SAFETY DATA SHEET

SNOMELT™ (USOL) – CALCIUM CHLORIDE FLAKE

MSDS NO.: KC004 **Rev Date: 07-17-2015** **Rev. Num. 01**

1. IDENTIFICATION:

COMPANY NAME:	Knight Chemicals LLC
ADDRESS:	7320 W. Florist Ave Milwaukee, WI 53218
TELEPHONE:	1(800)825-7650
FAX:	1(414)461-0903
EMERGENCY CONTACT:	Call CHEMTREC at 800-424-9300 for 24 hour Emergency Response involving a spill, leak, fire, exposure, or accident.
TO REQUEST AN SDS:	info@knightchemicals.com or www.knightchemicals.com
PRODUCT NAME / USE:	SnoMelt™ (USOL Flake) / Ice Melting – Dust Control

2. HAZARD(S) IDENTIFICATION:

OSHA REGULATORY STATUS: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

NFPA Hazard Rating (NFPA): (Scale 0-4)

HEALTH: **1** FLAMMABILITY: **0** REACTIVITY: **0** PERSONAL PROTECTION: **E**

HMIS Hazard Rating (HMIS): (Scale 0-4)

HEALTH: **2** FLAMMABILITY: **0** REACTIVITY: **0**

EMERGENCY OVERVIEW:

APPEARANCE:	White to off-white solid flakes
ODOR:	None / Odorless
REACTIVITY:	Reacts with water to create heat

MAJOR HEALTH HAZRDS: Causes Eye and Skin Irritation. Harmful if Swallowed.

PHYSICAL HAZARDS: Heat is generated when mixed with water or aqueous acid solutions.

PRECAUTIONARY STATEMENTS: Wash thoroughly after handling.

GHS CLASSIFICATION:

GHS: CONTACT HAZARD – SKIN:	Category 2 – Causes skin irritation
GHS: CONTACT HAZARD – EYE:	Category 2B – Causes eye irritation
GHS: ACUTE TOXICITY – INHALATION:	No data available. Not classified
GHS: ACUTE TOXICITY – ORAL:	Category 4 – Harmful if swallowed
GHS: ACUTE TOXICITY – DERMAL:	Not classified as acutely toxic for dermal exposure
GHS: CARCINOGENICITY:	Not classified as a carcinogen per GHS criteria. This Product is not classified as a carcinogen by NTP, IARC or OSHA,

GHS SYMBOL:

GHS SIGNAL WORD: WARNING

GHS HAZARD STATEMENTS:

GHS – HEALTH HAZARD STATEMENT(S)
Causes skin irritation
Causes eye irritation
Harmful if swallowed

GHS – Precautionary Statement(s) – Prevention
Wear eye and face protection
Wear protective gloves
Wash thoroughly after handling
Do not eat, drink or smoke when using this product

GHS – Precautionary Statement(s) – Response
IF IN EYES: Rinse cautiously with water for several minutes. If irritation persists seek medical attention.
IF ON SKIN: Wash with plenty of water. Take off contaminated clothing and wash before reuse.
IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

GHS – Precautionary Statement(s) – Storage
There are no Precautionary Storage phrases assigned

GHS – Precautionary Statement(s) – Disposal
Dispose of contents and container in accordance with applicable local, regional, national and/or international regulations.

See Section 11: **TOXICOLOGICAL INFORMATION**

3. COMPOSITION / INFORMATION ON INGREDIENTS:

PRODUCT TRADE NAME: SNOMELT™ / USOL Flake
CHEMICAL NAME: Calcium Chloride Flakes
SYNONYMS: Calcium Chloride Flakes
CHEMICAL FAMILY: Inorganic Salt
MOLECULAR FORMULA: $CaCl_2$
CAS NUMBER: None – Mixture

CHEMICAL	Wt %	CAS No.	TLV (ACGIH)	PEL (OSHA)
Calcium Chloride	> 77	010043-52-4	None Established	
Sodium Chloride	< 2	007647-14-5	None Established	
Potassium Chloride	< 3	007447-40-7	None Established	
Water	< 20	007732-18-5	None Established	

4. FIRST AID MEASURES

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

SKIN: Wash off in flowing water or shower.

INGESTION: If swallowed, induce vomiting immediately as directed by medical personnel. Call a physician. (Never give anything by mouth or attempt to induce vomiting in an unconscious person.)

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. No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reaction of the patient.

5. FIRE-FIGHTING MEASURES:

FIRE & EXPLOSION HAZARD: Negligible fire hazard when exposed to heat or flame.

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

FIRE FIGHTING PROCEDURES: Keep people away. Isolate fire and deny unnecessary entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as a fine spray.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS: Wear positive-pressure, self-containing breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-containing breathing apparatus and fight fire from a remote location.

Unusual Fire & Explosion Hazards: Heat is generated when product mixes with water.

Hazardous Combustion Products: Thermal decomposition products may include toxic and corrosive fumes of chlorine and hydrogen chloride. Product generates heat upon additions of water, with possible spattering. Product may react with some metals (Aluminum, Zinc, Tin, etc.) to release flammable hydrogen gas.

6. ACCIDENTAL RELEASE MEASURES:

Action to take for spills/leaks: Losses incidental to correct application of this product in its intended uses are not expected to be harmful to the environment. Wear appropriate safety apparel during clean-up. See Section 8. Avoid entry of large amount of product into sewers, natural waters, and drinking water sources. Due to possible harmful effects, avoid contact with vegetation, animals and fish life. Recover quickly into suitable, dry sealable containers if reusing. Small quantities may be flushed away with plenty of water. Walking surfaces may remain wet longer due to moisture being held by spilled product--avoid by thoroughly water washing surfaces.

7. HANDLING & STORAGE

Comply with federal, state, and local laws, regulations and procedures when storing this product. Store in a tightly closed container. Store away from incompatible materials. Do not store in attic, upper floors or any area where leaking of contents could cause damage.

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid eye and prolonged skin contact. ALWAYS USE COOL WATER (TEMPERATURE LESS THAN 80°F, 27°C). WHEN DISSOLVING CALCIUM CHLORIDE. HEAT DEVELOPED BY SOLUTION IS VERY HIGH DURING DISSOLVING AND MIXING. When exposed to the atmosphere, calcium chloride will pick up water and form a solution. Leather clothing and shoes will be damaged by calcium chloride.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION:

EXPOSURE GUIDELINES: There are no occupational exposure limits established by OSHA, ACGIH or NIOSH.

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

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

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, aprons, or full-body suit will depend on operation. If skin comes in contact with contaminated clothing, remove the clothing immediately, wash skin area with soap and water, and launder clothing before reuse.

EYE PROTECTION: Safety glasses should be sufficient for most operations; however, for dusty operations or when handling solutions of the material, wear chemical goggles. Eye wash fountain should be located in immediate work area.

9. PHYSICAL & CHEMICAL PROPERTIES:

MELTING POINT:	Approximately 446º F (230º C)
BOILING POINT:	388º F (198º C)
VAPOR PRESSURE:	0.009 mm Hg. at 20º C (68º F)
VAPOR DENSITY:	Not applicable
SOLUBILITY IN WATER:	Very soluble
SPECIFIC GRAVITY:	2.2
APPEARANCE:	White to off-white solid pellets
ODOR:	None
EVAPORATION RATE:	Not applicable
FLASH POINT:	Not applicable
METHOD USED:	Not applicable
FLAMMABLE LIMITS:	
LFL	Not applicable
UFL	Not applicable
AUTOIGNITION TEMPERATURE:	Not applicable
HYGROSCOPIC:	YES

10. STABILITY & REACTIVITY:

STABILITY: Stable. Hygroscopic.

CONDITIONS TO AVOID: Decomposes at >350º F

INCOMPATIBILITY: (Specific Materials to Avoid) Calcium chloride will: corrode most metals exposed to air; attack aluminum (and its alloys) and yellow brass; react with sulfuric acid to form hydrogen chloride which is corrosive, irritating, and reactive; give an exothermic reaction with water-reactive materials such as sodium; result in a runaway polymerization reaction with methyl vinyl ether (Bretherick, 1979); and, in solution form react with zinc (galvanizing) to yield hydrogen gas which is explosive (Ibid). (Bretherick, L., 1979, Handbook of Reactive Chemical Hazards, 2nd Ed.).

HAZARDOUS DECOMPOSITION PRODUCTS: Not Applicable.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION:

TOXICITY DATA:

PRODUCT TOXICITY DATA:

LD50 ORAL: 1126 mg/kg – Oral Acute Toxicity Estimate (ATE)
LD50 DERMAL: 2637 mg/kg – Dermal Acute Toxicity Estimate (ATE)
LD50 INHALATION: No data is available

COMPONENT TOXICITY DATA:

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium Chloride	1000 mg/kg (Rat)	2630 mg/kg (Rat)	
Potassium Chloride	2600 mg/kg (Rat)		
Sodium Chloride	3 g/kg (Rat)	10 g/kg (Rabbit)	42 g/m³ (1-Hr Rat)

SIGNS AND SYMPTOM OF EXPOSURE:
Solution and or solids may be visible on the skin and or eyes. Localized redness, warmth, and irritation consistent with mechanism of injury: abrasion, burn, hypertonic solution.

GHS HEALTH HAZARDS:

GHS: ACUTE TOXICITY – ORAL: Category 4 – Harmful if swallowed
GHS: ACUTE TOXICITY – DERMAL: Not classified as acutely toxic for dermal exposure.
GHS: ACUTE TOXICITY – INHALATION: No data available. Not Classified.
GHS: CONTACT HAZARD – SKIN: Category 2 – Causes skin irritation.
GHS: CONTACT HAZARD – EYE: Category 2B – Causes eye irritation.
GHS: CARCINOGENICITY: Not classified as a carcinogen per GHS criteria.

MUTAGENIC DATA: Not classified as a mutagen per GHS criteria.

DEVELOPMENTAL TOXICITY: Not classified as a developmental or reproductive toxin per GHS criteria. For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

12. ECOLOGICAL INFORMATION:

DEGRADABILITY: This product will not biodegrade or bioaccumulate.

13. DISPOSAL CONSIDERATIONS:

DISPOSAL METHOD: Comply with federal, state, and local laws, regulations and procedures. Contact manufacturer and/or authorities for detailed information. Product as sold is not an RCRA listed or characteristic hazardous waste.

14. TRANSPORT INFORMATION:

U.S. DOT 49 CFR 172.101: Not Regulated

CANADIAN TRANSPORTATION OF DANGEROUS GOODS: Not Regulated

The Transportation of Dangerous Goods Act **(T.D.G.A.)** classification for this product is: Not Regulated

15. REGULATORY INFORMATION:

REGULATION INFORMATION: (Not meant to be all-inclusive--selected regulations represented.)

OSHA Hazard Communication Standard:
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III Emergency Planning and Community Right-to-Know Act of 1986 Sections 311 and 312 (SARA 311 Classification):

Immediate (Acute) Health Hazard	Yes
Delayed (Chronic) Health Hazard	No
Fire Hazard	No
Reactivity Hazard	No
Sudden Release of Pressure Hazard	No
TSCA STATUS:	Yes
DSL STATUS:	Yes
EINECS STATUS:	Yes
OTHER TSCA ISSUES:	None
SARA 311 CLASSIFICATION:	Acute Hazard Reactivity Hazard

CALIFORNIA PROPOSITION 65: This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute. WARNING: This product (when used in aqueous formulations with a chemical oxidizer such as ozone) may react to form calcium bromate, a chemical known to the State of California to cause cancer.

U.S. REGULATIONS

SARA 313 INFORMATION: To the best of our knowledge, this product contains no chemical subject to SARA Title III, Section 313 supplier notification requirements.

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:
An immediate health hazard.

CANADA REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

WHMIS – Classification of Substances:
The Workplace Hazardous Materials Information System (W.H.M.I.S.) Classification for this product is: D2B - Poisonous and Infectious Material; Materials causing other toxic effects – Toxic Material.

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown below. However, no warranty, expressed or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

16. OTHER INFORMATION:

NFPA Hazard Rating (NFPA): (Scale 0-4)
HEALTH: **1** FLAMMABILITY: **0** REACTIVITY: **0** PERSONAL PROTECTION: **E**

HMIS Hazard Rating (HMIS): (Scale 0-4)
HEALTH: **2** FLAMMABILITY: **0** REACTIVITY: **0**

Information contained on these sheets needs to be made available to your workers according to the OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS).

This Safety Data Sheet and the information it contains is offered to you in good faith as accurate, but there is no representation, guarantee or warranty, either expressed or implied, regarding its accuracy, reliability or completeness. This information relates to the specific product designated and may not be valid for such product used in combination with any other materials or in any other processes. Certain health and safety precautions given in this data sheet may not be adequate for all individuals and/or situations. It is the user's responsibility to use this product safely and to satisfy themselves as to the suitability and completeness of such information for their own particular use. Consult with appropriate experts to guard against hazards associated with the use of this product and its ingredients. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.

The conditions of storage, handling, use and disposal of the product are beyond our control. For this and other reasons, we do not assume any responsibility and expressly disclaim any liability for loss, damage, or expense arising out of or in any way connected with the storage, handling, use or disposal of the product.