

Material Safety Data Sheet

The Dow Chemical Company, Midland, MI 48674

Emergency Phone: 517-636-4400

Product Code: 04539

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Product Name: DOWFLAKE (R) 77-80%

CALCIUM CHLORIDE (50 LB. BAGS)

Effective Date: 04/30/93

Date Printed: 05/10/95

MSDS: 000517

1. INGREDIENTS: (% w/w, unless otherwise noted)

Calcium chloride	CAS# 010043-52-4	77-80%
Sodium chloride	CAS# 007647-14-5	1-2%
Potassium chloride	CAS# 007447-40-7	2-3%
Water	CAS# 007732-18-5	15-20%

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.

2. PHYSICAL DATA:

MELTING POINT:	Approx. 345F, 174C.
BOILING POINT:	347F, 175C
VAP. PRESS:	1.0 mmHg @ 20C, 68F
VAP. DENSITY:	Not applicable.
SOL. IN WATER:	Very soluble
SP. GRAVITY:	1.85
APPEARANCE:	White to off-white solid flake.
ODOR:	None.

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT:	Not applicable.
METHOD USED:	Not applicable.

FLAMMABLE LIMITS

LFL:	Not applicable.
UFL:	Not applicable.

EXTINGUISHING MEDIA: Non-combustible.

FIRE & EXPLOSION HAZARDS: None

FIRE-FIGHTING EQUIPMENT: Wear positive pressure self-contained breathing apparatus.

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4 REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Decomposes at 349F.

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

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Losses incidental to correct applications 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 Midland, Michigan 48674 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, seal able 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.

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

6. HEALTH HAZARD DATA:

EYE: 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.

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6. HEALTH HAZARD DATA: (CONTINUED)

SKIN CONTACT: 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 and/or abraded, or if material is confined to skin. When dissolving, the heat produced may cause more intense effects as well as thermal burns. Dot classification: Non corrosive.

SKIN ABSORPTION: A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. The LD50 for skin absorption in rabbits is >5000 mg/kg.

INGESTION: Single dose oral toxicity is low. The oral LD50 for rats is 1100-1600 mg/kg. Ingestion may cause gastrointestinal irritation or ulceration. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; swallowing amounts larger than that may cause injury.

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

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: The components of this product are not listed by IARC, NTP, or OSHA as a carcinogen for hazard communication purposes.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro ('test tube') Mutagenicity tests have been negative.

7 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: Induce vomiting if large amounts are ingested. Consult a physician.

INHALATION: Remove to fresh air if effects occur. Consult medical personnel.

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7. FIRST AID: (CONTINUED)

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.

8. HANDLING PRECAUTIONS:

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

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 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: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Use impervious gloves at all times. 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: Use chemical goggles. Eye wash fountain should be located in immediate work area.

9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid eye and prolonged skin contact. ALWAYS USE COOL WATER (TEMPERATURE LESS THAN 80F, 27C) WHEN DISSOLVING CALCIUM CHLORIDE. HEAT DEVELOPED BY SOLUTIONS 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.

MSDS STATUS: Revised sections 6, 7, 8 and Regulatory Information.

For information regarding state/provincial and federal regulations see The Regulatory Information Section.

130 Headson Drive Syracuse, NY 13214 315-446-4180 Fax: 315-446-1370

GLEASON CHEMICALS

Fax

To: *Jeff* From: *A. Smith*

Company: *Meccermilling* Pages:

Fax: *701-4987* Date: *3/24/10*

Re: *MSds* CC:

Urgent For Review Please Comment Please Reply Please Recycle

• Comments:

MSds on Calcium flake.