

# VERSAMUL

VERSAMUL\* multi-purpose emulsifier is a liquid blend of selected emulsifiers, wetting agents, gelling agents and fluid stabilizers in a mineral oil base.

It is used as the basic emulsifier for the VERSADRIL\*, VERSACLEAN\* and VERSAPORT\* oil mud systems. VERSAMUL emulsifier provides excellent emulsion stability, secondary wetting, viscosity, filtration control and temperature stability.

### Typical Physical Properties

Physical appearance .....	Dark-amber, viscous liquid
Specific gravity .....	0.84-0.96
Flash point .....	197°F (91.7°C) (PMCC)

### Applications

VERSAMUL emulsifier forms the basic brine-in-oil emulsion required for the VERSADRIL, VERSACLEAN or VERSAPORT oil mud systems. Initial system formulations require 4 to 10 lb/bbl (11.4 to 28.5 kg/m<sup>3</sup>), depending on the properties desired and other components in the system. Daily treatments of VERSAMUL emulsifier enhance the emulsion characteristics of these systems. Daily treatments are usually in the 0.05 to 2 lb/bbl (0.14 to 5.7 kg/m<sup>3</sup>) range. VERSAMUL emulsifier treatments lower fluid loss and increase viscosity.

VERSAMUL emulsifier is activated by calcium and performs best at higher levels (>3 lb/bbl or >8.6 kg/m<sup>3</sup>) of excess lime. Generally, 1 lb/bbl (2.85 kg/m<sup>3</sup>) lime should be added to initial formulations for every 1 lb/bbl (2.85 kg/m<sup>3</sup>) VERSAMUL emulsifier.

### Advantages

- Is a multi-purpose product which can be used in a wide variety of oil mud systems, including VERSADRIL, VERSACLEAN and VERSAPORT systems
- Improves emulsion stability
- Functions as a secondary wetting agent
- Provides viscosity
- Provides filtration control
- Helps maintain high-temperature, high-pressure filtrate in a water-free state
- Improves the thermal stability and contamination-resistance of an oil mud

### 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).

CAUTION! Avoid exposure. VERSAMUL emulsifier contains mineral oil which is an irritant to eyes, skin and respiratory system.

### Packaging and Storage

VERSAMUL emulsifier is packaged in 55-gal (208-L) drums.

Store in a 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.



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