

SAFE-SURF 0 II

SAFE-SURF* 0 II well cleaner is a concentrated blend of surfactants, water-soluble co-solvents, and powerful water-wetting agents designed to clean up and displace oil- and synthetic-base mud and solids prior to production.

It disperses non-aqueous fluid residue efficiently while leaving downhole tubulars and casing in a water-wet condition. SAFE-SURF 0 II cleaner is also used in balanced displacements of water-base muds.

Typical Physical Properties

Physical appearance	Clear, yellow liquid
Specific gravity.....	0.96 - 1.0
pH (1% in water).....	3
Solubility in water	Soluble
Solubility in oil.....	Soluble
Flash point	265°F (129.4°C) (PMCC)

Applications

SAFE-SURF 0 II cleaner is designed for cleanup of oil and gas wells prior to the start of production. It is intended to be used as a solution in freshwater, seawater, or brine and applied as a “spacer.” SAFE-SURF 0 II well cleaner emulsifies oil and synthetic-based mud components into the water phase and prevents oil-wet solids from being re-deposited onto pipe surfaces. SAFE-SURF 0 II cleaner contains neither aromatic hydrocarbons, oil soluble solvents, nor alkyl-phenol surfactants. SAFE-SURF 0 II fluid also is preferred for balanced displacements of water-base muds to brine. In addition, SAFE-SURF 0 II is used to clean surface equipment and as a rig wash.

Solutions of between 3% to 10 % by volume are made by adding SAFE-SURF 0 II fluid directly to freshwater, seawater, or brine. SAFE-SURF 0 II also can be blended with SAFE-SOLV* OM and viscosifier to formulate the initial viscous Transition Spacer. Use higher concentrations when high levels of hydrocarbons or solids exist in the mud to be displaced, or when displacing unconditioned or high-density muds. Surface cleaning typically is accomplished by using a concentration of 1% to 2% by volume. Mix by adding directly to the pill pit without using the hopper.

Advantages

- Facilitates suspension of drilling mud residue and other deposits that could damage the formation
- Can be dispersed in heavy brines to provide the means for a weighted spacer
- Unaffected by normal levels of calcium, magnesium, or barium ions found in most solution makeup waters
- Does not contain alkyl phenol ethoxylates

Limitations

- Combustible if heated
- Tends to foam with excessive agitation

Toxicity and Handling

Bioassay information is available upon request.

Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the Material Safety Data Sheet (MSDS).

Packaging and Storage

SAFE-SURF O II spacer is packaged in 55-gal (208-L) drums.

Store in a dry, well-ventilated area. Keep container closed. Keep away from heat, sparks, and flames. Store away from incompatibles products. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping, and/or stacking.

No claim of personal safety is intended nor implied by the use of the name SAFE in this product. Personnel handling this material should read and follow all safety and handling procedures set forth on the Material Safety Data Sheet.



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