventilation to minimize dust and chlorine levels where industrial use occurs. Otherwise, ensure good general ventilation.

Other Protective Clothing or Equipment:

Skin and eye protective equipment: Wear gloves, and safety glasses to avoid skin and eye contact. Where industrial use occurs, chemical goggles and/or full impermeable suit may be required. Protective clothing type: Neoprene (this includes: gloves, boots, apron, protective suit)

Work/ Hygienic Practices:

## **IX - PHYSICAL/CHEMICAL CHARACTERISTICS**

Boiling Point: Not Applicable

Vapor Pressure (mm Hg): Not Applicable

Vapor Density (Air=1): Not Applicable

Solubility in Water: Approximately 18% @ 25°C (Product also contains calcium hydroxide and calcium carbonate which will leave a residue.)

Appearance and odor: White tablet. Chlorine-like odor.

Specific Gravity (H<sub>2</sub>O=1): Not Applicable

Percent volatile by volume: Not Applicable

Melting Point:

Evaporation Rate: Not Applicable

Freezing Point: Not Applicable

Decomposition Temperature: Onset – Approximately 170-180 °C (338-356°F)

Bulk Density: 1.9 g/cc

pH @ 25°C: 10.4-10.8 (1% solution)

Molecular Weight: 143 (Active ingredient)

Coefficient of oil/water distribution: Not Applicable

## **X – STABILITY AND REACTIVITY**

Stability: ( ) Unstable (X) Stable

Conditions under which this product may be unstable:

Temperatures above: 95°F



U.S. Department of Transportation - 49 CFR

Proper Shipping Name: RQ, Calcium Hypochlorite Hydrated

Hazard Class/Division Number: 5.1

ID Number: UN 2880

Packing Group: PG II

Label Required: Oxidizer

Placard Required: Oxidizer

Emergency Guide No: 140

Reportable Qty: 10 lbs

**XV - REGULATORY INFORMATION**

This chemical appears on the following lists:

- (X) SARA Title 3: Hazard Categories, per 40 CFR 370.2:
  - Health: Immediate (Acute)
  - Physical: Fire and Reactivity
- (X) TSCA

NSF Limits: NSF Drinking Water Treatment Chemicals Listing – DuroKleen 101 is certified for maximum use at 15 mg/L under NSF/ANSI Standard 60

Emergency Planning and Community right to know, per 40 CFR 355, APP.A:

Extreme Hazardous Substance – Threshold planning quantity: None established

Supplier Notification Requirements, per 40 CFR 372.45: None established

Regulated Under FIFRA, USDA & FDA

**XVI - ADDITIONAL INFORMATION**

This MSDS replaces 04/12/2010. **ALWAYS COMPLY WITH ALL APPLICABLE INTERNATIONAL, FEDERAL, STATE AND LOCAL REGULATIONS REGARDING THE TRANSPORTATION, STORAGE, USE AND DISPOSAL OF THIS CHEMICAL.**

Due to the changing nature of regulatory requirements, the REGULATORY INFORMATION listed in Section XV of this document should NOT be considered all-inclusive or authoritative. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

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