

INFORMATION

OIL AID-FL-15

FLUID LOSS ADDITIVE

DESCRIPTION

OIL AID-FL-15 is an exceptional fluid-loss additive designed for use in fracturing which is effective in fresh waters, brines, weak acids and gelled oils. It is compatible with gelling agents such as guar gum and synthetic polymers including HEC. OIL AID-FL-15 is especially effective with high-viscosity, cross-linked gel systems and is often used successfully in conjunction with 100 mesh sand. OIL AID-FL-15 has the following properties:

- Helps increase fracture extension
- Helps reduce leak-off
- Helps prevent sandouts
- Helps reduce spurt loss
- Effective in fresh water, brines, weak acids, and gelled oils
- Contains no residue producing natural guar gum

APPLICATION

OIL AID-FL-15 contains no bentonite or other swelling clay. The largest percentage of OIL AID-FL-15 is composed of material which is enzyme and temperature degradable for minimum formulation damage. The remainder is colloidal particles which will clean up and be produced back. With the addition of OIL AID-FL-15 to a fracturing system, a more efficient frac fluid is obtained resulting in minimal penetration into the formation matrix and thus more fracture area per gallon of fracturing fluid.

RECOMMENDED TREATMENT

OIL AID-FL-15 should be used in both the spearhead and in the body of the frac. In the spearhead, OIL AID-FL-15 should be used at a rate of 25-50 lb per 1000 gal of fluid and can be added directly to the frac tank or on the fly. If the OIL AID-FL-15 is added directly to the frac tank, it should be added alternately with any viscosifier.

In the body of the frac, OIL AID-FL-15 should be used at a rate of 25-50 lb per 1000 gal of fluid. However, it has been used up to 100 lb per 1000 gal of fluid. OIL AID-FL-15 can be added on the fly or directly to the frac tank. If added to the frac tank, it should be added alternately with fluid viscosifiers.

HANDLING

As with all powdered materials, contact with OIL AID-FL-15 should be avoided. Do not take internally or breathe any dust generated in handling.

An independent laboratory has determined that a return permeability in excess of 80% can be expected with fluids using OIL AID-FL-15.

OIL AID-FL-15 limits the intrusion of gel into the rock matrix, so that the OIL AID-FL-15 actually aids in the prevention of damage by guar and HPG.

2% KCl

Product	Dosage	Spurt	Fluid Loss - ML/Min					Cw
			1	4	9	16	25	
OIL AID-FL-15	25 pptg	1.0	5.0	7.5	10.0	13.0	16.0	1.6×10^{-3}
OIL AID-FL-15	50 pptg	1.0	3.0	5.0	7.0	9.0	11.0	1.0×10^{-3}
Silica Flour	25 pptg	--	Dry before 1 minute					--
Silica Flour	50 pptg	--	Dry before 1 minute					--

40 LB HPG GEL (NON CROSS-LINKED)

Product	Dosage	Spurt	Fluid Loss - ML/Min					Cw
			1	4	9	16	25	
Blank	--	21.25	28.0	44.0	50.0	52.5	55.0	3.5×10^{-3}
OIL AID-FL-15	25 pptg	3.5	4.0	6.0	8.0	9.5	11.0	0.8×10^{-3}
OIL AID-FL-15	50 pptg	1.0	2.0	4.0	5.5	7.0	8.5	0.8×10^{-3}
Silica Flour	25 pptg	5.75	6.5	9.0	11.0	13.0	14.5	0.9×10^{-3}
Silica Flour	50 pptg	4.75	5.5	8.0	10.0	11.5	13.5	0.9×10^{-3}

40 LB HPG GEL (NON CROSS-LINKED)

Product	Dosage	Spurt	Fluid Loss - ML/Min					
			1	4	9	16	25	Cw
Blank	--	21.25	28.0	44.0	50.0	52.5	55.0	3.5×10^{-3}
OIL AID-FL-15	25 pptg	3.5	4.0	6.0	8.0	9.5	11.0	0.8×10^{-3}
OIL AID-FL-15	50 pptg	1.0	2.0	4.0	5.5	7.0	8.5	0.8×10^{-3}
Silica Flour	25 pptg	5.75	6.5	9.0	11.0	13.0	14.5	0.9×10^{-3}
Silica Flour	50 pptg	4.75	5.5	8.0	10.0	11.5	13.5	0.9×10^{-3}

GELLED OIL

Product	Dosage	Spurt	Fluid Loss - ML/Min					
			1	4	9	16	25	Cw
Blank	--	8.7	9.0	18.0	25.0	29.0	32.0	2.4×10^{-3}
OIL AID-FL-15	25 pptg	1.1	2.5	4.5	6.0	7.0	8.0	0.7×10^{-3}
Silica Flour	25 pptg	2.0	4.0	8.0	10.0	11.0	12.0	1.0×10^{-3}

OIL AID-FL-15 is a Messina trademark