



Drilling Fluids, Inc.

Commercial Chemical

POTASSIUM HYDROXIDE

Description

POTASSIUM HYDROXIDE is a strong alkali commonly known as caustic potash (KOH).

Uses

POTASSIUM HYDROXIDE is used in place of CAUSTIC SODA (NaOH) to control the alkalinity of water-base drilling fluids and potassium-base drilling fluids or where potassium ions are preferred as a shale inhibitor over the sodium ion. POTASSIUM HYDROXIDE will solubilize the common lignite products and activate the lignosulfonate thinners.

Benefits

POTASSIUM HYDROXIDE provides a source of potassium inhibition in a variety of alkaline drilling fluids.

Treatment

POTASSIUM HYDROXIDE should be added as needed to control the pH and alkalinity. The product should be added where possible as a water solution from a chemical barrel. POTASSIUM HYDROXIDE is a corrosive material and should be used with extreme caution. POTASSIUM HYDROXIDE should not be mixed through the mud hopper. One sack should be added very *slowly* with careful agitation to 50 gallons of water in the chemical barrel. The solution can then be added to the drilling fluid system.

Function

POTASSIUM HYDROXIDE provides a significant source of potassium ions in high pH drilling fluids. Inhibition is derived by the replacement of cations in clays. Potassium is a monovalent ion of a nearly ideal size to fit the cationic space between clay platelets. Once exchanged for the native sodium or calcium, potassium prevents additional water from being absorbed and actually decreases the size of the particle by forcing water out of the interstitial area.

In high pH drilling fluids the dispersants require the addition of hydroxyl ions (OH⁻) to solubilize the organic materials. POTASSIUM HYDROXIDE is a good source of the OH⁻ in the drilling fluids.



Drilling Fluids, Inc.

Commercial Chemical

POTASSIUM HYDROXIDE (cont'd)

Typical Physical Properties

Appearance.....white flakes
Specific Gravity.....2.04
pH in water12.0

Safe Handling Recommendations

International and domestic regulatory agencies classify POTASSIUM HYDROXIDE as a corrosive material (UN 1813) for transportation. POTASSIUM HYDROXIDE is a very strong alkali. *Carefully read the Material Safety Data Sheet (MSDS) before using this product.*

Packaging

POTASSIUM HYDROXIDE is packaged in 50 pound moisture-proof multiwall bags.