



PROCOR CHEMICALS, INC.

Technical Data Sheet PRO HD Riser Flush™

DESCRIPTION

PRO HD Riser Flush™ is a proprietary blend of selected water-soluble surfactants specifically designed for the clean-up of casing, drill pipe, and surface equipment during completion operations. PRO HD Riser Flush is specifically designed to work on synthetic based drilling fluids.

TYPICAL PROPERTIES

Appearance	Yellow liquid
Ionic Character	Ionic/Anionic
Specific Gravity	1.03
Manufacturing	Compliant with ISO QA (Quality Assurance) testing standards.
ph (1% Solution)	8.0-10.0
Flash Point	>201°F
LC 50 Testing	PPM: >321,604 ≤ 0.1, Pass

ADVANTAGES

Non-flammable and non-corrosive

Biodegradable, non-toxic, and non-hazardous

Disperses oil and oil coated solids in to small droplets

Reduces or eliminates the need for filtering brine completion fluids

Leaves a water wet surface after displacement with no oily film on metal surfaces

When used as directed, does not form or create a surface sheen on receiving water

APPLICATIONS

PRO HD Riser Flush is used to displace mud systems prior to completion operations and to thoroughly clean tubing O.D. and casing I.D. for gravel packing operations. **PRO HD Riser Flush™** should be used at a 3 - 15% concentration with water or brine and circulated as a "pill" to remove residual mud. Total "pill" volume should be calculated to maximize time of contact while being circulated in turbulent flow. If more specific application recommendations are required, a **PROCOR™** engineer will be available upon request.

DIRECTIONS FOR SEAWATER DISPLACEMENT

- 1) Circulate well with seawater until the returning water appears clean.
Mix a "pill" containing 3-15% **PRO HD Riser Flush™** in seawater. Pump the "pill" in turbulent flow.
- 2) Circulate the pill around and continue circulating until the water behind the pill appears clean.
- 3) Displace the seawater with a clean completion fluid.

GENERALIZED PROCEDURE FOR DIRECT DISPLACEMENT OF MUD WITH COMPLETION FLUID

- 1) Pump a 30 – 50 barrel "spacer" containing +/- 2-4 pounds per barrel Xanthan.
- 2) Immediately follow the "spacer" with a +/-100 barrel "pill"(dependent on displacement volume) containing 3-15% **PRO HD Riser Flush™** in either seawater (or freshwater, if desired). Pump in turbulent flow.
- 3) Follow the **PRO HD Riser Flush™** "pill" with a 30 – 50 barrel "pill" containing +/-2-4 pounds per barrel Xanthan.
- 4) Follow the last "pill" with clean completion fluid. Discard all the "pills" before final filtering of the completion fluid.

PACKAGING

PRO HD Riser Flush™ is packaged in drums & tote tanks.