

MATERIAL SAFETY DATA SHEET

***** SECTION 1 - COMPANY INFORMATION *****

NAME: KNIGHT CHEMICALS LLC (Standard Tar)
 ADDRESS: 2456 West Cornell Street
 Milwaukee, WI 53209-6294
 TELEPHONE: 414-873-7650
 FAX: 414-873-7737

EMERGENCY TELEPHONE NUMBER: Call KNIGHT CHEMICALS LLC
 800-825-7650 for emergencies involving a spill, leak, fire, exposure, or accident.

***** SECTION 2 - PRODUCT IDENTIFICATION *****

Product Trade Name: LIQUID CALCIUM CHLORIDE SOLUTION
 Chemical Name: Calcium Chloride Solution
 Chemical Family: Inorganic Salt Solution
 Molecular Formula: CaCl₂
 Hazard Rating (HMIS/NFPA):
 HEALTH: 1 FLAMMABILITY: 0 REACTIVITY: 0
 PERSONAL PROTECTION: E

***** SECTION 3 - INGREDIENTS *****

Chemical	Wt%	CAS No.
Calcium Chloride	28-45	010043-52-4
Potassium Chloride	0-3	007447-40-7
Sodium Chloride	0-2	007647-14-5
Water		007732-18-5

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not "Hazardous" per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

***** SECTION 4 - HAZARDS IDENTIFICATION *****

EMERGENCY OVERVIEW: Colorless to pale yellow liquid. Odorless.
 WARNING! Causes eye irritation. Prolonged exposure may cause skin burns.
 Slipping hazard.

POTENTIAL HEALTH EFFECTS (See Section 12 for toxicological data.)

EYE: Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. May cause severe irritation with corneal injury. Effects may be slow to heal.

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SKIN: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation, even a burn. May cause more severe response if confined to skin or skin is abraded (scratched or cut). Material may be handled at elevated temperatures; contact with heated material may cause thermal burns. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Not classified as corrosive according to DOT.

INGESTION: Single dose oral toxicity is believed to be low. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury. Ingestion may cause gastrointestinal irritation or ulceration.

INHALATION: Vapors are unlikely due to physical properties. Mists may cause irritation to upper respiratory tract.

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: No relevant information found.

***** SECTION 5 - FIRST AID *****

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.

SKIN: Wash off in flowing water or shower.

INGESTION: Do not induce vomiting. Give large amounts of water or milk if available and transport to medical facility.

INHALATION: Remove to fresh air if effects occur. Consult a physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. May cause tissue destruction leading to stricture. If lavage is performed, suggest endotracheal and/or esophageal control. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

***** SECTION 6 - FIRE FIGHTING MEASURES *****

FLAMMABLE PROPERTIES

FLASH POINT: Not applicable.

METHOD USED: Not applicable.

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FLAMMABILITY LIMITS

LFL: Not applicable

UFL: Not applicable

HAZARDOUS COMBUSTION PRODUCTS: Not applicable.

EXTINGUISHING MEDIA: This material does not burn. If exposed to fire from another source, use suitable extinguishing agent for that fire.

FIRE FIGHTING INSTRUCTIONS. Keep people away. Isolate fire area and deny unnecessary entry.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and full protective fire fighting clothing (includes fire fighting helmet, coat, pants, boots, and gloves).

***** SECTION 7 - ACCIDENTAL RELEASE MEASURES *****
(See Section 16 for Regulatory Information)

PROTECT PEOPLE: Isolate area. Avoid contact with eyes and skin. May be a slipping hazard. Stop leak if it can be done safely. Wash exposed body areas thoroughly after handling. Use appropriate safety equipment. For additional information, refer to "Exposure Controls/Personnel Protection", MSDS Section 9.

PROTECT THE ENVIRONMENT: For small spills: Losses incidental to correct applications of this product in its intended uses are not expected to be harmful to the environment.

For large spills: Avoid contamination of drinking water, natural water, ground water or any waterway. Losses incidental to correct application of this product in its intended uses are not expected to be harmful to the environment.

CLEANUP: For small spills: Contain spill if possible. Absorb with material such as sand. Collect material in suitable and properly labeled open containers. Flush residue with plenty of water.

For large spills: Dike and transfer to suitable and properly labeled containers. Absorb with material such as sand. Flush residue with plenty of water.

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***** SECTION 8 - HANDLING AND STORAGE *****

HANDLING: Product shipped/handled hot can cause thermal burns. Refer to Exposure Controls/Personal Protection, Section 9, of the MSDS.

For more Storage and Handling Information refer to bulletin 173-01534.

STORAGE: Product may become a solid at temperatures below 32°F, OC (concentrations above 36% calcium chloride).

***** SECTION 9 - EXPOSURE CONTROLS/PERSONAL PROTECTION *****

ENGINEERING CONTROLS: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION: Use chemical goggles.

SKIN PROTECTION: When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron or full-body suit will depend on operation. If hands are cut or scratched, use gloves impervious to this material even for brief exposures. Use gloves with insulation for thermal protection, when needed.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an approved air-purifying respirator. In misty atmospheres, use an approved mist respirator.

EXPOSURE GUIDELINE (S): Dow Chemical USA Industrial Hygiene standard is 10 mg /m3 for calcium chloride, sodium chloride and potassium chloride. There is no OSHA PEL or ACGIH TLV for calcium chloride.

***** SECTION 10 - PHYSICAL AND CHEMICAL PROPERTIES *****

APPEARANCE/PHYSICAL STATE:	Colorless to pale yellow liquid.
ODOR:	None.
VAPOR PRESS:	7-15 mmHg @ 25°C, 77°F.
VAPOR DENSITY:	Same as water.
BOILING POINT:	230-251°F, 110-122°C
SOLUBILITY IN WATER:	Completely miscible.
SPECIFIC GRAVITY:	1.297-1.437 @ 25°C/70°F

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***** SECTION 11 - STABILITY AND REACTIVITY *****

CHEMICAL STABILITY: Stable. Hygroscopic.

CONDITIONS TO AVOID: None known.

INCOMPATIBILITY WITH OTHER MATERIALS: Corrosive to some metals. Avoid contact with metals such as: brass, mild steel, aluminum, or ferrous metals. Flammable hydrogen may be generated from contact with metals such as zinc or sodium. Avoid contact with sulfuric acid.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not decompose.

HAZARDOUS POLYMERIZATION: Will not occur.

***** SECTION 12 - TOXICOLOGICAL INFORMATION *****

(See Section 4 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1)

ACUTE

SKIN: The LD50 for skin absorption in rabbits is > 5000 mg/kg for CaCl₂.

INGESTION: The oral LD50 for rats is in the range of 900-2100 mg/kg for CaCl₂ (100% basis).

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): For CaCl₂, in vitro mutagenicity studies were negative.

***** SECTION 13 - ECOLOGICAL INFORMATION *****

(For detailed Ecological data, write or call the address or non-emergency number shown in Section 1)

ENVIRONMENTAL FATE

MOVEMENT & PARTITIONING: Partitioning from water to n-octanol is not applicable.

DEGRADATION & TRANSFORMATION: Biodegradation is not applicable.

ECOTOXICOLOGY: Based largely or completely on data for major component (s). Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species).

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***** SECTION 14 - DISPOSAL CONSIDERATIONS *****
(See Section 16 for Regulatory Information)

DISPOSAL: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. STANDARD TAR PRODUCTS CO., INC. HAS NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION 3 (Composition/Information On Ingredients).

FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: reclaimer or waste water treatment system.

For additional information, refer to:
Handling & Storage Information, MSDS Section 8.
Stability & Reactivity Information, MSDS Section 11.
Regulatory Information, MSDS Section 16.

As a service to its customers, Standard Tar can provide names of information resources to help identify waste management companies and other facilities which recycle, reprocess or manage chemicals or plastics, and that manage used drums.

***** SECTION 15 - TRANSPORT INFORMATION *****

UNITED STATES DOT INFORMATION: This product is not regulated by D.O.T. when shipped domestically by land.

CANADIAN TDG INFORMATION: This product is not regulated by T.D.G. when shipped domestically by land.

***** SECTION 16 - REGULATORY INFORMATION *****
(Not meant to be all-inclusive--selected regulations represented)

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, expressed or implied is given.