**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 @ 77°F (25°C)
- **Flash point**: >200°F (93°C) (PMCC)

**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 oil-base 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/m³). 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.

**Performance**

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 high-shear 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.

**Advantages**

**VERSATRIM** additive:

- 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
Bioassay information is available upon request.

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

Packaging and Storage
Versatrim additive is packaged in 55-gal (208-L) drums.

Store Versatrim additive in a dry, well-ventilated area. Keep container closed. Keep away from heat, sparks and flames. Store away from incompatibles.