

Description

SODIUM CHLORIDE (NaCl) is a white inorganic powdered salt of 99% purity.

Typical Properties

Appearance : White free flowing powder.

Features and Benefits

SODIUM CHLORIDE is used to prepare solids free workover and completion fluids with densities up to 10 lb/gal.

SODIUM CHLORIDE is also used to formulate saturated salt water fluids in either salt dome or salt bed drillings.

SODIUM CHLORIDE is an effective inhibitor for preventing the gas hydrate formation particularly in off-shore drilling operations.

SODIUM CHLORIDE can be utilized to adjust the activity of water phase of invert emulsion systems.

SODIUM CHLORIDE brines contribute to formation damage control by stabilizing the water sensitive clays during workover and completion operations.

SODIUM CHLORIDE brines eliminate the risk of scale formation when either the produced gas or formation waters are rich in carbonate and sulfate ions.

Application

SODIUM CHLORIDE is used to build clear brine workover and completion fluids for formations with pressure gradients ranging from 0.437 to 0.52 psi/ft. SODIUM CHLORIDE has also applications in salt water based and invert emulsion drilling fluids.

Limitations

Refer to mixing table (Table-1) to obtain the desired density and crystallization temperature. SODIUM CHLORIDE is added to fresh water through the rig hopper while agitating until powders completely dissolve.

Treatment

Normal treatment levels range from 3.0 to 6.0 percent by volume of the drilling fluid.

Packaging

SODIUM CHLORIDE is supplied in 1MT big bag moisture-proof.

Table 1. Mixing Schedule for 1 bbl (42 gal) Sodium Chloride Brine Using Powdered NaCl (99%)

Density (lb/gal)	Specific Gravity	NaCl (wt%)	Water (bbl)	NaCl (lb/bbl)	TCT (°F)
8.4	1.008	1.0	0.997	3.7	31
8.5	1.020	2.7	0.993	9.5	28
8.6	1.032	4.5	0.986	16.2	26
8.7	1.044	6.1	0.981	22.2	25
8.8	1.056	7.6	0.976	28.1	23
8.9	1.068	9.3	0.969	34.8	21
9.0	1.080	11.0	0.962	41.4	18
9.1	1.092	12.6	0.955	48.0	15
9.2	1.104	14.2	0.948	54.7	13
9.3	1.116	15.8	0.940	61.7	10
9.4	1.128	17.3	0.933	68.3	7
9.5	1.140	18.8	0.926	75.0	5
9.6	1.152	20.3	0.919	81.7	2
9.7	1.164	21.8	0.910	89.0	-2
9.8	1.176	23.3	0.902	96.0	-6
9.9	1.188	24.7	0.895	102.7	4
10.0	1.200	26.0	0.888	109.3	24