

# POTASH

## INHIBIT SHALE SWELLING

**Potash** (KCl) is an odorless white crystal, which forms a neutral salt solution with water. **Potash** purity is expressed as percent K<sub>2</sub>O.

Generally used to provide Potassium (K<sup>+</sup>) ions in shale inhibiting drilling muds. The K<sup>+</sup> ion provides a strong bonding ion between the clay platelets thus inhibiting the swelling of shales. Use in concentrations of 30.0-150.0 kg/m<sup>3</sup>.

The K<sup>+</sup> ion is absorbed into the clay and is thus depleted from the system. The rate of absorption is related to the reactivity of the shale.

## MIXING & HANDLING

**Potash** mixes readily with water and can be mixed directly into the water. The presence of salt depresses the ability of bentonite to extend a cement slurry. For this reason pre-hydration of the bentonite is necessary when combining salt in a bentonite/cement blend. Avoid breathing dust while mixing.

**WHMIS:** Not controlled  
**TDG:** Not regulated  
**Packaging:** 25kg bag

### PHYSICAL PROPERTIES:

Appearance: White pellet  
Bulk Density: 112 kg/m<sup>3</sup>  
Specific Gravity: 1.94 gm/cm<sup>3</sup>

### CHEMICAL PROPERTIES:

Potassium Chloride: 99.47%  
Chloride: 47.58%  
Sodium: 0.177%  
Sodium Chloride: 0.45%  
Moisture: 400 ppm  
Water Insolubles: 50 ppm

## PARTICLE SIZE DISTRIBUTION

Mesh Size	#30	#40	#50	#70	#100	#150	Pan
Microns	600	425	300	212	150	106	↓100
% Retained	1	14	25	30	15	9	6

