DRILL-WELL™ D325 Polymeric Fluid Loss Additive

DRILL-WELL™ D325 FLA is a polymeric fluid loss additive designed for reducing fluid loss in oil-based systems, including mineral and synthetic-based drilling fluids in low and high-temperature environments. DRILL-WELL™ D325 FLA is a white, free-flowing powder and is compatible with all commonly used materials for oil-based drilling fluids.

Advantages

- Mixes easily
- Reduces High-Temperature High-Pressure (HTHP) fluid loss
- Improves rheological properties
- More cost-effective than most polymeric fluid loss additives
- May be used in conjunction with other fluid loss additives such as amine treated lignite and Gilsonite®[1]
- Compatible with other commonly used materials in non-aqueous fluids
- Temperature stable to ±149 °C (300 °F) with results depending on fluid conditions. Pilot testing is recommended.

Application

- Typical application of product varies from 1 – 3 ppb (0.454 to 1.361 kg)

Cost

Cost-effective due to high quality

Mud Types

May be used in all oil-based muds

Physical Properties

DRILL-WELL™ D325 FLA is a white free-flowing power.

Mixing Requirements

DRILL-WELL™ D325 FL may be mixed at the mud plant or on location as needed. It is advised that the product be mixed slowly over several circulations to avoid uneven mixing.

Handling

For specific instruction on handling, refer to the SDS

Packaging

50-pound multi-wall sacks, 40 per pallet

1. Registered trademark of American Gilsonite Company Corporation Oklahoma.

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Test Results

Two twelve pounds per gallon mineral oil fluids were mixed. The base fluid was mixed without DRILL-WELL™ D325 FLA and the other fluid was mixed with two pounds per barrel of DRILL-WELL™ D325 FLA. Each fluid was hot rolled for sixteen hours at 250 °F before recording the fluid properties. The DRILL-WELL™ D325 FLA showed an increase in viscosity and a dramatic decrease in HTHP fluid loss as well as a reduction in the size of the HTHP filter cake.

Product	Base Fluid (BF)	BF+ DRILL-WELL™ D325 FLA
Escaid® 110, bbl	0.609	0.609
Water, bbl	0.150	0.150
$CaCl_2$, lb/bbl	18.5	18.5
VERSAMUL*, lb/bbl	10.0	10.0
VERSACOAT* NA, lb/bbl	2.0	2.0
Lime, lb/bbl	8.0	8.0
VG-69*, lb/bbl	1.0	1.0
DRILL-WELL™ D325 FLA, lb/bbl	0	2.0
Barite, lb/bbl	325.3	325.3
Properties @ 90 °F Using OFITE model 900 Viscometer		
600/300 rpm	44/22	103/57
200/100 rpm	12/7	41/24
6/3 rpm	1/1	3/2
PV, cP	22	46
YP, lb/100 ft^2	0	11
10 sec gel/10 min gel, lb/100 ft^2	0.6/0.3	2/8
Properties @ 120 °F Using OFITE model 900 Viscometer		
600/300 rpm	32/16	63/34
200/100 rpm	8/4	23/13
6/3 rpm	1/1	2/2
PV, cP	16	29
YP lb/100 ft^2	0	5
10 sec gel/10 min gel, lb/100 ft^2	0.4/0.5	2/2
Electrical Stability, volts	420	375
HTHP Fluid Loss @ 300 °F	23.4	1.0
HTHP Cake, 32nd"	18	2

VG-69* organophillic clay, VERSAMUL* emulsifier and VERSACOAT* NA are products of M-I SWACO
Escaid® 110 is a product of ExxonMobil