

RAPID SURF™ 600

WELLBORE & DRILL CUTTINGS CLEANER

Description:

Rapid Surf 600™ represents a totally new approach in downhole and oil mud cuttings cleaning surfactant technology. The product is a biodegradable super wetting agent and dispersant formulated to effectively displace hydrocarbon on oil well casing, drill pipe, tubing, cuttings and surface equipment. Rapid Surf 600™ is a non-corrosive liquid that will not attack metal surfaces or adversely affect gaskets. The product demonstrates superior performance in water wetting metal surfaces and solids, while dispersing oils and oil-coated solids. Dispersed oil and solids coated with Rapid Surf 600™ remain dispersed allowing them to be removed from downhole and surface equipment.

TYPICAL PHYSICAL PROPERTIES:

| | |
|--------------------|--------------------------------------|
| Appearance | Amber Liquid |
| Specific Gravity | 0.96 to 0.98 |
| Density, lbs./gal. | 7.75 (typical) |
| Pour Point | < 0° F |
| Flash Point | >200° F (PMCC) |
| pH | 8.5 to 9 |
| Solubility | Water Dispersible Oil Dispersible |

Application:

Rapid Surf 600™ is used as a cleaner in spacers between oil based mud and completion fluid. It can also be used to clean up surface equipment as a high performance mud system cleaning compound. The product is typically applied in a batch method by using the product in the form delivered or diluting Rapid Surf 600™ with seawater or suitable displacement water and pumped downhole. As a wellbore cleaning chemical Rapid Surf 600™ 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 600™ 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 600™ 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 600™ and Rapid Surf 500™ can be mixed in fresh, seawater or brine and will remove both water based and oil based mud deposits.

As an oil mud cuttings cleaner, Rapid Surf 600™ should be applied through a fluid injection pump into a directed spray pattern across the collection area where cuttings are transported to secondary shakers (open pipe or auger). At a point downstream from chemical injection, apply a high pressure, low volume spray of water across cuttings channel to activate the cleaning power of the Rapid Surf 600™.