

Safe-Surf W

Safe-Surf® W displacement wash chemical is a blend of anionic and nonionic glucose-base surfactants, formulated to remove water-base drilling mud residue and oil film from casing, pipe and surface equipment.

This strong water-wetting cleaner helps displace mud and solids from tubulars to ensure a clean wellbore is obtained for the completion fluid displacement. Safe-Surf W additive is readily biodegradable and is classified for discharge – CHARM ‘Gold’ Rating – in the UK.

Typical Physical Properties

Physical appearance	Viscous liquid
Specific gravity	1.04 @ 20°C (68°F)
pH (conc.)	approx. 5.0
Flash point	Non-flammable
Pour point	< 0°C (32°F)
Viscosity	approx. 300cP @ 20°C (68°F) (Brookfield)

Applications

Safe-Surf W additive is used as a cleaning spacer between water-base mud and completion fluids. It is also used to clean surface equipment and as a rig wash. Safe-Surf W additive is typically applied at 1 to 10% by volume, depending on the flow rate and degree of contamination.

Typical application during a wellbore displacement is 5 to 10% by volume. Surface cleaning is typically accomplished with a concentration of 2 to 5% by volume.

Safe-Surf W additive is added directly to fresh water or drill water and can be added to hi-vis spacers as a water-wetting agent. As with any surfactant-base cleaner, efficient cleaning is best achieved at high flow rates.

Safe-Surf W additive can also be used as an emulsifier in Direct-Mud-Emulsion (DME) drilling fluids. It can be added typically at 1 – 3% v/v in DMEs of 30/70 oil water ratio. Pilot testing is recommended for new applications.

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Advantages

- UK 'Gold' CHARM Rating for Completions
- Readily biodegradable
- Not flammable
- No special handling required under normal use
- Effective at low concentrations
- Reduced aquatic toxicity
- Effectively removes water-base mud and oil film from equipment
- Field proven in synthetic and low-toxicity oil-base mud displacements
- Effective emulsifier for Direct-Mud-Emulsion drilling fluids

Limitations

- Tendency to foam if subjected to continuous agitation
- Not compatible with calcium brines
- Avoid mixing in seawater
- Becomes viscous when stored at temperatures below 0°C (32°F)

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 W additive is available in 55-gal (208-L) drums.

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

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