

## MATERIAL SAFETY DATA SHEET

**Product Trade Name:**           **CALCIUM CHLORIDE - FLAKE**

**Revision Date:**                   05-Feb-2014

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Trade Name:**           CALCIUM CHLORIDE - FLAKE  
**Synonyms:**                       None  
**Chemical Family:**             Inorganic Salt  
**Application:**                    Additive

**Manufacturer/Supplier**         Halliburton Energy Services  
  P.O. Box 1431  
  Duncan, Oklahoma 73536-0431  
  Emergency Telephone: (281) 575-5000

**Prepared By**                     Chemical Compliance  
  Telephone: 1-580-251-4335  
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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT (w/w)	ACGIH TLV-TWA	OSHA PEL-TWA
Calcium chloride	10043-52-4	60 - 100%	Not applicable	Not applicable
Sodium chloride	7647-14-5	1 - 5%	Not applicable	Not applicable
Potassium chloride	7447-40-7	1 - 5%	Not applicable	Not applicable

### 3. HAZARDS IDENTIFICATION

**Hazard Overview**                May cause eye, skin, and respiratory irritation.

### 4. FIRST AID MEASURES

**Inhalation**                     If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

**Skin**                             Wash with soap and water. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

**Eyes**                            In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing.

**Ingestion**                     Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

**Notes to Physician**            Not Applicable

## 5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	Not Determined
Flash Point/Range (C):	Not Determined
Flash Point Method:	Not Determined
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

**Fire Extinguishing Media** All standard firefighting media.

**Special Exposure Hazards** Not applicable.

**Special Protective Equipment for Fire-Fighters** Not applicable.

**NFPA Ratings:** Health 1, Flammability 0, Reactivity 0  
**HMS Ratings:** Health 1, Flammability 0, Reactivity 0

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures** Use appropriate protective equipment. Avoid creating and breathing dust.

**Environmental Precautionary Measures** Prevent from entering sewers, waterways, or low areas.

**Procedure for Cleaning / Absorption** Scoop up and remove.

## 7. HANDLING AND STORAGE

**Handling Precautions** Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.

**Storage Information** Store in a cool, dry location.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls** Use in a well ventilated area.

**Respiratory Protection** Dust/mist respirator. (N95, P2/P3)

**Hand Protection** Normal work gloves.

**Skin Protection** Normal work coveralls.

**Eye Protection** Wear safety glasses or goggles to protect against exposure.

**Other Precautions** Eyewash fountains and safety showers must be easily accessible.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Color:	White
Odor:	Odorless
pH:	10

Specific Gravity @ 20 C (Water=1):	1.85
Density @ 20 C (lbs./gallon):	Not Determined
Bulk Density @ 20 C (lbs/ft <sup>3</sup> ):	56
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	1
Vapor Density (Air=1):	Not Determined
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	98
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	111

## 10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	None anticipated
Incompatibility (Materials to Avoid)	None known.
Hazardous Decomposition Products	None known.
Additional Guidelines	Not Applicable

## 11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure Eye or skin contact, inhalation.

### Symptoms related to exposure

#### Acute Toxicity

Inhalation	May cause respiratory irritation.
Eye Contact	May cause severe eye irritation. May cause corneal injury.
Skin Contact	Causes severe skin irritation. May cause skin burns on prolonged contact.
Ingestion	Causes burns of the mouth, throat and stomach.

Chronic Effects/Carcinogenicity No data available to indicate product or components present at greater than 1% are chronic health hazards.

### Toxicology data for the components

Substances	CAS Number	LD50 Oral	LD50 Dermal	LC50 Inhalation
Calcium chloride	10043-52-4	> 1000 mg/kg (Rat) 2301 mg/kg (Rat)	2630 mg/kg (Rat) > 5000 mg/kg (Rabbit)	No data available
Sodium chloride	7647-14-5	3 g/kg ( Rat )	10 g/kg ( Rabbit )	42 g/m <sup>3</sup> ( Rat ) 1 h

Potassium chloride	7447-40-7	2600 mg/kg (Rat) 2430 mg/kg (Rat) 3020 mg/kg (Rat) 383 mg/kg (Mouse) 1500 mg/kg (Mouse)	No data available	No data available
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**Test species:** Rat

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information

#### Ecotoxicity Product

**Acute Fish Toxicity:** Not determined  
**Acute Crustaceans Toxicity:** Not determined  
**Acute Algae Toxicity:** Not determined

#### Ecotoxicity Substance

Substances	CAS Number	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Calcium chloride	10043-52-4	EC50(72h): 2900 mg/L (Pseudokirchnerella subcapitata)	LC50(96h): 4630 mg/L (Pimephales promelas)	No information available	EC50(48h): 2400 mg/L (Daphnia magna) EC50(21d) 610 mg/L (reproduction) (Daphnia magna)
Sodium chloride	7647-14-5	No information available	TLM96: > 1000 mg/l (Oncorhynchus mykiss)	No information available	TLM96: > 1,000,000 ppm (Mysidopsis bahia)
Potassium chloride	7447-40-7	EC50: 2500 mg/l (Desmodesmus subspicatus)	LC50: 1060 mg/L (Lepomis macrochirus); LC50: 750-1020 mg/L (Pimephales promelas)	No information available	TLM96: 100-330 ppm (Crangon crangon)

#### 12.2 Persistence and degradability

The methods for determining biodegradability are not applicable to inorganic substances.

#### 12.3 Bioaccumulative potential

No information available

#### 12.4 Mobility in soil

No information available

#### 12.5 Results of PBT and vPvB assessment

No information available.

#### 12.6 Other adverse effects

## 13. DISPOSAL CONSIDERATIONS

**Disposal Method** Bury in a licensed landfill according to federal, state, and local regulations.

**Contaminated Packaging** Follow all applicable national or local regulations.

## 14. TRANSPORT INFORMATION

### Land Transportation

#### DOT

Not restricted

#### Canadian TDG

Not restricted

**ADR**

Not restricted

**Air Transportation**

**ICAO/IATA**

Not restricted

**Sea Transportation**

**IMDG**

Not restricted

**Other Transportation Information**

**Labels:** None

**15. REGULATORY INFORMATION**

**US Regulations**

<b>US TSCA Inventory</b>	All components listed on inventory or are exempt.
<b>EPA SARA Title III Extremely Hazardous Substances</b>	Not applicable
<b>EPA SARA (311,312) Hazard Class</b>	Acute Health Hazard
<b>EPA SARA (313) Chemicals</b>	This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).
<b>EPA CERCLA/Superfund Reportable Spill Quantity</b>	Not applicable.
<b>EPA RCRA Hazardous Waste Classification</b>	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
<b>California Proposition 65</b>	All components listed do not apply to the California Proposition 65 Regulation.
<b>MA Right-to-Know Law</b>	Does not apply.
<b>NJ Right-to-Know Law</b>	Does not apply.
<b>PA Right-to-Know Law</b>	Does not apply.

**Canadian Regulations**

<b>Canadian DSL Inventory</b>	All components listed on inventory or are exempt.
<b>WHMIS Hazard Class</b>	D2B Toxic Materials

**16. OTHER INFORMATION**

**The following sections have been revised since the last issue of this SDS**

Not applicable

**Additional Information**

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

**Disclaimer Statement**

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**\*\*\*END OF MSDS\*\*\***