



SAFETY DATA SHEET

ANHYDROUS 94 - 97% CALCIUM CHLORIDE POWDER

MSDS No.: M48002

Rev. Date: 2010-Oct-01

Rev. Num. 0

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Company Identification:

Occidental Chemical Corporation
5005 LBJ Freeway
P.O. Box 809050
Dallas, TX
75380-9050

Supplier:

Cal-Chlor Corporation
627 Jefferson Street
Lafayette, Louisiana, USA
Phone: 1-337-264-1449

24 Hour Emergency Telephone Number: Call Chemtrec 1-703-527-3887

To Request an MSDS: 1-800-245-6743

Customer Service: 1-800-245-6743 or 1-337-942-9599

Product Use: Concrete acceleration, Drilling Fluid Additive

2. HAZARDS IDENTIFICATION

The substance/preparation is classified as dangerous in accordance with Directive(s) 67/548/EEC with amendments and/or 1999/45/EC with amendments

EC CLASSIFICATION:

Xi: Irritant
Xn: Harmful



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R22 - Harmful if swallowed.

S-phrase(s)

S22 - Do not breathe dust

S24 - Avoid contact with skin

S 2 - Keep out of the reach of children

GHS SYMBOL:



GHS SIGNAL WORD: WARNING

GHS - Hazard Statement for Health Hazards

H319 - Causes serious eye irritation

H316 - Causes mild skin irritation

H302 - Harmful if swallowed

GHS Precautionary Statement(s) - Prevention

P264 - Wash thoroughly after handling

P280 - Wear eye and face protection

P270 - Do not eat, drink or smoke when using this product

GHS Precautionary Statement(s) - Response

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

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

P301 + P312 - IF SWALLOWED, Call a POISON CENTER or doctor/physician if you feel unwell

P330 - Rinse mouth if ingested

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

GHS Precautionary Statement(s) - Disposal

P501 - Dispose of contents/container in accordance with applicable local, regional, national, and/or international regulations

POTENTIAL HEALTH EFFECTS:

Inhalation: Dust 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. Not classified as corrosive to the skin according to DOT guidelines. May cause more severe response if skin is damp. May cause more severe response if skin is abraded (scratched or cut). May cause more severe response on covered skin (under clothing, gloves).

Eye contact: For solid: May cause slight eye irritation, mechanical injury only. Dust formation should be avoided, as dust can cause severe eye irritation with corneal injury.

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.

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Chronic Effects: For the minor component(s): POTASSIUM CHLORIDE: In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, heart, and kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. SODIUM CHLORIDE: Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

See Section 11: TOXICOLOGICAL INFORMATION

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	EC-No.	REACH Reg. No.	CAS Number	Percentage	EU Classification
Calcium chloride	EEC NO. 233-140-8	-----	10043-52-4	> 94 - < 97	Xi;R36
Potassium Chloride	EEC NO. 231-211-8	-----	7447-40-7	> 2 - < 3	-----
Sodium chloride	EEC NO. 231-598-3	-----	7647-14-5	> 1 - < 2	-----
Water	EEC NO. 231-791-2	-----	7732-18-5	< 1.0	-----
Calcium bromide (CaBr ₂)	EEC NO. 232-164-6	-----	7789-41-5	< 1.0	-----

For the full text of the R phrases mentioned in this Section, see Section 2

4. FIRST AID MEASURES

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

SKIN CONTACT: Wash off immediately with plenty of water.

EYE CONTACT: Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. If effects occur, consult a physician, preferably an ophthalmologist. May cause injury due to mechanical action.

INGESTION: If swallowed, do not induce vomiting. Give one cup (8 ounces or 240 ml) of water or milk if available and transport to a medical facility. Never give anything by mouth to an unconscious or convulsive person.

Protection of First-Aiders: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Notes to Physician: Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/esophageal control if lavage is done. If burn is present, treat as any thermal burn, after decontamination. 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

Fire Hazard: This material does not burn.

Extinguishing Media: Use extinguishing agents appropriate for surrounding fire.

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Fire Fighting: 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. Wear NIOSH approved positive-pressure self-contained breathing apparatus operated in pressure demand mode. Wear protective fire fighting clothing (includes fire fighting helmet, coat, trousers, 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 self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

Flash point: Not applicable

Autoignition Temperature: Not applicable

6. ACCIDENTAL RELEASE MEASURES

Occupational Release: Small and large spills: Contain spilled material if possible. Collect in suitable and properly labeled containers. Flush residue with plenty of water. See Section 13, Disposal Considerations, for additional information.

Personal Precautions: Spilled material may cause a slipping hazard. Isolate area. Keep unnecessary and unprotected personnel from entering the area. 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.

Environmental Precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

7. HANDLING AND STORAGE

Storage Conditions: Store in a dry place. Protect from atmospheric moisture.

Handling Procedures: Heat developed during diluting or dissolving is very high. Use cool water when diluting or dissolving (temperature less than 80°F, 27°C). Avoid contact with eyes, skin, and clothing. Do not swallow. Wash thoroughly after handling. Keep container tightly closed. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Regulatory Exposure limit(s):

Component	European Union	Bulgaria	Czech Republic
Calcium chloride 10043-52-4	-----	-----	TWA = 5 mg/m ³ Ceiling = 4 mg/m ³
Potassium Chloride 7447-40-7	-----	TWA = 5.0 mg/m ³	-----

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Component	CAS Number	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Particulates not otherwise regulated	Not Assigned	TWA 15 mg/m ³ (total) TWA 5 mg/m ³ (resp)	-----	-----

OEL: Occupational Exposure Level; OSHA: United States Occupational Safety and Health Administration; PEL: Permissible Exposure Limit; TWA: Time Weighted Average; STEL: Short Term Exposure Limit

Non-Regulatory Exposure Limit(s):

Component	CAS Number	ACGIH TWA	ACGIH STEL	ACGIH Ceiling
Particles Not Otherwise Specified (PNOS)	Not Assigned	TWA 10 mg/m ³ (inhalable) TWA 3mg/m ³ (resp)	-----	-----

- The American Conference of Governmental Industrial Hygienists (ACGIH) is a voluntary organization of professional industrial hygiene personnel in government or educational institutions in the United States. The ACGIH develops and publishes recommended occupational exposure limits each year called Threshold Limit Values (TLVs) for hundreds of chemicals, physical agents, and biological exposure indices.

Additional Advice: Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

ENGINEERING CONTROLS:

Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

PERSONAL PROTECTIVE EQUIPMENT:

Eye Protection: Wear safety glasses with side-shields. For dusty operations or when handling solutions of the material, wear chemical goggles.

Skin and Body Protection: Wear clean, body-covering clothing.

Hand Protection: Use gloves chemically resistant to this material. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Examples of preferred glove barrier materials include: neoprene, polyvinyl chloride ("PVC" or "vinyl"), nitrile/butadiene rubber ("nitrile" or "NBR"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection:

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. In dusty or misty atmospheres, use an approved particulate respirator. The following should be effective types of air-purifying respirators: High efficiency particulate air (HEPA) N95. A respiratory protection program that meets applicable regulatory requirements must be followed whenever workplace conditions warrant use of a respirator.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Powder
Color:	White
Odor:	Odorless
Odor Threshold:	Not applicable
Boiling Point/Range:	Not applicable
Freezing Point/Range:	Not applicable to solids
Melting Point/Range:	772 °C (1,422 °F) Literature Approximately
Vapor Pressure:	Literature negligible at ambient temperature
Vapor Density (air=1):	Not applicable
Specific Gravity (water=1):	Not applicable to solids
Bulk Density:	62 - 65 lb/ft ³ Estimated
Water Solubility:	Readily soluble
pH:	Not applicable to solids
Evaporation Rate (ether=1):	Not applicable
Partition Coefficient (n-octanol/water):	Not applicable
Flash point:	Not applicable
Autoignition Temperature:	Not applicable

10. STABILITY AND REACTIVITY

Reactivity/ Stability: Stable. Hygroscopic.

Conditions to Avoid: None known. Avoid moisture.

Incompatibilities/ Materials to Avoid: 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. Reaction of bromide impurity with oxidizing materials may generate trace levels of impurities such as bromate.

Hazardous Decomposition Products: Does not decompose.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

TOXICITY DATA:

LD50 Oral: Typical for this family of materials. LD50, Rat 918 - 1,668 mg/kg

LD50 Dermal: For the major component(s): LD50, Rabbit > 5,000 mg/kg

CHRONIC TOXICITY:

For the minor component(s): Potassium chloride - In animals, effects have been reported on the following organs after ingestion: Gastrointestinal tract, Heart, and Kidney. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. Medical experience with sodium chloride has shown a strong association between elevated blood pressure and prolonged dietary overuse. Related effects could occur in the kidneys.

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11. TOXICOLOGICAL INFORMATION

CARCINOGENICITY: This product is not classified as a carcinogen by NTP, IARC or OSHA.

MUTAGENIC DATA: The data presented are for the following material: Calcium chloride (CaCl₂) - In vitro genetic toxicity studies were negative. The data presented are for the following material: Potassium chloride - In vitro genetic toxicity studies were positive. However, the relevance of this to humans is unknown. For the minor component(s): Sodium chloride - In vitro genetic toxicity studies were predominantly negative.

DEVELOPMENTAL TOXICITY: For the major component(s): Did not cause birth defects or any other fetal effects in laboratory animals.

12. ECOLOGICAL INFORMATION

ECOTOXICITY DATA:

- **Aquatic Toxicity:**

Material is practically non-toxic to aquatic organisms on an acute basis. (LC₅₀/EC₅₀/EL₅₀/LL₅₀ >100 mg/L in the most sensitive species tested).

- **Freshwater Fish Toxicity:**

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

- **Invertebrate Toxicity:**

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

LC₅₀, water flea *Ceriodaphnia dubia*, 96 h: 3,470 mg/l

Sodium Chloride: LC₅₀, water flea *Daphnia magna*: 4,571 mg/l

FATE AND TRANSPORT:

BIODEGRADATION: Biodegradation is not applicable.

BIOCONCENTRATION: No bioconcentration is expected because of the relatively high water solubility. Potential for mobility in soil is very high (K_{oc} between 0 and 50). Partitioning from water to n-octanol is not applicable.

13. DISPOSAL CONSIDERATIONS

Waste from material: Reuse or reprocess, if possible. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Report spills if applicable. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE 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: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Landfill and waste water treatment system.

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14. TRANSPORT INFORMATION

U.S.DOT 49 CFR 172.101: Not regulated

MARITIME TRANSPORT IMO / IMDG: Not regulated

AIR TRANSPORT ICAO: Not regulated

15. REGULATORY INFORMATION

Germany, Water Endangering Classes (VwVwS):

Component	German - Water Hazard Classess	German - Water Hazard Class Annex 1	German - Water Hazard Class Annex 3
Calcium chloride	ID Number 220, hazard class 1 - low hazard to waters	Not Listed	Not Listed
Potassium Chloride	ID Number 230, hazard class 1 - low hazard to waters	Not Listed	Not Listed
Sodium chloride	ID Number 270, hazard class 1 - low hazard to waters	Not Listed	Not Listed
Calcium bromide (CaBr ₂)	Not Listed	Not Listed	Not Listed

International Inventory Status:

Australian Chemical Inventory:

Component	AICS
Calcium chloride	Listed
Potassium Chloride	Listed
Sodium chloride	Listed
Calcium bromide (CaBr ₂)	Listed

Canadian Chemical Inventory:

Component	DSL	NDSL
Calcium chloride	Listed	Not Listed
Potassium Chloride	Listed	Not Listed
Sodium chloride	Listed	Not Listed
Calcium bromide (CaBr ₂)	Listed	Not Listed

China Chemical Inventory:

Component	IECS
Calcium chloride	Listed
Potassium Chloride	Listed
Sodium chloride	Listed
Calcium bromide (CaBr ₂)	Listed

EINECS:

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Component	EU - NLPL	ELINCS	EINECS
Calcium chloride	Not Listed	Not Listed	233-140-8
Potassium Chloride	Not Listed	Not Listed	231-211-8
Sodium chloride	Not Listed	Not Listed	231-598-3
Calcium bromide (CaBr ₂)	Not Listed	Not Listed	232-164-6

Japan Chemical Inventory:

Component	ENCS
Calcium chloride	1-176
Potassium Chloride	1-228
Sodium chloride	1-236
Calcium bromide (CaBr ₂)	1-1038

Korean Chemical Inventory:

Component	KECL
Calcium chloride	KE-04496
Potassium Chloride	KE-29086
Sodium chloride	KE-31387
Calcium bromide (CaBr ₂)	KE-04485

New Zealand Chemical Inventory:

Component	NZIOC
Calcium chloride	Listed
Potassium Chloride	Listed
Sodium chloride	Listed
Calcium bromide (CaBr ₂)	Listed

Philippines - Priority Chemical List:

Component	PICCS
Calcium chloride	Listed
Potassium Chloride	Listed
Sodium chloride	Listed
Calcium bromide (CaBr ₂)	Listed

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

Component	TSCA	TSCA 12(b)	TSCA-Section 5
Calcium chloride	Listed	Not Listed	Not Listed
Potassium Chloride	Listed	Not Listed	Not Listed
Sodium chloride	Listed	Not Listed	Not Listed
Calcium bromide (CaBr ₂)	Listed	Not Listed	Not Listed

16. OTHER INFORMATION

Prepared by: OxyChem Corporate HESS - Health Risk Management

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16. OTHER INFORMATION

IMPORTANT:

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OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

End of Safety Data Sheet
