

Material Safety Data Sheet



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Approved by U.S. Dept. of Labor as "Essentially similar" to Form OSHA-20

Date: January, 1984	Edition: Seventh
Chemical Name and Synonyms: Calcium Hypochlorite CAS No.: 7778-54-3 <i>H.T.H. - DRY</i>	Trade Name and Synonyms: PITTCLOR, Calcium Hypochlorite FR, INDUCLOR™, ZAPPIT™, REPAK™ Granular
Chemical Family: Hypochlorite	Formula: Ca(OCl) ₂
DOT Shipping Name: Calcium Hypochlorite, Hydrated 100 lbs./	DOT Hazard Class: Oxidizer
Reportable Quantity: 45.4 kg. I. D. Number UN2880	Subsidiary Risk: N/A

SECTION 1 - PHYSICAL DATA

Boiling Point @ 760 mm Hg: Decomposes @ 180°C	Vapor Density (Air=1): Not Applicable	Specific Gravity (H ₂ O=1): Approx. 0.98 (variable)	pH of Solutions: Alkaline
Freezing/Melting Point: Not Applicable	Solubility (Weight % in Water): @27°C = 217 g/l	Bulk Density: 61 lbs./ft ³ (variable)	Volume % Volatile: Not Applicable
Vapor Pressure: Not Applicable	Evaporation Rate (____=1): Not Applicable	Heat of Solution: Slightly Exothermic	Appearance and Odor: White powder with slight chlorine odor.

SECTION 2 - HAZARDOUS INGREDIENTS

	%	Hazard Data
Calcium Hypochlorite (65% available chlorine)	65	
Inerts	35	

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA

Flash Point °F (Method Used) None	Flammable Limits in Air (% by Volume) LEL: UEL: Not Applicable	Extinguishing Media: Water only; smothering ineffective because product supplies own oxygen.
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Special Fire Fighting Procedures: Fire fighters must wear NIOSH/MSHA-approved, pressure demand self-contained breathing apparatus with full face-piece for possible exposure to chlorine gas.

Unusual Fire and Explosion Hazards: Decomposes @ 180°C liberating chlorine gas; containers may rupture.

SECTION 4 - HEALTH HAZARD DATA

Toxicity Data See References 1-5	Classification (Poison, Irritant, Etc.)
LC ₅₀ Inhalation (rat) No mortality @ 3.5mg/l(1 hr)	Inhalation: Irritating
LD ₅₀ Dermal (rabbit) - 1000 mg/kg	Skin Slightly Toxic
Skin/Eye Irritation See Section 5	Skin/Eye: See Section 5
LD ₅₀ Ingestion See Section 5	Ingestion: Slightly Toxic
Fish, LC ₅₀ (Lethal Concentration) TLm 96 hr.: 1 ppm	Aquatic: Highly Toxic

24-HOUR EMERGENCY ASSISTANCE: (304) 843-1300

SECTION 5 - EFFECTS OF OVEREXPOSURE

This section covers effects of overexposure for inhalation, eye/skin contact, ingestion and other types of overexposure information in the order of the most hazardous and the most likely route of overexposure.

Permissible Exposure Limits (TLV):

No permissible exposure limit has been established by OSHA.
PPG Internal Permissible Exposure Limit (IPFL): 2 mg/m³
STEL (short-term exposure limit) for any 15-minute excursion period.

ACUTE:

Inhalation: Inhalation of calcium hypochlorite dust can cause irritation or burns to the nose, throat, and mucous membranes. Respirable size dust reaching the lungs is extremely toxic and can be quickly fatal; however, the physical nature of calcium hypochlorite (granules) is such that dust particles of respirable sizes are not likely to be encountered.

Eye/Skin: Calcium hypochlorite is corrosive to the eyes. Contact of calcium hypochlorite dust with the eyes, even a minute amount for a short duration, can cause severe irritation and even blindness.

Contact with the skin may cause severe irritation, burns, or tissue destruction.

Ingestion: Calcium hypochlorite, if swallowed, causes severe burns to the digestive tract and can be fatal.

CHRONIC

The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize minimizing repeated acute exposures.

SECTION 8 · SPECIAL PROTECTION INFORMATION

Respiratory Protection: If dusty conditions are encountered, use NIOSH/MSHA-approved respirator with acid gas cartridge and dust prefilter. The respirator use limitations specified by NIOSH/MSHA or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29CFR 1910.134.

Ventilation (Type): None, unless dusty conditions are encountered.

Eye Protection: Chemical safety goggles | **Gloves:** Natural or synthetic rubber

Other Protective Equipment: Boots, aprons, or chemical suits should be used when necessary to prevent skin contact. Personnel protective clothing and use of equipment must be in accordance with 29CFR 1910.133 and 29CFR 1910.132.

SECTION 9 · SPECIAL PRECAUTIONS

Precautions to be Taken During Handling and Storing:

- Do not get in eyes, on skin or on clothing.
- Keep in original container in a cool, dry place.
- Keep container closed when not in use.
- Keep away from heat sources, sparks, open flames and lighted tobacco products.
- Use only a clean, dry scoop made of metal or plastic each time material is taken from container.
- DO NOT ADD THIS PRODUCT TO ANY DISPENSING DEVICE CONTAINING REMNANTS OF ANY OTHER PRODUCT. SUCH USE MAY CAUSE VIOLENT REACTION LEADING TO FIRE OR EXPLOSION.
- Add material only to water.
- May cause fire or explosion if mixed with other chemicals.
- Fire may result if contaminated with acids or easily combustible material such as oil, kerosene, gasoline, paint products and most other organic materials.
- Wash hands after handling.
- Do not reuse container. Residual material remaining in empty drum can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water, food, or feed by storage or disposal.
- Keep out of reach of children.
- Strong oxidizer--fire may result from contact with heat, acids, organic or combustible matter.
- May be fatal or harmful if swallowed.
- May cause chemical burns.
- Irritating to nose and throat -- avoid breathing dust.

References:

1. Industrial Bio-Test Laboratories, Inc., Test Report No. 601-06659, May 7, 1975
2. Industrial Bio-Test Laboratories, Inc., Test Report No. 663-06660, May 19, 1975
3. Battelle Laboratory Report, Acute Inhalation of Calcium Hypochlorite in Rats to determine the LC₅₀ with an initial Range-Finding Study, October 28, 1980
4. NIOSH, Registry of Toxic Effects of Chemical Substances, 1978
5. Primary Skin Irritation in Albino Rabbits, WIL-26001, Wil Laboratories, 1982

COMMENTS: Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the Chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, FIFRA, as well as any other relevant federal, state, or local laws/regulations regarding disposal. *PKC 2/2/84*

Mgr., Product Safety

EMERGENCY AND FIRST AID PROCEDURES:

Inhalation: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

Eye or Skin Contact: Flush with plenty of water for at least 15 minutes, while removing contaminated clothing and shoes. For eye contact, get immediate medical attention. If skin irritation occurs, get medical attention.

Ingestion: If conscious, drink large quantities of water and any common cooking vegetable oil, if available. DO NOT induce vomiting. Take immediately to a hospital or physician. If unconscious, or in convulsions, take immediately to a hospital. Do not attempt to induce vomiting or give anything by mouth to an unconscious person.

Notes to Physician (Including Antidotes):

SECTION 6 . REACTIVITY DATA

Stability: Unstable	Conditions to Avoid: Any form of contamination (especially combustible materials) or excessive heat may cause decomposition and/or fire.
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Hazardous Polymerization: Will not occur	Conditions to Avoid: None--will not polymerize
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Incompatibility (Materials to Avoid): Acids, combustible materials, organics, reducing agents

Hazardous Decomposition Products: Acids or ammonia contamination or excessive heat will release chlorine gas.

SECTION 7 . SPILL OR LEAK PROCEDURES

Steps to be Taken if Material is Spilled or Released: NOTE: Use extreme caution in handling spilled material. Contamination with organic or combustible material may cause fire or violent decomposition. If fire or decomposition occurs in area of spill, immediately douse with plenty of water. Otherwise, sweep up all visible material using a clean, dry shovel and broom and dissolve material in water. Dispose of waste material as outlined below.

Waste Disposal Method: Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which calcium hypochlorite is being consumed. If this is not possible, carefully neutralize dissolved material by adding hydrogen peroxide (one pint of 35% hydrogen peroxide solution per pound of calcium hypochlorite to be neutralized) then dilute the neutralized material with plenty of water and flush to sewer. NOTE: Only properly neutralized material should be flushed to sewer. Unneutralized material can cause environmental damage to receiving water or can interfere with treatment plant operation.

For on-site neutralization, carefully and slowly pour the appropriate quantity of 35% hydrogen peroxide solution over all spilled material then flush area with plenty of water.