

Master Fiber Seal®



Seepage Loss / Lost Circulation Fiber

Product Description

- Microionized, surface modified, cellulose derivative
- Elongated, fibrous, solid particles which range in size from a few microns up to fibers with a length of 1 mm or more
- Liquid dispersable (both water and non-aqueous) cellulose fiber
- Specific gravity 1.54
- Bulk density (lb/cu ft): compacted- 29, uncompacted- 15
- Moisture % - 5 to 10
- pH, 10% in water 5 to 6
- Particle size - 95% wet washes thru 100 mesh screen

Function

- Prevent seepage loss in conventional oil muds or most water-based muds
- Fibrous extender for concentrating oil or liquid lubricants into wall cake in water-base mud
- Wall cake conditioner- reduces permeability, increases strength of wall cake, reduces thickness, reduces sticking
- Reduces cuttings dispersions by strengthening through fiber reinforcing and aggregation. Helps control effect of contaminating salts on oil or liquid lubricants in water emulsion by stabilizing the system.

Benefits

- Though fibrous, flows like a powder. Unlike most cellulose, Master Fiber Seal® will preferentially oil-wet rather than water-wet.
- Manufactured by a chemical and mechanical degradation of selected plant cellulose. The extremely fine cellulose fibers are surface modified to produce a novel class of cellulose derivatives having different properties and functions than most commercially available cellulose derivatives.

Other Recommended Uses & Functions

- Secondary or supplemental emulsifier and stabilizer for conventional oil mud systems.
- Reduces collar and stabilizer balling.
- High concentration spotting pill for oil muds. Can use up to 100-150 lb/bbl in unweighted low viscosity oils and still maintain a pumpable slurry
- Effective in preventing losses during cementing operations. Used as a spearhead treatment or pad ahead of a cement job. Can be used to form a soft, slow setting cement plug suitable as a LCM pill.



MASTER FIBER SEAL® PARTICLE SIZE COMPARISON CHART

FINE COARSE

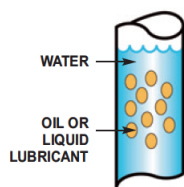
+14 Mesh	<1%	15% to 30%
+28 Mesh	2% to 3%	15% to 20%
+100 Mesh	5% to 10%	15% to 20%
-100 Mesh	60% to 70%	45% to 55%

ABOUT FIBROUS LOST CIRCULATION MATERIALS Cellulose fibers come in a variety of shapes and sizes. These shapes and sizes vary widely because of the many types and sources of plant cellulose and manufacturing processes involved in making MASTER FIBER SEAL®. Also, manufacturing processes vary from simple grinding and the sizing of fibers, to the chemical reaction and modification of the fibers followed by size reduction and sizing. Larger fiber particles and materials are designed to matt and seal across large openings such as larger fractures and vugs. Smaller fiber particles are designed to seal small pore throats and small micro-fractures of various sizes, such as those found in depleted sand and sand/shale interfaces. Coarse grade cellulose fibers with its larger particle sizes provide a broader range of particle sizes and shapes.

NEED ASSISTANCE? Contact Raymond Griffin at 713-882-8386 to select the appropriate grade and usage strategy for your project.

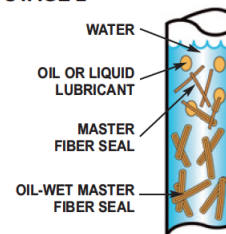
HOW MASTER FIBER SEAL® WORKS

STAGE 1



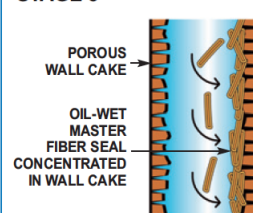
Oil or liquid lubricant is dispersed in water-based mud.

STAGE 2



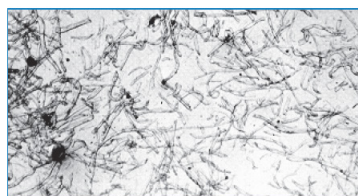
Preferential oil-wetting of MASTER FIBER SEAL® occurs when added to water-based mud containing oil or a liquid lubricant.

STAGE 3

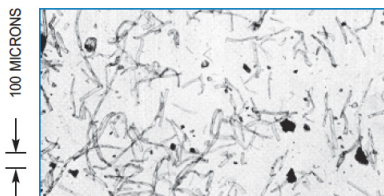


Filtration and concentration of MASTER FIBER SEAL® containing oil or liquid lubricant in the wall cake occurs as the fluid is circulated.

PHOTO-MICROGRAPHS OF MASTER FIBER SEAL®



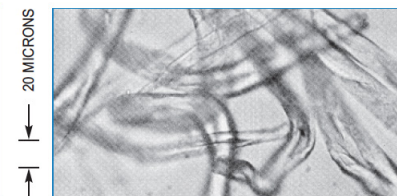
MASTER FIBER SEAL® (Oil Mud Filtrate) 40X



MASTER FIBER SEAL® (Tap Water) 40X



MASTER FIBER SEAL® (Oil Mud Filtrate) 20X



MASTER FIBER SEAL® (Tap Water) 20X



Mud Masters Group®

a division of Horizon Mud Company

See SDS for more product information.
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