

AERCHEM INC.
320 North Walnut
Bloomington, IN 47404

Telephone: 812.334.9996

Fax: 812.334.1960

Emergency: 800.424.9300

Effective Date: 12/8/96

Product Name: Calcium Chloride and Calcium Chloride dihydrate

Chemical Formula: $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$

CAS No.: 10043-52-4 (anhydrous)

Hazardous Ingredients: Causes irritation to skin, eyes, and respiratory tract. Harmful if swallowed or inhaled.

Potential Health Effects

Inhalation: Granular material does not pose a significant inhalation hazard, but inhalation of dust may cause irritation to the respiratory tract, with symptoms of coughing and shortness of breath.

Ingestion: Low toxicity material but ingestion may cause serious irritation of mucous membrane due to heat of hydrolysis. Large amounts can cause gastrointestinal upset, vomiting, abdominal pain.

Eye contact: Hazard may be either mechanical abrasion, or more serious, burns from heat of hydrolysis and chloride irritation.

Skin Contact: Solid may cause mild irritation on dry skin. Strong solutions or solid contact with moist skin may cause severe irritation, even burns.

Physical Data:

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|--------------------------------|---|
| Melting point (range) Approx.: | 260°C |
| Boiling point: | Over 1600°C |
| Decomposition temperature: | N/A |
| Solubility in water: | Freely soluble in water, exothermic. |
| Odor: | None |
| Physical form: | coarse white powder or mixture of coarse white powder and medium sized granules |
| Density: | 0.835 |
| pH (aqueous solution) | 8-9 |

Fire and Explosion Information:

Material is not considered a fire hazard or an explosion hazard.

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| Flash point: | N/A |
| (Auto) Ignition temperature: | N/A |
| Extinguishing media to be recommended: | Use any means suitable for extinguishing. |
| Special fire and explosions precautions: | In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode. Emits toxic chlorine fumes when heated to decomposition. May form hydrogen chloride in presence of sulfuric or phosphoric acids or with water at elevated temperatures. |
| Fire and explosions hazards: | Not considered to be a fire or explosion hazard. |

Reactivity Data: **Stable** X **Unstable** _____

Hazardous Decomposition: Emits toxic chlorine fumes when heated to decomposition. May form hydrogen chloride in presence of sulfuric or phosphoric acids or with water at elevated temperatures

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Methyl vinyl ether, water, zinc, bromine trifluoride, mixtures of lime and boric acid, barium chloride, and 2-furan percarboxylic acid. Metals will slowly corrode in aqueous calcium chloride solutions. Aluminum (and alloys) and yellow brass will be attacked by calcium chloride.

Handling and Storage Information: Keep in a tightly closed container, store in a cool, dry, ventilated area. Protect against physical damage. Moist calcium chloride and concentrated solutions can corrode steel. When exposed to the atmosphere, calcium chloride will absorb water and form a solution. Maintain good housekeeping in work area. Dust

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deposits on floors and other surfaces may pick up moisture and cause the surfaces to become slippery and present safety hazards.

Leak/Spill Information: Sweep, scoop or pick up spilled material. Collected waste may be transferred to a closed, water-proof, non-metal container and sent to an approved waste disposal facility.

Disposal Information: Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of the product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Chronic Exposures: No information found.

Aggravation of pre-existing conditions: Contact may aggravate skin conditions.

B. First Aid:

Inhalation: Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: If swallowed, give water or milk to drink as soon as possible. Call a physician immediately. Never give anything by mouth to an unconscious person.

Skin Contact: Remove any contaminated clothing. Wipe off excess from skin. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Contact: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. Toxicity Data

Oral rat LD50: 1000 mg/kg.

Investigated as a mutagen, tumorigen

LC50/96 hour values for fish are over 100 mg/L

Occupational Control Measures:

Airborne Exposure Limits: none established

Ventilation Systems: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices," most recent edition, for details.

Personal Respirators: For conditions of use where exposure to dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are no know, use a full-face positive pressure air supplied respirator. Air purifying respirators do not protect workers in oxygen deficient atmospheres.

Skin Protection: Wear protective gloves and clean body--covering clothing.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Regulatory Information

Chemical inventory status

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|------------------|------------|----------|------------|----------------|
| Calcium chloride | TSCA: yes | EC: yes | Japan: yes | Australia: yes |
| | Korea: yes | DSL: yes | NDSL: no | Phil.: yes |

Federal, state, & international regulations

| | | | | | |
|------------------|--|--|---------------|-------------|---------------|
| Calcium chloride | SARA 302: RQ no, TPQ no | SARA 313: list no, chemical catalog no | | | |
| | CERCLA: no | RCRA 261.33: no | TSCA 8(d): no | | |
| | SARA 311/312: acute=yes | chronic-no | fire-no | pressure-no | reactivity-no |
| | Australian Hazchem code: no info found | | | | |

Other Information

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|---------------|----------|----------------|--------------|
| NFPA ratings: | health 1 | flammability 0 | reactivity 1 |
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