

# Drilling Fluids - Viscosifiers

## Drill Liquid



Product Number: 9410013

## Applications

- **Drill Liquid polymer systems.** Drill Liquid provides excellent cuttings encapsulation and improved wellbore stability. Typical concentrations of Drill Liquid are 0.75 to 3 lb/bbl (2.1 to 8.5 kg/m<sup>3</sup>). It is also effective in KCl or NaCl enhanced fluids.
- **Clear-water fluids.** Drill Liquid may be used in clear-water, solids-free drilling fluids. It increases viscosity and removes solids by flocculation. It also provides cuttings encapsulation and improved wellbore stability.
- **Low-Solids, Non-Dispersed (LSND).** In reduced-bentonite fluids, Drill Liquid acts as a bentonite extender to increase viscosity, flocculates drill solids for more efficient removal, encapsulates cuttings and improves wellbore stability.
- **Weighted muds.** Drill Liquid can be used in weighted fluids for cuttings encapsulation and improved wellbore stability.
- **Drill Liquid sweeps.** Viscous sweeps are effective for periodic hole cleaning.

## Advantages

- Provides excellent cuttings encapsulation and limits cuttings dispersion
- Provides improved shale stabilization
- Enhances the removal of drill solids
- Mixes and yields easily
- Aids in preventing balling on the bit, stabilizers and bottom-hole assemblies by coating and lubricating solids

DRILL LIQUID polymer is a high-molecular-weight, anionic liquid designed to provide cuttings encapsulation and shale stabilization. Drill Liquid also acts as a viscosifier, friction reducer and flocculant. Drill Liquid can be used in both fresh and saline make up water.

## Method of Addition

Drill Liquid may be mixed directly into the active mud system or premixed at higher concentrations in a separate pit or chemical barrel and added as needed to the active system. A small, steady stream of Drill Liquid injected into the flow line will provide selective flocculation of drill solids. Sweeps may be accomplished by mixing the polymer directly in the active system at the suction pit or by pouring small quantities (1 to 2 cups) directly into the drill string during connections.

## Typical Physical Properties

Physical appearance	Cream colored, opaque liquid
Odor	Slightly hydrocarbon
Viscosity (typical)	~ 500 cP
Specific gravity	1.07 – 1.10
pH (1% Solution)	8.0 – 9.0
Flash point	>200° F (93.3° C) (PMCC)
Pour point	-20°F/-28.9°C

## Packaging and Storage

Drill Liquid is supplied in 5 gal/18.9 L plastic pails.

Approximate Amounts of Drill Liquid Added to Drilling Fluid Systems			
Drilling Application	qt/100 gal	pints/bbl	L/m <sup>3</sup>
Fresh water			
Stabilizes water-sensitive formation	1.00	1.00	2.50
Reduces torque and pump pressure, and increases hole stability	1.50	1.25	3.75
Low-Solids, Non-Dispersed (LSND)	0.50	0.50	1.25
3% KCl drilling system	2.00	1.75	5.00
Injection liquid in air/foam applications	0.50-1.00	0.50-1.00	1.25-2.50

