**A. GENERAL INFORMATION**

**TRADE NAME (COMMON NAME OR SYNONYM):**
- Flake Calcium Chloride
- Powdered Calcium Chloride

**C.A.S. NO.:**
- 10035-04-8

**CHEMICAL NAME:**
- Calcium Chloride, Dihydrate

**FORMULA:**
- CaCl₂ · 2H₂O

**MOLECULAR WEIGHT:**
- 147.02

**ADDRESS (NO., STREET, CITY, STATE AND ZIP CODE):**
- Columbus Chemical Industries, Inc.
- N4335 Temkin Road
- Columbus, WI 53925

**CONTACT:**
- Director, Product Safety

**PHONE NUMBER:**
- (414) 623-2140

**ISSUED DATE:**
- June 12, 1980

**REVISED DATE:**
- Mar., 1982

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**B. FIRST AID MEASURES**

**Eyes:** Flush promptly with plenty of water, continuing for at least 15 minutes.
- Get medical attention.

**Inhalation:** Remove to fresh air.

**Skin:** Wash with plenty of soap and water.
- Ingestion: If conscious, immediately give 2 to 4 glasses of water, and induce vomiting by touching finger to back of throat.
- Get medical attention for irritation, ingestion, or discomfort from inhalation.

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**C. HAZARDS INFORMATION**

**HEALTH**

**INHALATION:**
- Dust or mist inhalation may irritate nose, throat, and lungs.

**INGESTION:**
- Low in toxicity, but more toxic than sodium chloride, LD₅₀ (rat): 1 g/kg
  - Reference (e). May irritate gastrointestinal tract.
  - anhydrous basis

**SKIN:**
- May cause skin irritation. Under conditions of prolonged contact or when moisture is present, superficial burns may result.
- Contact with abraded skin or cuts can cause severe necrosis.

**EYES:**
- May irritate or burn eyes.

**PERMISSIBLE CONCENTRATION: AIR**
- NONE established by OSHA.
- Also, no TLV established by ACGIH.

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**UNUSUAL CHRONIC TOXICITY:**
D. PRECAUTIONS/PROCEDURES

FIRE EXTINGUISHING AGENTS RECOMMENDED
Not applicable

FIRE EXTINGUISHING AGENTS TO AVOID

SPECIAL FIRE FIGHTING PRECAUTIONS
None

VENTILATION
Local exhaust: In packaging and unloading areas, over open processing equipment, and
any other places where dusty or misty condition prevails.
Natural ventilation: Adequate for other areas.

NORMAL HANDLING
Avoid contact with eyes, skin, or clothing. Avoid breathing dust or mist. Use good personal hygiene and housekeeping.

STORAGE
Store in a cool, dry area. Prolonged storage may cause product to cake and become wet from atmospheric moisture.

SPILL OR LEAK
Shovel up dry chemical and place in metal drum with a cover. Cautiously spray residue with plenty of water.

SPECIAL: PRECAUTIONS/PROCEDURES/LABEL INSTRUCTIONS
Label signal word: WARNING!

E. PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION
For dusty or misty condition, wear NIOSH-approved dust or mist respirator.

EYES AND FACE
For dusty or misty condition, or when handling solutions where there is reasonable probability of eye contact, wear chemical
safety goggles and hat. Under these conditions, do not wear contact lenses.

HANDS, ARMS, AND BODY
As a minimum, wear long-sleeve shirt and trousers, boots and gloves for routine product use.
Cotton gloves permitted for dry product, impervious gloves when using solutions.

OTHER CLOTHING AND EQUIPMENT
Not generally required.
### F. PHYSICAL DATA

<table>
<thead>
<tr>
<th>MATERIAL IS (AT NORMAL CONDITIONS):</th>
<th>APPEARANCE AND ODOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>I LIQUID    ☒ SOLID    □ GAS</td>
<td>Small white flakes; odorless.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BOILING POINT</th>
<th>Unknown °C</th>
<th>SPECIFIC GRAVITY (H₂O = 1)</th>
<th>0.835</th>
<th>VAPOR DENSITY (AIR = 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MELTING POINT</td>
<td>176 °C</td>
<td></td>
<td></td>
<td>Not applicable: water vapor only.</td>
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</tbody>
</table>

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<thead>
<tr>
<th>SOLUBILITY IN WATER (1% by Weight)</th>
<th>pH</th>
<th>VAPOR PRESSURE (mm Hg at 20°C)</th>
<th>(PSIG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>42 (anhydrous) @ 20°C</td>
<td>Neutral or slightly alkaline</td>
<td>Not applicable</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>EVAPORATION RATE (Butyl Acetate = 1)</th>
<th>% VOLATILES BY VOLUME (At 20°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Ether = 1) □</td>
<td>Not applicable</td>
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### G. REACTIVITY DATA

<table>
<thead>
<tr>
<th>STABILITY</th>
<th>CONDITIONS TO AVOID</th>
</tr>
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<tbody>
<tr>
<td>☒ STABLE</td>
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**INCOMPATIBILITY (MATERIALS TO AVOID):**
Sulfuric acid: yields hydrogen chloride gas, which is corrosive, irritating, and reactive. Water-reactive materials, such as sodium: cause an exothermic reaction. Methyl vinyl ether: starts runaway polymerization reaction--Reference (d). Zinc as in galvanized iron: yields hydrogen gas with solutions, which may explode under these conditions. --Reference (d).

**HAZARDOUS DECOMPOSITION PRODUCTS**
None.

**HAZARDOUS POLYMERIZATION**

<table>
<thead>
<tr>
<th>CONDITIONS TO AVOID</th>
<th>MAY OCCUR</th>
<th>WILL NOT OCCUR</th>
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### H. HAZARDOUS INGREDIENTS (Mixtures Only)

<table>
<thead>
<tr>
<th>MATERIAL OR COMPONENT/C.A.S. #</th>
<th>WT. %</th>
<th>HAZARD DATA (SEE SECT. J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOT APPLICABLE</td>
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</table>
**DEGRADABILITY/AQUATIC TOXICITY**

Aquatic toxicity: TLm96: over 1000 ppm (anhydrous)—Reference (a).

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<tr>
<th>OCTANOL/WATER PARTITION COEFFICIENT</th>
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**EPA HAZARDOUS SUBSTANCE?**

<table>
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<tr>
<th>YES NO</th>
<th>IF SO, REPORTABLE QUANTITY:</th>
<th>#</th>
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<tbody>
<tr>
<td></td>
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<td>40 CFR 116-117</td>
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**WASTE DISPOSAL METHODS (DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL OR DISCHARGE LAWS)**

Dissolve in water using caution as solution can get very hot. Flush to sewer with plenty of water if permitted by applicable disposal regulations. Waste may have to be disposed of by an approved contractor.

**RCRA STATUS OF UNUSED MATERIAL:**

Not a "hazardous waste".

| 40 CFR 261 |

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**J. REFERENCES**

**PERMISSIBLE CONCENTRATION REFERENCES**

**REGULATORY STANDARDS**

D.O.T. CLASSIFICATION: Not regulated 49 CFR

**GENERAL**

(a) NIOSH, Registry of Toxic Effects of Chemical Substances, 1979, Accession No. EV 98 00 000.


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**K. ADDITIONAL INFORMATION**

This product is not for food or drug use.