



Material Safety Data Sheet

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

24-Hour Emergency Phone Number: 989-636-4400
 Product: BRINERS CHOICE* Anhydrous Calcium Chloride Pellets
 Product Code: 42028
 Effective Date: 10/20/03 Date Printed: 06/16/04 MSD: 004987
 The Dow Chemical Company, Midland, MI 48674
 Customer Information Center: 800-258-2436

2. COMPOSITION/INFORMATION ON INGREDIENTS

Calcium chloride	CAS#	010043-52-4	94-97%
Water	CAS#	007732-18-5	0- 2%
Sodium chloride	CAS#	007647-14-5	1- 2%
Potassium chloride	CAS#	007447-40-7	2- 3%

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

 * White to off-white pellets. Odorless. Causes eye irritation. *
 * May cause skin irritation. *

POTENTIAL HEALTH EFFECTS (See Section 11 for toxicological data.)

EYE: Pellets may cause slight eye irritation. Dusts 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.

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.

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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 gastrointestinal irritation or ulceration.

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

SYSTEMIC (OTHER TARGET ORGAN) EFFECTS: For potassium chloride: in animals, effects have been reported on the following organs following ingestion: gastrointestinal tract, heart, kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use.

CANCER INFORMATION: No relevant information found.

TERATOLOGY (BIRTH DEFECTS): No relevant information found.

REPRODUCTIVE EFFECTS: No relevant information found.

4. FIRST AID

EYES: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist.

SKIN: Wash skin with plenty of water.

INGESTION: Do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air; if effects occur; consult a physician.

NOTE TO PHYSICIAN: If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower GI tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE FIGHTING MEASURES

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FLAMMABLE PROPERTIES

FLASH POINT: None.
METHOD USED: Not applicable.
AUTOIGNITION TEMPERATURE: Not applicable.

FLAMMABILITY LIMITS

LFL: Not applicable.
UFL: Not applicable.

HAZARDOUS COMBUSTION PRODUCTS: Not applicable.

OTHER FLAMMABILITY INFORMATION: Heat is generated when product mixes with water.

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

FIRE FIGHTING INSTRUCTIONS: Keep people away. Isolate fire area 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.

PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, pants 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 SCBA. If this is not available, wear full chemical resistant clothing with SCBA and fight fire from a remote location. For protective equipment in post-fire or non-fire clean up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES (See Section 15 for Regulatory Information.)

PROTECT PEOPLE: Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to Section 7, Handling for additional precautionary measures. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls/Personal Protection.

PROTECT THE ENVIRONMENT: Prevent from entering into soil,

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ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

CLEANUP: Small spills: contain spilled material if possible. Collect in suitable and properly labeled containers. Wash the spill site with large quantities of water. Large spills: Dike area to contain spill. Collect in suitable and properly labeled containers. Wash the spill site with large quantities of water.

7. HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80F, 27C). See Section 8, Exposure Controls/Personal Protection.

STORAGE: Keep containers closed. Store in a dry place. Protect from atmospheric moisture. Do not store in zinc.

8. 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 safety glasses. For dusty operations or when handling solutions of the material, wear chemical goggles.

SKIN PROTECTION: Wear clean, long-sleeved, body-covering clothing. Use gloves chemically resistant to this material. When prolonged or frequently repeated contact could occur, use chemically protective clothing resistant to this material. Selection of specific items such as faceshield, gloves, boots, apron, or full-body suit will depend on operation. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures.

RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, in dusty

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 atmospheres, use an approved particulate respirator.

EXPOSURE GUIDELINES: Calcium chloride: Dow IHG is 10 mg/m3.

 Sodium chloride: Dow IHG is 10 mg/m3.

 Potassium chloride: Dow IHG is 10 mg/m3.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: White to off-white pellets.

ODOR: Odorless.

MELTING POINT: Approx. 1424F, 772C

BOILING POINT: >1500F, >815C

VAP. PRESS: <0.005 mmHg @ 20C

VAP. DENSITY: Not applicable.

SOL. IN WATER: Very soluble.

SP. GRAVITY: 2.2

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable. Hygroscopic.

CONDITIONS TO AVOID: None known. Avoid moisture.

INCOMPATIBILITY WITH OTHER MATERIALS: Heat is generated when mixed with water. Spattering and boiling can occur. Avoid contact with sulfuric acid. Corrosive when wet. Flammable hydrogen may be generated from contact with metals such as: zinc, sodium.

HAZARDOUS DECOMPOSITION PRODUCTS: Does not decompose.

HAZARDOUS POLYMERIZATION: Will not occur.

11. TOXICOLOGICAL INFORMATION (See Section 3 for Potential Health Effects. For detailed toxicological data, write or call the address or non-emergency number shown in Section 1.)

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

INGESTION: The oral LD50 for rats is between 967-1668 mg/kg.

MUTAGENICTY (EFFECTS ON GENETIC MATERIAL): For CaCl2, in vitro genetic toxicity studies were negative.

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

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ENVIRONMENTAL FATE

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

DEGRADATION & PERSISTANCE: Inhibitory concentration (IC50) in OECD Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is greater than 1000 mg/L.

ECOTOXICOLOGY: Based largely or completely on data for major component(s). Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50 >100 mg/L in most sensitive species).
Acute LC50 in bluegill (Lepomis Macrochirus) is 8400-10650 mg/L.
Acute LC50 in mosquito fish (Gambusia affinis) is 13400 mg/L.
Acute LC50 in water flea Daphnia magna is 759-3005.

13. DISPOSAL CONSIDERATIONS (See Section 15 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. THE DOW CHEMICAL COMPANY 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 2 (Composition/Information On Ingredients).

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

- For additional information, refer to:
- Handling & Storage Information, MSDS Section 7.
 - Stability & Reactivity Information, MSDS Section 10.
 - Regulatory Information, MSDS Section 15.

As a service to its customers, Dow 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. Telephone Dow's Customer Information Center at

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800-258-2436 or 989-632-1556 for further details.

14. TRANSPORT INFORMATION

DEPARTMENT OF TRANSPORTATION (D.O.T.): This product is not regulated by D.O.T. when shipped domestically by land.

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

15. 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, 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.

U.S REGULATIONS
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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.

TOXIC SUBSTANCES CONTROL ACT (TSCA):
All ingredients are on the TSCA inventory or are not required to be

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listed on the TSCA inventory.

The CAS number(~) for TSCA is(are):

- CAS# 010043-52-4
- CAS# 007647-14-5
- CAS# 007447-40-7
- CAS# 007732-18-5

STATE RIGHT-TO-KNOW: This product is not known to contain any substances subject to the disclosure requirements of

Pennsylvania

OSHA HAZARD COMMUNICATION STANDARD:

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

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:

D2B - eye or 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.

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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	94-97%

16. OTHER INFORMATION

MSDS STATUS: Revised Sections 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15.
(Includes Canadian 3-year review.)

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The Information Herein Is Given In Good Faith, But No Warranty,
Express Or Implied, Is Made. Consult The Dow Chemical Company
For Further Information.