

D-D

D-D* drilling detergent is an aqueous blend of surface-active agents.

It is designed to reduce the surface tension of all water-base mud systems and reduce the sticking tendency of water-sensitive shale cuttings.

Typical Physical Properties

Physical appearance	Light-blue-green liquid
Specific gravity.....	1.01-1.02
pH (1% solution)	8.2
Solubility in water	100%
Freezing point	32°F (0°C)

Applications

D-D detergent has application in all drilling areas and can be used in virtually any water-base drilling fluid. It is used primarily in upper-hole drilling to minimize bit and Bottom-Hole Assembly (BHA) balling, reduce surface tension, and aid in dropping sand and the removal of drill solids. It may be used as an emulsifier at any point in the drilling operation to improve emulsification of oil and reduce the viscosity of oil-contaminated fluids. D-D detergent frequently reduces torque and drag, even when no oil is present in the system.

Normal treatments range from 0.1 to 0.2 lb/bbl (0.3 to 0.6 kg/m³) and provide satisfactory performance under most conditions. In severe gumbo shale areas, 4 to 6 lb/bbl (11.4 to 17 kg/m³) concentrations of D-D detergent are recommended to minimize bit and BHA balling; higher concentrations may cause foaming and require a defoamer. D-D detergent is effective in all water-base systems including freshwater, brackish water, seawater and saturated saltwater fluids.

Advantages

- Minimizes bit and BHA balling
- Reduces the surface tension of the liquid phase, helping to drop sand and remove drill solids
- Improves water-wetting action on all solids and reduces the sticking tendency of reactive shale cuttings
- Functions as an emulsifier, reducing the viscosity of oil-contaminated fluids
- Effective in all water-base mud

Limitations

- The freezing point of D-D detergent is 32°F (0°C). D-D CWT additive, a special cold-weather formulation with a freezing point of -29°F (-20°C) is available.

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).

Fluids containing high concentrations of D-D may not be suitable for discharge into all marine environments.

Packaging and Storage

D-D detergent is packaged in 5-gal (18.9-L) cans and 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. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping and/or stacking.



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