GLYDRIL HC

GLYDRIL HC polyglycol is a high-cloud-point additive designed for high-salinity polyglycol systems. It can provide improved wellbore stability, lubricity, high-temperature filtration control, plus reduced dilution rates and bit balling. GLYDRIL HC additive is recommended for freshwater to high-saline polyglycol systems. While polyglycols are most effective when used in conjunction with an inhibitive-salt, non-dispersed polymer system, they can be used as additives in most water-base systems. GLYDRIL HC agent is acceptable for most applications specifying low-toxicity additives.*

Typical Physical Properties

Physical appearance	Pale yellow
Specific gravity	1.1 – 1.2
Solubility in water	Variable
Flash point	>347°F (175°C) (PMCC)
Cloud point	>200°F (93°C) @ 3% in 15% NaCl

Applications

GLYDRIL HC additive has application in polyglycol systems in fresh-to-high salinity make-up water and can be used in wells with high formation temperatures. When used properly, this high-cloud-point additive helps to stabilize troublesome shales by plugging shale pores, preventing the equalization of hydrostatic pressure away from the wellbore.

Polyglycol systems are generally low-to-medium density, non-dispersed polymer systems utilizing an electrolyte to activate the cloud point polyglycol. They have application where troublesome water-sensitive shales are to be drilled, and can be used in lieu of oil-base systems for certain applications. GLYDRIL HC agent can be used in thermally activated mud emulsion (TAME) applications (near the cloud point) or in situations where it is insoluble (above the cloud point).

Normal concentrations of GLYDRIL HC product range from 2 to 5% or 7 to 17.5 lb/bbl (20 to 50 kg/m^3). After the initial treatment, periodic treatments should be made to maintain the desired concentration. A field test method is available to monitor the concentration of GLYDRIL HC additive. Above the cloud point, GLYDRIL HC agent is insoluble and tends to increase the plastic viscosity (as all insoluble additives do.)

"Cloud point" is the temperature where polyglycol additives change from being soluble (at lower temperatures) to being insoluble (at higher temperatures). The cloud point temperature can be reduced by increasing salinity (or other electrolytes) and/or by increasing the concentration of GLYDRIL HC agent, as shown in Figure 1 below.

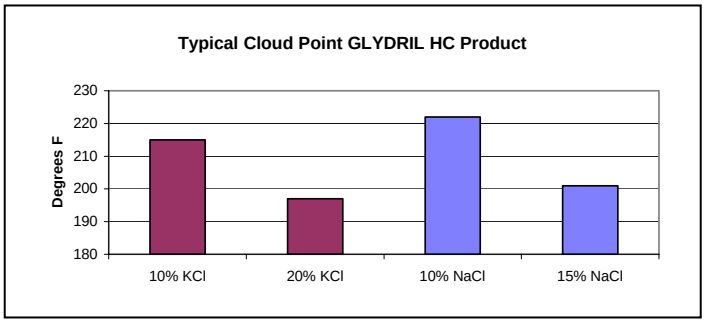

Figure 1

Advantages

- Improved wellbore stability and shale inhibition
- Improved lubricity
- Low toxicity
- Improved high-temperature filtration control
- Reduced dilution rates and mud consumption
- Reduced bit balling potential

Limitations

- When GLYDRIL HC product becomes insoluble, it causes slight increases in plastic viscosity.

Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions as described in the Material Safety Data Sheet (MSDS).

Packaging and Storage

GLYDRIL HC additive is packaged in bulk and 55-gal (208-L) drums.

Keep in cool, dry, ventilated storage and closed containers. Keep in original container.

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