

KemDrill™ A-2051 Bentonite Extender

Engineered for Oilfield Drilling Applications

KemDrill™ A-2051 drilling mud additive is designed to extend the yield of bentonite while selectively flocculating low-yield drilled solids. This allows maintaining total solids at less than 5% by volume for faster penetration rates and lower overall drilling costs. KemDrill A-2051 extender can be effectively used to prepare both weighted and un-weighted muds.

The shear-thinning fluid rheology combined with solids minimization results in extended bit life with fewer trips, less pump maintenance, and a reduction in the amount of bentonite required for viscosity and filtration control.

Preparation

Fresh water should be added to the accumulated solids removed from the mud pits. The calcium concentration of the water should be maintained below 200 ppm level, ideally at less than 125 ppm level. Calcium can be removed using soda ash and its level can be measured via a simple calcium titration. Typically 0.01lb (5g) soda ash is used for each barrel of make-up water.

If necessary, the pH can be increased to a level of 9.5 to 10.5 with caustic soda. The pH should be increased only after the calcium concentration is reduced to less than 200 ppm.

Once the calcium is removed, bentonite and KemDrill A-2051 extender should be added. Field experience showed that approximately 2 lb (~1Kg) or 1 bag of KemDrill A-2051 drilling mud additive should be added for every 5-8 sacks of bentonite.

Fluid Maintenance

Solids Control – For optimum performance, the solids should be maintained at less than 5% by volume.

Hourly treatments with KemDrill A-2051 extender will selectively flocculate drilled solids. Flocculation can be supplemented with KemDrill N-2142 flocculant (dry) or KemDrill N-1141 flocculant (liquid) if necessary. When needed, the mud pits should be jet cleaned to avoid a solids build-up.

Viscosity – Bentonite should be added as required to maintain viscosity. KemDrill A-2051 extender should also be added whenever fresh bentonite is added at the ratio of 2 lb (~1 Kg) KemDrill A-2051 extender (1 bag) for every 5 sacks of bentonite. Viscosity can also be maintained if needed, with polymer viscosifiers such as KemDrill A-2362 (dry) or KemDrill A-1363 (liquid).

Viscosity can be reduced by water dilution or with small additions of a polymeric thinner like KemDrill 8111.



Adding Value for our Customers

Increases bentonite yields

Flocculates low-yield solids selectively

Boosts penetration rates

Reduces overall drilling costs

Improves fluid rheology for optimized hydraulics

Product Specifications

Anionic Charge	98-100%
Powder Product	Min 87% solids
Molecular Weight	Low
Particle Size	0.15-2.1mm >93%

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