

CASING CLEANER ULTROIL[®] WM 1001

ULTROIL[®] WM 1001 is a surfactant package for wellbore cleaning and spacer pills designed to improve displacement of drilling muds from surfaces downhole.

ULTROIL[®] WM 1001 is NPE/BTEX- free, highly biodegradable, and compatible with various types of brines, providing high cleaning efficiency.



CASING CLEANERS - ULTROIL® WM 1001

SURFACTANT PACKAGE FOR FLUID DISPLACEMENT

A biodegradable and aromatic-free formulation, **ULTROIL® WM 1001 delivers high cleaning performance** while being compatible with several brine environments.

Composition: Surfactant formulation with aromatic-free solvents

Appearance: Colorless liquid

Density: 7.64 lb/gal

Flash point: > 195°F (closed cup)

pH: 7.0

Biodegradability: 100% biodegradable after 28 days

FEATURES AND BENEFITS

Features

- › Provides **emulsification** of oil-based mud residues, removes **grease and oil-soluble** compounds
- › Compatible with a **variety of brines** (NaCl, CaCl₂, fresh water)
- › **Aromatic-free** formulation (no BTEX/NPE)
- › Readily **biodegradable** product
- › Concentrated surfactant package (**can be diluted up to 8%wt**)
- › Successfully used in **Brazilian Offshore operations**

Benefits

- › **Fast and high performance** cleaning action on drilling mud displacement and wellbore flushing
- › High **salinity resistance**
- › **User-friendly formulation** to the operator (biodegradable and not flammable)
- › **Reduced cleaning costs** (low dosages required)

FLUID CLEANING - TEST METHODOLOGY

All tests were run at ambient temperature and atmospheric pressure

1. Typical oil-based and synthetic based fluids were formulated. For challenging conditions, pure crude oil was used.
2. The FANN viscometer rotor was dipped into the drilling fluid and then removed, leaving a deposit of drilling fluid on it.

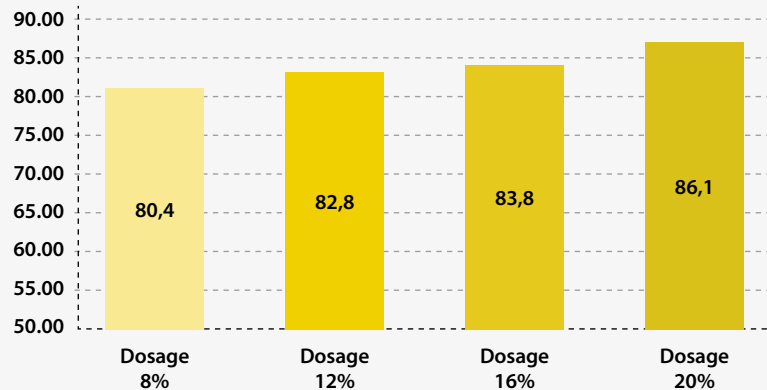


3. The rotor was immersed into the flush solution of study, left with agitation at 300RPM for 2 minutes and then removed.
4. The masses were assessed at each step so that the percentage of fluid removed from the rotor by the flush could be evaluated.
5. Rotor's overall appearance was also assessed through visual inspection.

OIL-BASED MUD (OBM) REMOVAL TEST

ULTROIL® WM 1001 PERFORMANCE X CONCENTRATION (2 MINUTES TEST)

CLEANING OF OBM: Mineral Oil/ Saturated NaCl brine 60/40



Dosages of ULTROIL® WM 1001 diluted on NaCl saturated brine

ULTROIL® WM 1001 (8%)



ULTROIL® WM 1001 (12%)



ULTROIL® WM 1001 (16%)



ULTROIL® WM 1001 (20%)



Efficiency of mud removal evaluated for different dosages



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DISCLAIMER

This information is provided in good faith, based on Oxiteno's current knowledge of the subject and is purely indicative. No information, including suggestions for using the products, should preclude experimental testing and verification, which are essential to ensuring the suitability of the products for each specific application. All users must also respect local laws and obtain all the necessary permits. When handling the product, consult the safety data sheet. If you have any questions or additional needs, please contact Oxiteno through our customer service channels.