

Description

KAR-GLY MC is a medium-cloud-point polyalkylene glycol used in water-base drilling fluids to improve shale stability and lubricity.

Typical Properties

Appearance : Slightly yellowish liquid
pH (5% solution) : 6 - 8
Specific Gravity : 1.01 - 1.10
Flash Point : >230 °F (110 °C)
Cloud Point : 155 °F (68 °C) in 10% NaCl sol'n.

Features and Benefits

KAR-GLY MC stabilizes hydratable and dispersible shales by adsorbing onto clay surfaces and restricting the water penetration into the clay matrix when the system temperature is below the cloud point.

KAR-GLY MC forms thermally activated mud emulsion (TAME) near the cloud point and becomes insoluble or clouded out above the cloud point. This phenomenon protects shales by plugging shale pores and preventing the pressure transmission between wellbore and formation.

KAR-GLY MC works in synergy with KCl and causes hardening of soft shales.

The cloud point of the system can be modified by adjusting the glycol concentration and/or salt concentration.

KAR-GLY MC reduces the potential for bit and BHA balling and improves lubricity.

KAR-GLY MC provides the effective HTHP filtration control and improves the filter cake quality.

KAR-GLY MC is compatible with most water-base drilling fluids and not affected by contaminants.

KAR-GLY MC is environmentally acceptable.

Application

KAR-GLY MC can be successfully used with non-dispersed KCl/PHPA drilling fluids to stabilize troublesome shale formations through complex bonding onto clay surfaces and cloud point technology.

Limitations

Thermally activated mud emulsion becomes insoluble above the cloud point causing somewhat rises in plastic viscosity.

Treatment

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

Packaging

KAR-GLY MC is supplied in 55 gal (208 liters) drums.