



Drilling Fluids, Inc.

DESCRIPTION

CALCIUM CHLORIDE (CaCl_2) forms a neutral salt solution in water. The product is available in powdered, granular, and flaked form and ranges in purity from 73 to 98% by weight. **CALCIUM CHLORIDE** is also available as a premixed liquid in various concentrations up to saturation.

USES

CALCIUM CHLORIDE is used as an inhibitor to control active shale and clay dispersion. **CALCIUM CHLORIDE** can be used in polymer mud to minimize the formation of gas hydrates. **CALCIUM CHLORIDE** is used to retard the dissolution of massive salt sections and salt stringers. **CALCIUM CHLORIDE** can be used to balance the activity of the water phase in oil mud. **CALCIUM CHLORIDE** can be used as a weighting material up to 11.6 pounds per gallon plus additional weight/density can be obtained by using finely ground **CALCIUM CHLORIDE** in a saturated solution. In some applications, **CALCIUM CHLORIDE** is used as a bridging agent for lost circulation in saturated salt systems.

BENEFITS

In water-based fluids the high calcium and chloride content of **CALCIUM CHLORIDE** makes this a very inhibitive fluid. The density range of **CALCIUM CHLORIDE** makes it possible to use clear like brine up to 11.6 pounds per gallon with a very economical fluid.

TREATMENT

CALCIUM CHLORIDE is added to water to provide the desired specific gravity or chloride content. Drilling conditions and mud system requirements dictate concentration levels. **CALCIUM CHLORIDE** is soluble up to a density of 11.6 pounds per gallon in water. See chart on following page.

FUNCTION

CALCIUM CHLORIDE in water-based fluids can provide higher density at saturation than can be attained with either Sodium Chloride (NaCl) or Potassium Chloride (KCl). This product is an inexpensive alternative to the more expensive and environmentally undesirable Bromide Salts or Zinc Chloride

GEO Drilling Fluids, Inc.

1431 Union Avenue
Bakersfield, CA 93305

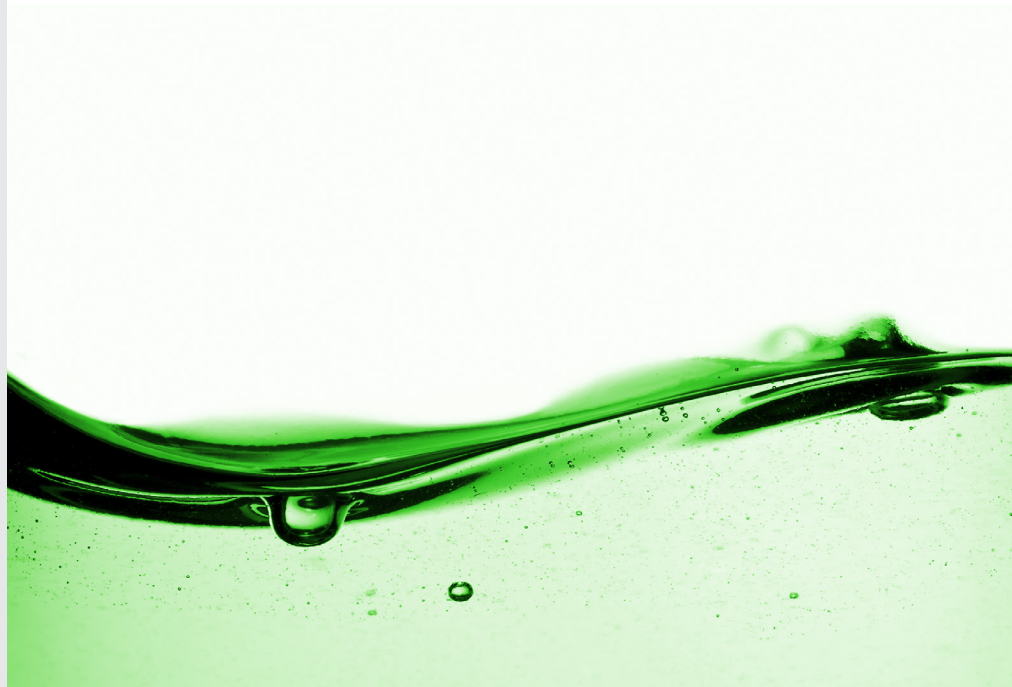
1-800-GETSGEO

(661)325-5919

geodf@geodf.com

For more info visit:

geodf.com





Drilling Fluids, Inc.

TYPICAL PHYSICAL PROPERTIES

Physical Appearanceflaked, granular, powder, or liquid
Specific Gravity2.15
Bulk Density51-60lb/ft³
Hygroscopic:yes (extremely)
Solubility in water:192 pounds per barrel at 68°F
39.4% by weight

SAFE HANDLING RECOMMENDATIONS

CALCIUM CHLORIDE is extremely hygroscopic and corrosive. Utilize normal precautions for employee protection when handling chemical products. Use of appropriate respirator, gloves, goggles, and apron is recommended for employee comfort and protection. See Material Safety Data Sheet (MSDS) for this product prior to use.

Protect from moisture.

Transportation of **CALCIUM CHLORIDE** is not restricted by international or domestic regulatory agencies.

PACKAGING

CALCIUM CHLORIDE is packaged in 80 lb [36.3 kg] and 100 lb [45.4 kg] moisture-proof multi-wall bags. **CALCIUM CHLORIDE** is also sold as a liquid at a variety of densities.

GEO Drilling Fluids, Inc.

1431 Union Avenue
Bakersfield, CA 93305

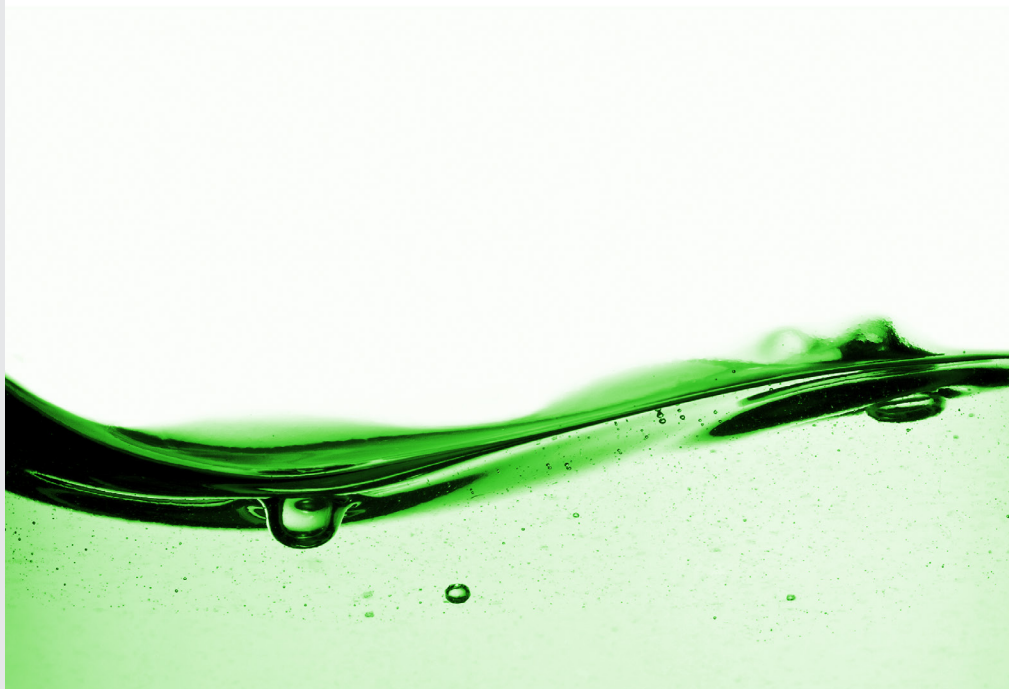
1-800-GETSGEO

[661]325-5919

geodf@geodf.com

For more info visit:

geodf.com





Drilling Fluids, Inc.

**CHLORIDES CHART
94%-97% CaCl₂L**

CALCIUM CHLORIDE

CaCl ₂ Con- centration (% by weight)	Density (ppg)	CaCl ₂ per finished bar- rel (ppb)	Percent Vol- ume to Start	Ca+ (mg/l)	Cl- (mg/l)	CaCl ₂ (mg/l)
0.90%	8.4	3	99.70%	5,485	3,100	8,585
2.20%	8.54	10.75	99.45%	14,403	8,141	22,544
3.60%	8.6	13	99.20%	23,569	13,322	36,891
4.60%	8.68	18.2	99.07%	30,070	16,996	47,066
5.50%	8.75	22.02	98.93%	36,780	20,789	57,569
6.50%	8.8	24	98.80%	43,487	24,580	68,067
7.40%	8.9	29.86	98.47%	50,132	28,336	78,467
8.30%	8.97	33.85	98.13%	56,770	32,088	88,858
9.30%	9	35	97.80%	63,543	35,916	99,459
11.90%	9.2	46	97.10%	82,352	46,548	128,901
14.70%	9.4	58	96.20%	103,379	58,433	161,812
16.00%	9.5	63.78	95.60%	114,636	64,796	179,431
17.40%	9.6	70	95.00%	126,246	71,358	197,604
19.70%	9.8	81	94.30%	145,589	82,291	227,880
22.40%	10	94	93.10%	168,366	95,166	263,532
24.70%	10.2	106	91.90%	189,294	106,995	296,289
27.00%	10.4	118	91.20%	210,188	118,805	328,993
29.20%	10.6	130	90.00%	231,093	130,621	361,714
30.30%	10.7	134.6	89.65%	243,521	137,646	381,168
31.30%	10.8	142	89.30%	256,342	144,892	401,234
33.30%	11	154	87.80%	277,537	156,873	434,410
35.50%	11.2	167	86.40%	300,724	169,979	470,703
37.60%	11.4	180	85.40%	323,912	183,085	506,998
39.40%	11.6	192	84.30%	345,400	195,231	540,632

GEO Drilling Fluids, Inc.

1431 Union Avenue
Bakersfield, CA 93305

1-800-GETSGEO

(661)325-5919

geodf@geodf.com

For more info visit:

geodf.com

