

RAPID SURF™ 400

WELLBORE CLEANER

Description:

Rapid Surf 400™ is a biodegradable wetting agent and dispersant formulated to effectively clean oilwell casing, drill pipe, tubing and surface equipment. Rapid Surf 400™ is a non-corrosive liquid that will not attack metal surfaces or adversely affect gaskets. Rapid Surf 400™ is designed to water wet metal surfaces and solids, while dispersing oils and oil coated solids. Dispersed oil and solids coated with Rapid Surf 400™ remain dispersed allowing them to be removed from downhole and surface equipment.

TYPICAL PHYSICAL PROPERTIES:

Appearance	Green Liquid
Specific Gravity	0.92 to 0.94
Density, lbs./gal.	7.75 (typical)
Pour Point	< 0° F
Flash Point	>200° F (PMCC)
pH	10 to 11
Solubility	Water Soluble Oil Dispersible

Application:

Rapid Surf 400™ is used as a cleaning spacer between water based mud and completion fluid. It can also be used to clean up surface equipment as a high performance rig wash compound. The product is typically applied in a batch method by diluting Rapid Surf 400™ with seawater or a chloride adjusted water and added pumped downhole. Rapid Surf 400™ is typically applied at 1% to 10% by volume depending on the area of application, degree of contamination and flow rate of circulation. For downhole cleaning, the Rapid Surf 400™ and water blend is circulated at turbulent velocities or as high as possible to enhance the hydraulic forces aiding in the cleaning action. In cases where wellbore geometry prevents displacement at higher fluid velocities, a high viscosity pill is developed to assist in the removal of contamination. When used as a sweep or spacer before solids-free completion fluids, Rapid Surf 400™ used in tandem with Rapid Surf 500™ provides a high performance cleaning system preventing brine fluids from becoming contaminated and greatly reducing the potential for formation damage due to fine solids plugging formation or perforations. Both Rapid Surf 400™ and Rapid Surf 500™ can be mixed in fresh, seawater or brine and cleans up both water based and oil based mud deposits.