

## FLC-500

## FLUID LOSS

### Description

FLC-500 is a fluid loss control additive designed to provide exceptional clean up in water based fracturing fluids. FLC-500 is a blend of natural, high molecular weight polymers and contains no insoluble materials. FLC-500 will effectively control water and spurt loss over the temperature range of 130°F (54.5°C) to 300° F (148.9°C) . Many products contain materials which are unaffected by temperature, oxidizers, acid or their own internal breakers. These materials can plug the formation and reduce the permeability of the propped fracture. FLC-500 has been formulated with an internal breaker system to allow complete degradation at temperatures up to 190°F, even in the absence of external oxidizing breakers. The internal breaker system is FLC-500 specific and will not affect cellulose or guar based fluids. The presence of oxidizing breakers, elevated bottom hole temperatures (>200° F (93.3°C)) or subsequent acid treatments will also ensure complete clean up in the absence of any breaker. FLC-500 will also provide fluid and spurt loss in oil based treatment fluids.

### Properties

Form: Solid	Chemical Family: Polysaccharide
Color: White	Solubility: Water, brines, acids
Odor: None	Bulk Density: 37± 2 lbs./ft <sup>3</sup>
Charge: Nonionic	Flash Point: None

### Application

Typical use rate is 10 - 50 lb/Mgal. of fluid. FLC-500 can be batch mixed or added on-the-fly. If desired FLC-500 can be easily slurried at 4.0lbs./gal. in water or oil. The slurry should be stirred to prevent settling of the fluid loss additive. If desired, a water or oil slurry package may be incorporated into the product to provide greater slurry stability.

### Compatibility

FLC-500 is nonionic. It is compatible with all water-based gels and cross-linkers, oil gels and acids. It will not interfere with the performance of any liquid additives.

### Handling/Storage

FLC-500 is non-toxic and virtually harmless. The dust may be irritating to the eyes and respiratory tract. A dust mask and cloth gloves are recommended during handling. Avoid procedures, which create dust due to the potential explosion hazard. FLC-500 should be stored in a dry location. Keep bags tightly sealed. Refer to the Material Safety Data Sheet (MSDS) for handling and hazard data.

### Packaging

FLC-500 is packaged in 50 lb. net weight bags, 2,000 lbs. per shrink-wrapped pallet. Silk-screened private label bags are available on request.

## FLC-500

## PERFORMANCE DATA

Test Fluid: 40 lbs guar/1000 gals 2% KCl

FLA: 50 lbs/1000 gals test fluid

Permeability: 1-10 md

### FLC-500

Temperature (°F)	120	150	200
Time (mins.)		Volume (mls.)	
1	3.9	1.6	1.3
4	5.8	2.8	2.5
9	6.4	3.6	3.1
16	6.8	4.4	3.7
25	7.5	5.1	4.4
36	8.0	5.9	4.9
Cw (ft/min 1/2)	.0031	.0035	.0029
Spurt (gals/ft <sup>2</sup> )	.24	.06	.06

### Competitive Product

Temperature (°F)	120	150	200
Time (mins)		Volume (mls)	
1	4.3	2.7	2.1
4	6.5	4.6	4.1
9	7.2	5.6	4.6
16	7.7	6.3	5.0
25	8.3	6.9	5.4
36	8.7	7.4	5.9
Cw (ft/min 1/2)	.0033	.0037	.0028
Spurt (gals/ft <sup>2</sup> )	.27	.15	.14

## FLC-500

## PERFORMANCE DATA

Test Fluid: 40 lbs. Guar/1000 gals. 2% KCl

Crosslink: 1 gal. 25% TYZOR GBA in Isopropanol, pH=6.55

FLA: 50 lbs./1000 gals. test fluid

Permeability: 1-10 md. limestone

	<u>FLC-500</u>		
Temperature (°F)	175	200	250
Time (mins.)		Volume (mls.)	
1	0.1	0.2	0.80
4	0.4	0.8	2.0
9	0.9	1.5	2.8
16	1.4	2.0	3.3
25	1.8	2.4	3.7
36	2.2	2.7	4.0
Cw (ft/min 1/2)	.0018	.0021	.0026
Spurt (gals/ft <sup>2</sup> )	-.024	-.010	.04