



Safety Data Sheet

Conforms to OSHA CFR 29 1910.1200 and aligns to the United Nations Globally Harmonized System
Conforms to The United Nations Regulation Globally Harmonized System

Section 1 - Chemical Product and Company Identification

1.1 Product Name: Calcium Chloride Solution

Other Identification: Liquid Calcium Chloride, Calcium Dichloride, Calcium Chloride Aqueous Solution

1.2 Distributor: Vitro Chemicals, Fibers & Mining, LLC, 13481 Resource Drive, Laredo, TX 78045
800)258-1545

1.3 Product Use: Drilling mud additive, dust control

1.4 Emergency Telephone: Hazmat Service 800-373-7542
Contract Number 1186

Section 2 - Hazards Identification

GHS HAZARD

2.1 Hazard Classes

Skin irritation

Eye irritation

Acute toxicity, oral

Hazard Categories

Category 3

Category 2A

Category 4

2.2 Signal Word: Warning



2.3 Pictograms:

2.4 Hazard Statements

PHYSICAL HAZARDS:

None

HEALTH HAZARDS:

H302: Harmful if swallowed

H315: Causes skin mild irritation

H319: Causes serious eye irritation

ENVIRONMENTAL HAZARDS:

None

PRECAUTIONARY STATEMENTS:

P261: Avoid breathing mist or vapors

P264: Wash skin thoroughly after handling

P280: Wear protective gloves and eye protection

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RESPONSE STATEMENTS:

P301 +310+ P331: IF SWALLOWED: USA Immediately call the National POISON CENTER at **800-222-1222**.
OUT SIDE USA Immediately call poison center or doctor.
DO NOT induce vomiting

P303+P361+353: IF ON SKIN, Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+340: IF INHALED, Remove to fresh air and keep comfortable for breathing. If not breathing give artificial respiration. DO NOT use mouth to mouth resuscitation without proper protection

P305+P351: IF IN EYES rinse cautiously with water for at least 15 minutes

P306+P361: IF ON CLOTHING, Take off contaminated clothing

P376: Stop leaks if safe to do so. See section 6 for proper clean up

STORAGE STATEMENTS:

P403 + P233: Store in a well-ventilated place, Keep container tightly closed when not in use

DISPOSAL STATEMENTS:

P501: Dispose of content and/ container in accordance with local, regional, national and/or international regulations

Hazards not otherwise classified (HNOC) or not covered by GHS: May irritate mucous membranes.

Section 3 - Composition / Information on Ingredients

3.1

Chemical Names	CAS #.	Concentration%	Other Identifiers
Calcium chloride	10043-52-4	10 - 38%	Calcium dichloride dihydrate
Water	7732-18-5	62 -90 %	H ₂ O

Section 4 - First Aid Measures

4.1 Eye: Contact with the eyes can cause serious irritation. Symptoms may include discomfort or pain and redness. Severe overexposure can result in swelling of the conjunctiva along with tissue damage.

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

4.2 Skin: Prolonged and repeated liquid contact can cause defatting and drying of the skin and can lead to irritation and/or dermatitis.

Skin: Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

4.3 Ingestion: Liquid ingestion can cause inebriation, headache, gastrointestinal pain, nausea, and vomiting leading to central nervous system depression. Aspiration of liquid into the lungs must be avoided as even small quantities in the lungs can produce chemical pneumonia, pulmonary edema and even death.

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Ingestion: Do NOT induce vomiting. Get medical aid immediately.

4.4 Inhalation: Prolonged breathing of high mist concentrations can produce headache, dizziness, nausea, and impaired vision. Excessive overexposure can cause central nervous system depression, loss of consciousness, liver damage and death resulting from respiratory failure.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult and **IF TRAINED**, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation without protection.

4.5 After first aid, get appropriate paramedic, or community medical support.

Note to Physicians: The severity of outcome following ingestion may be more related to the time between ingestion and treatment, rather than the amount ingested. Therefore, there is a need for rapid treatment of any ingestion exposure.

Section 5 - Fire-Fighting Measures

5.1 Flammable Properties: Not flammable

5.2 Suitable Extinguishing Media: Carbon dioxide, dry chemical powder or appropriate foam. Use water to keep non-leaking, fire-exposed containers cool.

5.3 Special hazards arising from the substance or mixture: Hydrogen chloride gas, Calcium oxide

5.4 Precautions for Firefighters: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Contact with metals may evolve flammable hydrogen gas.

Section 6 - Accidental Release Measures

6.1 Personal Precautions: Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move container to a well-ventilated and secure area. Do not touch damaged containers or spilled product unless wearing appropriate protective equipment. Before entry, especially into confined areas, check atmosphere with an appropriate monitor.

6.2 Methods for Containment and Clean-up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating vapor or mist conditions. Cover with sand, dry lime or soda ash and place in a closed container for disposal. Provide ventilation. Evacuate unnecessary personnel.

6.3 Other Information: Report spills to local health, safety and environmental authorities, as required.

Section 7 - Handling and Storage

7.1 Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not breathe dust minimize dust generation and accumulation. Do not get in eyes, on skin, or on clothing.

7.2 Storage: Store in a cool, dry, well-ventilated area, out of direct sunlight. Keep quantities stored as small as possible. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel.

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Section 8 - Exposure Controls / Personal Protection

8.1

Chemical Names	ACGIH- TLV	OSHA - PEL
Calcium chloride	5 mg/m3 TWA	5 mg/m3 TWA

8.2 ACGIH® = American Conference of Governmental Industrial Hygienists. TLV® = Threshold Limit Value. OSHA = US Occupational Safety and Health Administration. PEL = Permissible Exposure Limits.

NOTE: TWA Means "TWA is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded."

8.3 Ventilation: Provide general or local exhaust ventilation systems to maintain airborne concentrations below TLV/PELs Local exhaust ventilation is preferred because it prevents contaminant dispersion into the work area by controlling it at its source.

8.5 Personal protective equipment

8.5.1 Respiratory protection respirator Use a type N100 as a backup to engineering controls.

8.5.2 Hand protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use. Select gloves tested to the **ANSI/ISEA 105-2011**

Full contact: Nitrile rubber

Splash contact: Nitrile rubber

8.5.3 Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US).

8.5.4 Skin and body protection

Chemical splash protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

8.9 Protective Clothing Pictograms



Splash Goggles



Gloves



Protective Apron



Boots

Section 9 - Physical and Chemical Properties

9.1

Physical State: Aqueous solution

Appearance: Transparent

Odor: Odorless

Vapor Pressure: Not Available

Vapor Density (Air=1): Not Data Available

Specific Gravity (H2O=1,): 1.3

Relative Density: Not Available

Odor Threshold: Not Available

Flammability (solid, gas): Not applicable.

Evaporation rate: Not Available

Partition coefficient octanol/water: Not Available

Water Solubility: Soluble

Melting point/freezing point: Not Available

Flash Point: Not Data Available

Boiling Point / Range: 224°F

(118°C)

Lower Explosive Limits (vol % in air): N/A

Upper Explosive Limits (vol % in air):N/A

Viscosity: Not Available

Auto ignition Temperature: Not Available

Decomposition temperature: Not Available

pH: 4

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Section 10 - Stability and Reactivity

10.1 Chemical Stability: Stable under ordinary conditions of use and storage.

10.2 Conditions to Avoid: Avoid contact with: bromide trifluoride, 2-furan percarboxylic acid because calcium chloride is incompatible with those substances. Contact with zinc forms flammable hydrogen gas, which can be explosive. Catalyzes exothermic polymerization of methyl vinyl ether. May release flammable hydrogen gas. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromates.

10.3 Incompatible Materials: Slowly corrodes metal aluminum and alloy

10.4 Hazardous Combustion Products: Formed under fire conditions: hydrogen chloride gas, calcium oxide

Section 11- Toxicological Information

11.1 Toxicity Data

Chemical Name	LD50 oral rat	LC50 Dermal Rat
Calcium chloride	1000 mg/kg	2630mg/kg

Key to Abbreviations

IARC = International Agency for Research on Cancer.

ACGIH= American Conference of Governmental Industrial Hygienists

NTP = National Toxicology Program.

11.2 Route of Entry: Ingestion, Skin and/or Eye Contact

11.3 Aspiration Hazard: European Chemical Agency Data Base shows that this product is not fatal if swallowed and enters airways.

11.4 Acute Toxicity: Harmful if swallowed. OECD Guideline 401 Tests results found in the European Chemical Agency Data Base shows that components of this product to be Harmful Oral Toxicity.

11.5 Mutagenicity: European Chemical Agency Data Base show that this product will not cause genetic defects.

11.6 Skin Corrosion/Irritation: OECD Guideline 404 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause mild skin irritation.

11.7 Serious Eye Damage/Irritation: OECD Guideline 405 Tests results found in the European Chemical Agency Data Base shows that components of this product to cause serious eye irritation.

11.8 Specific Target Organ Toxicity (Single Exposure): European Chemical Agency Data Base shows that this product will not cause single target organ toxicity.

11.9 Reproductive toxicity: European Chemical Agency Data Base shows that this product will not cause damage to fertility or the unborn child.

11.10 Target Organ Toxicity (Repeated Exposure): European Chemical Agency Data Base shows that this product will not cause repeated target organ toxicity.

11.11 Signs and Symptoms of Exposure: Dust may produce irritation of eyes, mouth and respiratory tract. Inhalation of the dust may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

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11.12 Carcinogenicity: European Chemical Agency Data Base shows that this product will not cause cancer.

Chemical Name	IARC	ACGIH	NTP	OSHA
Calcium chloride	None Listing	None Listing	None listed	None Listed

Section 12 - Ecological Information

Calcium chloride	LC50 759 mg/l	Fish	96 hours
Calcium chloride	EC50 590mg/l	Daphnia	48 hours

Toxicity Not toxic to aquatic organisms, contain runoff

Mobility in soil: No Data available

Persistence/degradability: No Data available

Bioaccumulation: No Data available

PBT and vPvB assessment: No Data available

Section 13 - Disposal Considerations

13.1 Disposal: DO NOT REUSE EMPTY CONTAINER! Container with residues should be considered to be hazardous wastes. Contact a licensed contractor for detailed recommendations. Follow applicable federal, state, and local regulations.

Section 14 - Transport Information

14.1

Regulatory Information	UN #	Proper Shipping Name	Hazard Class	PG	Label	Additional Information
US DOT Classification		Not Regulated				
TDG Classification		Not Regulated				

Section 15 - Regulatory Information

15.1 US Regulations:

TSCA: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements under 40 CFR 720.30

CERCLA Hazardous Substances and corresponding RQs None

SARA Community Right-to-Know Program: None

Clean Water Act: None

Clean Air Act: None

OSHA: All ingredients are listed in 1910.1200

State Regulations

California prop. 65: None

Chemicals on the following State Right to Know Lists:

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Massachusetts: All components of this product are on the Massachusetts Inventory or are exempt from Inventory requirements.

New Jersey All components of this product are on the New Jersey inventory or are exempt from Inventory requirements.

Pennsylvania: All components of this product are on the Pennsylvania Inventory or are exempt from Inventory requirements.

15.2 Canadian Regulation:

All substances contained in this product are listed on the Canadian Domestic Substances List (DSL) or are not required to be listed.

Section 16 - Other Information

16.1 Disclaimer: The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER NO responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above is furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use.

16.2 References: CHEMpendium data base of Canadian Centre for Occupational Health and Safety (CCOHS), JJ Keller on Line, European Chemical Agency Data Base and MSDS and SDS of chemicals in this mixture.

16.3 SDS Preparation Date: 05/22/2015, **SDS Revision Date:** 02/11/2016
Section 1, 9, 02/26/2016
Section 1
Distributor Name and address
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