
SECTION 3 - PHYSICAL DATA/CHEMICAL CHARACTERISTICS

Boiling Point: 230-251°F, Specific Gravity (H₂O = 1) 1.297-1.437
110-122°C @ 25°C, 77°
Vapor Pressure (mm Hg.) 7-15 mmHG @ 25°C, % Volatiles ~55% as Water
77°F

Vapor Density(AIR = 1) Same as Water Evaporation Rate ~ Equal to Water
(Butyl Acetate = 1)

Solubility in Water: Complete pH ~9

Bulk Density (#/cu. ft): Not Applicable

Appearance and Odor: Clear to straw liquid solution with
no odor.

Odor Threshold:
Not Determined

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point: Not Applicable Flammable Limits:
Method Used: Not Applicable LEL N/A UEL N/A

F.P.A. Rating: H-1 F-0 R-0

Extinguishing Media

Not applicable, product is non-combustible.

Special Fire Fighting Procedures

Wear positive pressure self-contained breathing apparatus.

Unusual Fire and Explosion Hazards

None

SECTION 5 - REACTIVITY DATA

Stable under normal conditions (yes or no): YES

Conditions or Materials to avoid (which may react or cause instability):

Calcium Chloride will corrode most metals exposed to air.

Hazardous Decomposition or Byproducts:

Not Applicable

Hazardous Polymerization:

Will not occur.

Conditions to Avoid:

None Known

SECTION 6 - HEALTH HAZARD DATA & TOXICOLOGICAL PROPERTIES

(Include all known acute and chronic effects, signs, and symptoms of exposure and medical conditions generally aggravated by exposure)

Routes of Exposure:**Inhalation:**

Vapors are unlikely due to physical properties. Mists may irritate respiratory tract causing breathing difficulties.

Skin and Eye:

May cause moderate to severe EYE irritation causing tearing and redness. Possible corneal injury, which may be slow to heal.

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 confined to skin or skin is abraded (scratched or cut). 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 for CaCl₂.

Ingestion:

Single dose oral toxicity is believed to be low. Ingestion may cause gastrointestinal irritation or ulceration causing pain, nausea, vomiting and diarrhea. The oral LD₅₀ for rats is in the range of 900-2100 mg/kg for calcium chloride on a 100% basis.

Carcinogenicity According to NTP, IARC and OSHA:

Not Applicable.

Results of in vitro mutagenicity tests have been negative for CaCl₂.

SECTION 7 EMERGENCY AND FIRST AID PROCEDURES

In case of contact, flush EYES immediately with plenty of water for at least 15 minutes. If irritation persists, consult a physician.

Flush SKIN with plenty of water. If irritation develops, consult a physician.

If SWALLOWED, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. (Never give anything by mouth or attempt to induce vomiting in an unconscious person.)

INHALATION is not expected to require first aid. If irritation should result, move to fresh air. Consult a physician if irritation persists.

SECTION 8 - PREVENTIVE & CONTROL MEASURES

Warning Statements:

WARNING! CONTACT CAUSES EYE IRRITATION.

- ... Contains Calcium Chloride CAS# 10043-52-4 solution in Water CAS# 7732-18-5. May contain Potassium Chloride CAS# 7447-40-7 and Sodium Chloride CAS# 7647-14-5.
- ... Eye contact may cause moderate to severe eye irritation with corneal injury, which may be slow to heal.
- ... Prolonged or repeated skin exposure may cause irritation or burns.
- ... Inhalation of mists may irritate respiratory tract causing coughing or breathing difficulties.
- ... Ingestion may cause gastrointestinal irritation or ulceration.

Precautionary Measures:

- ... Avoid contact with eyes. Wear goggles if splashing is possible.
- ... Avoid skin contact. Wash thoroughly after contact.
- ... Work clothing that is soaked with product should be changed.
- ... Avoid breathing mist.
- ... For professional use only. Keep out of children's reach.

Respiratory Protection:

Not generally required. However, if a mist is created which results in irritation, a NIOSH-approved Dust/Mist Respirator is recommended (Type TC-21C-XXX).

Ventilation:

Good general ventilation should be adequate.

Skin Protection:

Rubber or synthetic gloves recommended to guard against prolonged or repeated contact. Other impervious clothing such as boots and apron may be appropriate depending upon potential exposure.

Eye Protection:

Use chemical goggles or face shield if splashing is likely. Eye wash should be located in immediate work area.

Other Protective Clothing or Equipment:

See Work/Hygienic Practices

Work/Hygienic Practices:

Personal Protective Equipment (PPE) specified above is appropriate for typical production operations and exposures. For any unusual situations such as vessel entry or spill clean-up, your supervisor and/or Health and Safety Department should determine additional PPE requirements and safety procedures.

SECTION 9 - HAZARDOUS INGREDIENTS EXPOSURE LIMITS - U. S. Only

INGREDIENT:	Exposure Limits		
	OSHA	ACGIH	OTHER
CALCIUM CHLORIDE CAS# 10043-52-4	None Established	None Established	None Established
POTASSIUM CHLORIDE CAS# 7447-40-7	None Established	None Established	None Established
SODIUM CHLORIDE CAS# 07647-14-5	None Established	None Established	None Established

SECTION 10 - SPILL & DISPOSAL INFORMATION - U. S. Only

Calcium Chloride is often used for road de-icing. However, you should prevent product from entering drinking water supplies or streams. Observing the precautions noted above, collect liquid or absorb liquid with an inert, noncombustible material and remove for disposal.

Spill reporting requirements and reportable quantities vary by region. In case of any spill or release, consult Sections 10 and 11 of the Material Safety Data Sheet and all applicable state and local regulations.

Waste of this product is not defined as hazardous according to EPA RCRA Regulations (40 CFR 261.3). Consult applicable state and local regulations prior to disposal.

SECTION 11 - GOVERNMENT REPORTING INFORMATION - U. S. OnlySARA Title III Reporting Information

Tier I & II Hazard Categories:

IMMEDIATE-ACUTE

Contains Extremely Hazardous-SARA III Section 302 Ingredient: NO
Comments:

Contains Toxic Chemical Release-SARA III Section 313 Ingredient: NO
Comments:

Other Government Reporting Requirements:

None Known

Non-Hazardous Ingredient Disclosure:

Calcium Chloride, Potassium Chloride, Sodium Chloride and Water are not specifically listed as hazardous per the OSHA.

SECTION 12 - PRODUCT IDENTIFICATION/TRADENAME ADDENDUM

The information contained in this Material Safety Data Sheet is applicable to the following products:

None

"THE DATA INCLUDED HEREIN ARE PRESENTED ACCORDING TO W. R. GRACE & CO.-CONN'S PRACTICES CURRENT AT THE TIME OF PREPARATION HEREOF, ARE MADE AVAILABLE SOLELY FOR THE CONSIDERATION, INVESTIGATION AND VERIFICATION OF THE ORIGINAL RECIPIENTS HEREOF AND DO NOT CONSTITUTE A REPRESENTATION OR WARRANTY FOR WHICH GRACE ASSUMES LEGAL RESPONSIBILITY. IT IS THE RESPONSIBILITY OF A RECIPIENT OF THIS DATA TO REMAIN CURRENTLY INFORMED ON CHEMICAL HAZARD INFORMATION, TO DESIGN AND UPDATE ITS OWN PROGRAM AND TO COMPLY WITH ALL NATIONAL, FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS APPLICABLE TO SAFETY, OCCUPATIONAL HEALTH, RIGHT-TO-KNOW AND ENVIRONMENTAL PROTECTION."