

Material Safety Data Sheet

Date Printed: 29/JUL/2007
Date Updated: 16/MAR/2006
Version 1.7
Regulation (EC) No 1907/2006

1 - Product and Company Information

Product Name CALCIUM CHLORIDE DIHYDRATE, 99+%,
 A.C.S. REAGENT
Product Number 223506

Company Sigma-Aldrich Pte Ltd
 #02-14 The Capricorn, Sci. Park II
 Singapore 117528
 Singapore
Technical Phone # (65) 6779 1200
Fax (65) 6779 1822

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Irritating to eyes.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
CALCIUM CHLORIDE DIHYDRATE	10035-04-8	233-140-8	017-013-00-2
Formula	CaCl ₂ · 2H ₂ O		
Molecular Weight	147.02 AMU		
Synonyms	Calcium dichloride dihydrate * CAL plus * Replenisher (calcium)		

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed.

SPECIAL REQUIREMENTS: Hygroscopic.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid
	Color: White
	Form: Fine crystals

Property	Value	At Temperature or Pressure
pH	5.0 - 8.0	
BP/BP Range	N/A	
MP/MP Range	176 °C	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	

Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	0.01 mmHg	20 °C
SG/Density	1.85 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water: 1 M in H ₂ O, 20°C complete, colorless	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions to Avoid: Exposure to moisture may affect product quality.

Materials to Avoid: Strong acids, Boron oxides, Zinc, Calcium oxide, Methyl vinyl ether, Calcium chloride is attacked by bromine trifluoride.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Hydrogen chloride gas, Calcium oxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: EV9810000

ACUTE TOXICITY

LD50
Intraperitoneal
Mouse
20500 MG/KG

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Rat
500 UG/KG
Oral
Unscheduled DNA synthesis

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

Non-hazardous for road transport.

IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 017-013-00-2

INDICATION OF DANGER: Xi

Irritant.

R-PHRASES: 36

Irritating to eyes.

S-PHRASES: 26

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

ID-Number: 220

KBwS-Decision

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

DISCLAIMER

For R&D use only. Not for drug, household or other uses.