

Section 1: Product & Company Information

Product Identifier: Calcium Chloride 30-32% Solution

Other Means of Identification

Product Number: No data available.

Recommended Use and Restrictions on Use

Recommended Use: No data available.

Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information

Company Name: CORECHEM Inc.

Address: 4320 Greenway Drive
Knoxville, TN 3791
USA

Information Telephone Number: 1-865-524-4239

Fax Number: 1-865-524-3375

Website: www.corecheminc.com

Contact Person: Regulatory Manager

E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

Section 2: Hazards Identification

GHS Hazard Classification(s)

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)

Not classified.

Health Hazard(s)

Corrosion/Irritation, Skin - 2

(Corrosion)Damage/Irritation, Eye - 2A

Environmental Hazard(s)

Not classified.

Label Elements

Signal Word

WARNING

Hazard Symbol(s)



Hazard Statement(s)

H315: Causes skin Irritation.

H319: Causes serious eye Irritation.

Precautionary Statements

General

Not applicable.

Prevention

P264: Wash face, hands and any exposed skin thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response

P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P321: Specific treatment (see supplemental first aid instructions on this label).

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

Storage

Not applicable.

Disposal

Not applicable.

Hazard(s) not otherwise classified (HNOC)
None known.

Section 3: Composition/Information on Ingredients

Mixture

Chemical Identity ²	Common Name/Synonym(s)	CAS # ³	Weight %	Impurity or Stabilizing Additive
Sodium Chloride	---	7647-14-5	<1	No
Potassium Chloride	---	7447-40-7	<3	No
Calcium Chloride	Calcium Dichloride, Calcium Chloride Aqueous Solution, Liquid Calcium Chloride, Calcium Chloride	10043-52-4	28-42	No

- Information regarding the composition and the percent ranges of the mixture ingredients are not presented as it is confidential business information (CBI). Where a medical emergency exists (as determined by medical professionals), timely disclosure of CBI is assured. The information on this label pertains to only the name of the substance and the concentration in the mixture (as listed) and can only be requested by a duly-licensed or local (State/Provincial or Federal) Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Skin Contact

Take off immediately all contaminated clothing. Wash off IMMEDIATELY with plenty of water for at least 15-20 minutes. Get medical attention immediately. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact

If in eyes, immediately rinse eyes cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation occurs, get medical advice/attention.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Symptoms

Irritating to eyes, respiratory system and skin

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

No data available.

Section 5: Fire-Fighting Measures

General Fire Hazards

This material does not burn.

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Unsuitable Extinguishing Media

No data available.

Specific Hazards Arising from the Chemical

No data available.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

Keep unnecessary people away, isolate hazard area and deny entry. This material does not burn. Fight fire for other material that is burning. Water should be applied in large quantities as fine spray.

Special Protective Equipment for Fire-Fighters

As in any fire, wear self-contained breathing apparatus (pressure-demand (OSHA/NIOSH approved or equivalent) and full protective gear.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

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

Methods and Materials for Containment and Clean-Up

Small and large spills: Contain spilled material if possible. Absorb with materials such as sand. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal considerations, for additional information.

Notification Procedures

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions

Prevent large spills from entering into soil, ditches, sewers, waterways and/or groundwater.

Section 7: Handling and Storage

Precautions for Safe Handling

Use caution when handling/transferring. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Do not breathe mist or vapor. Use only with adequate ventilation. Wear appropriate personal protective equipment. Transfer and storage systems should be compatible. Observe good industrial hygiene practices.

Conditions for Safe Storage, Including any Incompatibilities

Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials (See Section 10). Ensure that all local regulations regarding handling and storage facilities are followed.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

The product does not contain any relevant quantities of hazardous materials with critical values that have to be monitored in the workplace.

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.

Skin Protection

Hand Protection

Wear appropriate chemical-resistant gloves.

Other

Wear appropriate chemical-resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:

Physical State: Liquid
Color: Clear

Odor:

Odorless

Odor Threshold:

Not applicable.

pH:

9 - Estimated (undiluted)

Melting Point/Freezing Point:

Not applicable.

Initial Boiling Point and Boiling Range:

~ 10 - 122 °C (230 - 252 °F)

Flash Point:

Not applicable.

Evaporation Rate (butyl acetate=1):

No data available.

Flammability (solid, gas):

No data available.

Upper/Lower Limit on Flammability or Explosive Limits

Flammability Limit – Upper: Not applicable.
 Flammability Limit – Lower: Not applicable.
 Explosive Limit – Upper: Not applicable.
 Explosive Limit – Lower: Not applicable.

Vapor Pressure: 9 - 15 mm Hg @ 25 °C (77 °F)

Vapor Density (air =1): No data available.

Relative Density (water =1): 1.275 - 1.439 @ 25 °C (77 °F)

Solubility(ies):
 Solubility in water: Completely miscible
 Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-ignition Temperature: Not applicable.

Decomposition Temperature: Not applicable.

Viscosity: 2 - 7 cp @ 25°C (77°F)

Other Information:

Molecular Weight: No data available.

Formula: No data available.

Section 10: Stability and Reactivity

Reactivity

Hygroscopic.

Chemical Stability

Stable at normal temperatures and pressures.

Possibility of Hazardous Reactions

No data available.

Conditions to Avoid

None known.

Incompatible Materials

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.

Hazardous Decomposition Products

Formed under fire conditions: hydrogen chloride gas, calcium oxide

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation or ulceration.

Inhalation: Vapors are unlikely due to physical properties. Mist may cause irritation to upper respiratory tract (nose and throat).

Skin Contact: Brief contact is essentially nonirritating to skin. Prolonged contact may cause skin irritation, even a burn. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear. Not classified as corrosive to the skin according to DGT guidelines.

Eye Contact: May cause serious eye irritation. May cause slight corneal injury. Effects may be slow to heal.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Calcium Chloride: LD50 Oral: 2282 mg/kg
 Calcium Chloride: LD50 Oral: 1000 mg/kg (Rat)
 Sodium Chloride: LD50 Ora: 3000 mg/kg (Rat)

Dermal

Calcium Chloride: LD50 Dermal: 6013 mg/kg
 Calcium Chloride: LD50: Dermal: 2630 mg/kg (Rat)

Inhalation

Sodium Chloride: LC50 Inhalation: 426/m³(1 hr-Rat)

Repeated Dose Toxicity

No data available.

Skin Corrosion/Irritation

Skin Irritation: Skin exposure may cause slight irritation, redness, itching, swelling. May cause more severe response if skin is damp, abraded (scratched or cut), or covered by clothing, gloves, or footwear. Prolonged contact may cause more severe symptoms. Damage is localized to contact areas.

Serious Eye Damage/Eye Irritation

Eye Irritation: Eye exposure may cause serious eye irritation and pain. May cause conjunctival swelling and cornea opacification from hypertonic solution. Corneal eye pain, redness, acute corneal thickening or whitening.

Respiratory/Skin Sensitization

Inhaling mist, spray, or vapor may cause irritation to upper respiratory tract (nose and throat), nasal mucosal and laryngeal erythema.

Carcinogenicity

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

US, National Toxicology Program (NTP) Report on Carcinogens

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

US, OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity

In Vitro

No mutagenic components identified.

In Vivo

No mutagenic components identified.

Reproductive Toxicity

None known.

Specific Target Organ Toxicity – Single Exposure

None known.

Specific Target Organ Toxicity – Repeated Exposure

None known.

Aspiration Hazard

Not classified.

Other Effects

None known.

Section 12: Ecological Information

Ecotoxicity

Acute Hazards to the Aquatic Environment

Fish

Calcium Chloride: LC50, bluegill (*Lepomis macrochirus*): 8,350 – 10,650 mg/l
Potassium Chloride: LC50, rainbow trout (*Oncorhynchus mykiss*): 96 h: 4,236 mg/l
Sodium Chloride: – LC50, fathead minnow (*Pimephales promelas*): 10,610 mg/l

Aquatic Invertebrates

Calcium Chloride: LC50, water flea *Daphnia magna*: 759 – 3,005 mg/l
Potassium Chloride: EC50, water flea *Daphnia magna*, 24 h, immobilization: 590 mg/l
Potassium Chloride: LC50, water flea *Ceriodaphnia dubia*, 96 h: 3,470 mg/l
Sodium Chloride: LC50, water flea *Daphnia magna*: 4,571 mg/l

Toxicity to Aquatic Plants

Sodium Chloride: LC50, OECD 209 Test, activated sludge, respiration inhibition: > 1,000 mg/l

Chronic Hazards to the Aquatic Environment

Fish

No data available.

Aquatic Invertebrates

No data available.

Toxicity to Aquatic Plants

No data available.

Persistence and Degradability

Biodegradation

This material is inorganic and not subject to biodegradation.

BOD/COD Ratio

No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

No data available on bioaccumulation.

Partition Coefficient n-octanol / water (log Kow)

No data available.

Mobility in Soil

The product is water soluble and may spread in water systems.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Empty containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No
Sudden Release of Pressure: No
Reactive: No
Acute (Immediate) Health Hazard: Yes
Chronic (Delayed) Health Hazard: No

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 1
Chronic Health Hazard: /
Flammability: 0
Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 1
Fire Hazard: 0
Reactivity Hazard: 0

Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATF - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL - Immediately Dangerous to Life and Health
Kg - Kilogram
l - Liter
lb - Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml - milliliter
N/A - Not Applicable
N/D - Not Determined
PEL - Permissible Exposure Limit
REL - Recommended Exposure Limit
STEL - Short-term Exposure Limit
TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists
AIHA - American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS - Chemical Abstracts Service
DOT - US Department of Transportation
EPA - US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labeling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH - National Institute for Occupational Safety and Health
NTP - National Toxicology Program
OSHA - US Occupational Health and Safety Administration
SARA - US EPA Superfund Amendments and Reauthorization Act
TSCA - US EPA Toxic Substances Control Act
UN - United Nations

References

HSDDB - Hazardous Substances Data Bank

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