Versatrim

VERSATRIM* additive is designed to reduce the amount of oil retained by drill cuttings generated when drilling with an oil-base fluid.

VERSATRIM additive also decreases high-shear-rate viscosities in high-water-content VERSACLEAN* and Versaport* systems.

Typical Physical Properties

Physical appearance	Dark brown liquid
Specific gravity	0.95 SG
Flash Point	93 C

Applications

VERSATRIM additive is formulated as a daily treatment for oil-base mud to reduce the total oil retained by drill cuttings. VERSATRIM additive also lowers apparent viscosities at high-shear rates in high-water-content oilbase fluids. Low-shear-rate viscosities are only minimally affected.

VERSATRIM additive also provides lower fluid losses and increased emulsion stabilities for most oil-base mud systems. A normal optimum initial treatment is 2 to 6 lb/bbl (5.7 to 11.4 kg/m 3). The effective concentration of VERSATRIM additive depends on several criteria, including oil/water ratio (OWR), solids content, desired viscosity and existing emulsifier content. Pilot testing for rheology control at the rig site is recommended.

Drilling with high-water-content oil-base fluids (oil content < water content) has increased mainly as a result of the need to meet low values of cuttings oil retention (COR). Other factors that affect the COR values obtained at the rig site are mud viscosity and solids control efficiency.

Unfortunately, with increasing water content, there is also a severe increase in viscosity, especially in the highshear range. This results in high plastic and apparent viscosities. These high viscosities not only adversely affect the COR, but also the solids control efficiency. VERSATRIM additive aids in controlling these high viscosities and, more importantly, lowering COR values.

Treatment with 3.0 lb/bbl of VERSATRIM additive showed 22.7% reduction in COR values in a 50:50 OWR field mud. Due to the nature of VERSATRIM additive and its solids activity, daily treatments are necessary to maintain low COR values.

VERSATRIM additive adjusts the wettability of solids such that the solids are more efficiently "wetted," thus requiring less oil to accommodate them. High-shear-rate viscosities are the most affected due to the increased wetting efficiency. In addition, VERSATRIM additive alters the effective surface of the particles, making them more uniform in shape.

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Advantages

- Lowers the total amount of oil retained on drill cuttings generated from drilling with an oil-base mud system
- Aids in adjusting the rheology of thick high-water-content oil-base fluids by lowering apparent and plastic viscosities
- Is compatible with existing VERSACLEAN and VERSAPORT systems
- Increases solids tolerance in high-water-content oil-base fluids
- Can provide secondary enhancement of emulsion stability and HTHP fluid loss control

Limitations

In thick high-water-content oil-base muds VERSATRIM additive reduces all rheology parameters. Avoid over-treatment with VERSATRIM additive. If barite settling is observed, treatments of organophilic clay should be used to restore barite suspension capacity

Toxicity and Handling

Information on biological data can be provided upon request. Handle in accordance with the Material Safety Data Sheet (MSDS) and general requirements for working with industrial reagents

Packaging and Storage

Versatrim additive is packaged in a 55-gal (208-L) drum and 5 gal (18.9-L) cans. Store in a dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles.

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