

# VP-Mul™

EMULSIFIER



**NEWPARK**  
DRILLING FLUIDS

www.newparkdf.com

## PRODUCT DESCRIPTION

VP-Mul™ emulsifier is a fatty acid derived product that establishes an interfacial-stabilized water-in-oil emulsion in Newpark’s OptiDrill™ diesel- or mineral oil-based drilling fluid system. The OptiDrill system manages the invert emulsion with two components: the VP-Mul primary emulsifier and the VP-Plus™ secondary emulsifier.

## BENEFITS

- Establishes an interfacial-stabilized water-in-oil emulsion
- Allows adjustable concentrations to balance emulsion stability with increased ROP
- Imparts oil-wetting characteristics
- Performs effectively in the presence of contaminants

## APPLICATION

VP-Mul emulsifier builds the initial emulsion when preparing the system. It is also used as a treating agent during drilling operations. VP-Mul and VP-Plus emulsifiers are complementary to each other and yield best results when used together in prescribed ratios. If one product is used exclusively, the absence of the other will result in a decrease in performance and degradation of the fluid. The emulsifiers are effective with NaCl, CaCl<sub>2</sub> and NewPhase™ polyglycerol internal phases. VP-Mul emulsifier should be used in an alkaline environment. An excess of Ca(OH)<sub>2</sub> (lime) should always be present in the fluid. VP-Mul emulsifier is effective in applications to 250°F (121°C).

## TREATMENT RECOMMENDATIONS

VP-Mul and VP-Plus concentrations should be engineered for the specific fluid design, but typical concentrations in various fluids are shown in the table below. In typical formulations, the recommended values yield good fluid properties and give a proper balance of emulsification and solids management. The need for additional treatments is indicated by the presence of water in the HPHT filtrate and/or low emulsion strength as measured by an electrical stability meter. The minimum maintenance ratio of VP-Mul to VP-Plus is indicated in the final column in the table below. VP-Wet™ wetting agent additions may be necessary when

excessive low-gravity solids are present. The emulsifiers can be added through the hopper or directly into the pits, providing agitation is sufficient. Once the fluid is in the well and properly sheared, maintain the excess lime above 3.0 lb/bbl.

Mud Weight (ppg)	O:W Ratio	VP-Mul (ppb)	VP-Plus (ppb)	Minimum Maintenance Ratios (Mul:Plus)
10	70:30	6	6	2:1
12	75:25	5	7	1.5:1
14	80:20	4	8	1:1
16	90:10	4	9	1:1

## TYPICAL PHYSICAL PROPERTIES

Appearance.....Dark brown liquid  
Flash Point.....144°F (62°C)  
Pour Point .....-33°F (-36°C)  
Specific Gravity.....0.9

## HANDLING AND STORAGE

Avoid contact, inhalation and ingestion. Store in a cool, dry, well-ventilated area away from ignition sources and strong oxidizing agents. Use appropriate hygiene, clothing and personal protective equipment suitable for work being done. Review the SDS thoroughly before using this product.

## PACKAGING

VP-Mul emulsifier is available in 1-gallon (3.785-liter) pails, 5-gallon (19-liter) pails, 55-gallon (208-liter) drums and 275-gallon (1,041-liter) totes.

This document is supplied solely for informational purposes and Newpark Drilling Fluids makes no guarantees or warranties, either expressed or implied, with respect to the accuracy and use of this data.

All product warranties and guarantees shall be governed by the General Terms and Conditions.