MATERIAL SAFETY DATA SHEET

This MSDS complies with OSHA'S Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND MANUFACTURER'S INFORMATION	
Manufacturer's Name: **MKG Sales Associates, Inc.** Address: 409 Bloomfield Dr. Unit 5 West Berlin, NJ 08091	**Identity** (trade name as used on label)**: Peladow Ice Melt**
Date Prepared: 11/12/96 Prepared By: RR	**MSDS Number:** 7065000
Information Calls: (609)753-7111 **EMERGENCY RESPONSE NUMBER: 517-636-4400**	NOTICE: JUDGMENT BASED ON INDIRECT TEST DATA

SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION		
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)	CAS Number	%
Calcium chloride	**010043-52-4**	**90-92**
Sodium chloride	**007647-14-5**	**1-2**
Potassium chloride	**007447-40-7**	**2-3**
Strontium chloride	**010476-85-4**	**1**
Water	**007732-18-5**	**2-6**

SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS	
Boiling Point: 388 F, 198 C	**Specific Gravity** (H2O=1): 2.2
Vapor Pressure: 0.009 mm Hg @ 70F, 20C.	**Solubility in Water:** Very soluble
Vapor Density (air=1): N/A	**Appearance and Odor:** White to off white solid pellets, no odor

SECTION 3 - FIRE AND EXPLOSION HAZARD DATA		
Flammable Limits	**LEL:** N/A	**UEL:** N/A
FLASH POINT AND METHOD USED (°F): N/A	**Extinguishing Media:** Non-combustible	
Protective equipment: Wear positive-pressure self-contained breathing apparatus and full protective equipment.		
Special Fire Fighting Procedures: Keep unnecessary people away; isolate hazard area and deny unnecessary entry.		

SECTION 4 - REACTIVITY HAZARD DATA	
STABILITY [X] STABLE [ ] UNSTABLE	**HAZARDOUS POLYMERIZATION** [ ] WILL [X] WILL NOT OCCUR
Incompatibility (Mat. to avoid): Calcium chloride will: accelerate corrosion of most metals exposed to air; attack aluminum (and most of 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.).	
Conditions to Avoid: See INCOMPATIBILITY section below.	**Hazardous Decomposition Products:** N/A

SECTION 5 - HEALTH HAZARD DATA	
Potential Health Effects: See section II for toxicological data.	**Primary Routes of Exposure:** eye, skin, ingestion, inhalation
Effects of Overexposure:	**Systemic & Other Effects:** No relevant information found.
Eyes: Pellets may cause slight eye irritation. Dust may cause severe irritation with corneal injury. Effects may be slow to heal. When dissolving, the heat produced may cause more intense effects as well as thermal burns.	
Inhalation: Vapors are unlikely due to physical properties. Dust may cause irritation to upper respiratory tract.	
Ingestion: Single dose oral toxicity is considered 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 irritation of the mouth, throat and gastrointestinal tract.	
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 skin is damp or if material is confined to skin. May cause more severe response if skin is abraded (scratched or cut). When dissolving, the heat produced may cause more intense effects as well as thermal burns. Not classified as corrosive according to DOT. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts.	

EMERGENCY FIRST AID PROCEDURES
Eye Contact: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.
Skin Contact: Wash off in flowing water or shower.
Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.
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 reactions of the patient.

SECTION 6 - CONTROL AND PROTECTIVE MEASURES
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 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 faceshield, gloves, boots, apron or full-body suit will depend on operation. If skin comes in contact with contaminated clothing, remove clothing immediately, wash skin area with soap and water and launder clothing before reuse. If hands are cut or scratched, use gloves impervious to this material even for brief exposures.
Eye Protection: Use safety glasses. For dust operations or when handling solutions of the materials, wear chemical goggles.
Engineering Controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.
Exposure guidelines: Calcium chloride: Dow 1 HG is 10 mg/m3. Sodium chloride: Dow 1 HG is 10mg/m3. Potassium chloride: Dow 1 HG is 10mg/m3.

SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE

Protect People: Isolate and confine spill area. Spills may be a slipping hazard. Wear appropriate safety apparel during cleanup.

Protect the environment: Losses incidental to correct applications of this product in its intended uses are not expected to be harmful to the environment. Avoid entry of large amounts of product into sewer, natural water, and drinking water sources.

Steps To Be Taken If Material Is Spilled Or Released: Spills should be collected to prevent contamination of waterways. Dike spill and recover quickly into suitable containers if reusing; or collect using absorbent material or sand. 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 surface.

Waste Disposal Methods: Any disposal practice must be in compliance with all federal, state/provincial, and local laws and regulations. State/provincial and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Regulations may also vary in different locations. Chemical additions, processing, storage, or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate or otherwise inappropriate. Waste characterization and disposal compliance are the responsibility solely of the party generating the waste or deciding to discard or dispose of the material. None of these waste management options should be considered “arranging for disposal”.
Product as sold is not a RCRA hazardous waste when disposed.
Refer to 40 CFR section 261, and/or any other appropriate federal, state, provincial, or local requirements for proper classification information. For additional information see MSDS Regulatory information.

Precautions To Be Taken In Handling & Storage: Use cool water (temperature less than 80F, 27C) When dissolving calcium chloride. Heat developed by solutions is very high during mixing. Leather clothing and shoes will be damaged by calcium chloride. Avoid eye and prolonged skin contact. When exposed to the atmosphere, calcium chloride will pick up water and form a solution.

Other Precautions &/or Special Hazards:

SECTION 8 - TOXICOLOGICAL INFORMATION

ACUTE

Skin: The LD50 for skin absorption in rabbits is >5000 mg/kg for CaC12.

Ingestion: The oral LD50 for rats is 967-1668 mg/kg for CaC12 (100% basis).

Mutagenicity (Effects on genetic materials): For CaC12, in vitro mutagenicity studies were negative.

SECTION 9 - ECOLOGICAL INFORMATION

Environmental Fate Movement & Partitioning: Partitioning from water to n-octanol is not applicable.

Degradation & Persistence: Inhibitory concentration (IC50) in DECD “Activated sludge, Respiration Inhibition Test” (Guideline #209) is greater than 1000 mg/L.

Ecotoxicology: Based largely or completely on data for major components. Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for bluegill (Lepomis macrochirus) is 8400-10650 mg/L. Acute LC50 for mosquito fish (Gambusia affinis) is 13400 mg/L at 95 hr. Algae growth inhibition EC50 is 3130 mg/L in Nitzschia linearis at 120 hr. Acute LC50 for unspecified marine fish is 2400 mg/L at 48 hr. Acute LC50 for water flea (Daphnia magna) is 759-3005 mg/L at 48 hr.

SECTION 10 - TRANSPORT INFORMATION

United States DOT Information: For DOT regulatory information, if required, consult transportation regulations, product shipping papers, or your DOW representative.

Canadian TDG Information: For TDG regulatory information, if required, consult transportation regulations, product shipping papers, or your DOW representative.

SECTION 11 - REGULATORY INFORMATION

Notice: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express 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 other sections for health and safety information.

US 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
This product has been categorized as “an immediate health hazard” due to effects on the eye.

Toxic Substances Control Act (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.
The CAS number(s) for TSCA is(are):
CAS# 010043-52-4
CAS# 007647-14-5
CAS# 007447-40-7
CAS# 010476-85-4
CAS# 007732-18-5

State Right-To-Know: This product is not known to contain any substances subject to the disclosure requirements of New Jersey, and Pennsylvania.

Comprehensive environmental response compensation and liability act (Cercla, or Superfund): To the best of our knowledge, this product contains no chemical subject to reporting under CERCLA.

Canadian Regulations:

WHMIS Information: The Canadian Workplace Hazardous Materials Information System (WHMIS) Classification for this product is :
D28- Eye and skin irritant

Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

CPR Statement: This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

Hazardous Products Act Information: This product contains the following ingredients which are Controlled Products and/or on the Ingredient Disclosure List (Canadian HPA section 13 and 14):

Components:	**CAS#**	**Amount (%w/w)**
Calcium Chloride	010043-52-4	90-92

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not Listed [e] Animal Data Only