

# VERSACOAT<sup>®</sup>

*VERSACOAT organic surfactant is a multi-functional additive which serves as an emulsifier and wetting agent in the VERSA 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	0.90 – 0.97
Flash point	83°F (28°C) (PMCC)
Pour point	-20°F (-28.9°C)

## APPLICATIONS

VERSACOAT functions as a wetting agent and secondary emulsifier when used in conventional, low-fluid-loss, high-lime systems in combination with VERSAMUL<sup>®</sup>. In this application, the product oil-wets barite and drill solids to prevent water-wet solids; improves thermal stability, rheological stability, filtration control and emulsion stability; and improves the fluid's resistance to contamination. Concentrations for initial formulations range from 1 to 3 lb/bbl (2.85 to 8.6 kg/m<sup>3</sup>) when used as a wetting agent, with occasional daily treatments of ~0.063 lb/bbl (0.18 kg/m<sup>3</sup>).

VERSACOAT functions as the primary emulsifier when used in relaxed-fluid-loss, lower-lime systems, in combination with VERSAWET<sup>®</sup>. In this application, the product forms a stable, oil-in-water emulsion and provides a degree of oil-wetting.

Concentrations for initial formulations range from 2 to 8 lb/bbl (5.7 to 22.8 kg/m<sup>3</sup>) when used as the primary emulsifier, with daily treatments of ~0.125 lb/bbl (0.36 kg/m<sup>3</sup>). High-temperature applications and some "light" mineral oils require higher concentrations of VERSACOAT.

VERSACOAT is a primary ingredient in all VERSA system formulations. Consult the M-I Drilling Fluids Engineering Manual or individual system information for specific formulations. The recommended treatment levels depend on the oil-water ratio, anticipated temperatures, desired properties and the other products used in the formulation. The VERSA systems include VERSADRIL<sup>®</sup> (diesel), VERSACLEAN<sup>®</sup> (mineral oil), VERSAPORT<sup>™</sup> (elevated low-shear-rate viscosity) and VERSACORE<sup>™</sup> (minimal-water) systems.



## ADVANTAGES

- Wide application, including higher-lime, conventional and lower-lime, relaxed VERSA systems.
- Improves emulsion stability.
- Improves oil-wetting and prevents water-wet solids.
- Maintains stable oil-in-water 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 VERSACOAT may thin VERSAPORT systems under certain conditions.
- Environmental restrictions concerning the use of oils and

oil-base fluids should be considered since VERSACOAT is used in conjunction with oil.

## TOXICITY AND HANDLING

Bioassay information is available upon request.

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

**WARNING! Avoid exposure; VERSACOAT contains mineral oil and methyl alcohol which is an irritant to eyes, skin and respiratory system.**

## PACKAGING AND STORAGE

VERSA COAT is packaged in 55-gal (208.2-l) drums and 5-gal (18.9-l) cans.

Store in a cool, well-ventilated area away from heat, sparks and flame. Keep containers closed and tightly sealed.

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