MUL-S

Secondary Emulsifier

Product Description

MUL S organic surfactant is a multi-functional additive which serves as secondary emulsifier and wetting agent in the oil mud systems. Secondary benefits include improved thermal stability and High-Temperature, High-Pressure (HTHP) filtration control. The product is effective over a wide temperature range and in the presence of contaminants and for reducing the adverse effects of water contamination.

Typical Physical Properties

Physical appearance	Dark-amber, viscous liquid
Specific gravity	0.87-0.92
Flash Point	149°F (65°C)

Application

MUL S additive functions as a secondary emulsifier and wetting agent when used in conventional, low-fluid-loss, high-lime systems in combination with MUL P additive. In this application, the product oil-wets barite and drill solids to prevent water-wet solids; it improves thermal stability, rheological stability, filtration control and emulsion stability; and it improves the fluid's resistance to contamination.

MUL S additive functions as the primary emulsifier when used in relaxed-fluid-loss, lower-lime systems, in combination with MUL P additive.

Advantages

- Wide application, including higher-lime, conventional and lower-lime systems
- Improves emulsion stability
- Improves oil-wetting and prevents water-wet solids
- Maintains stable water-in-oil emulsion and helps prevent water in HTHP filtrate
- Improves thermal stability, rheological stability, filtration control and contamination-resistance of oil-base muds
- Effective at counteracting the adverse effects of water contamination such as high viscosity, low-emulsion stability and water-wet solids

Limitations

- Overtreatment with MUL S additive can thin systems under certain conditions
- Environmental restrictions concerning the use of oils and oil-base fluids should be considered since MUL S is used in conjunction with oil

Recommended Treatment

Concentrations for initial formulations range from 1 to 3 lb/bbl (2.85 to 8.6 kg/m^3) when used as a wetting agent, with occasional daily treatments. Concentrations for initial formulations range from 2 to 8 lb/bbl (5.7 to 22.8 kg/m3) when used as an emulsifier, with occasional daily treatments.

The recommended treatment levels depend on the oil-water ratio, anticipated temperatures, desired properties and the other products used in the formulation. High-temperature applications and some light mineral oils require higher concentration of MUL S.

MUL-S

Secondary Emulsifier

Packaging and Storage

MUL S emulsifier is packaged in 5-gal (18.9-L) pails and 55-gal (208-L) drums.

Store in dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.