



Drilling Fluids, Inc.

Lost Circulation Material

Description

FIBER SEAL is a deformable and compressible micro-sized cellulose fiber used as a lost circulation material.

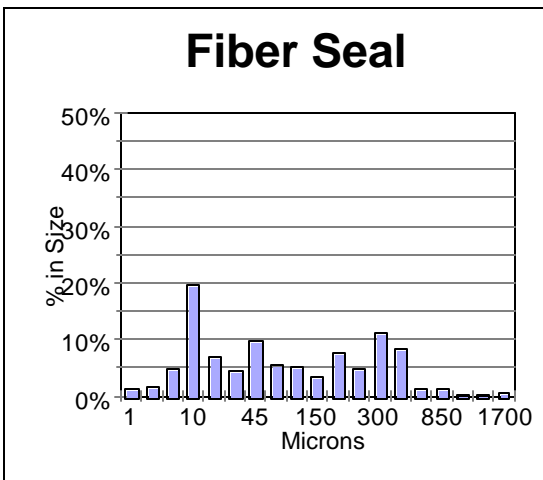
Uses

FIBER SEAL can be used in both water and oil based muds to seal seepage and lost circulation zones as well as promote the anti-friction characteristics of a drilling fluid.

Benefits

The range of particle sizes in FIBER SEAL is capable of bridging and matting fractures without extending the wall cake. This minimizes contact with tools and pipe reducing the chance of reopening closed treated fractures during operations. The small particle size of FIBER SEAL also helps reduce filtrate loss in none fractured zones. The small size, relative to other lost circulation material, minimizes the loss over shakers.

Particle Size Analysis



Mesh	Micron
400	35.56
75	190.80
60	250.00
50	300.00
40	425.00
30	600.00
20	850.00
14	1400.00
10	1700.00

The data indicates a percent by weight and minimum particle size in microns for each sub-division.



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FIBER SEAL (continued)

Treatment

FIBER SEAL is mixed through the mud hopper. Pills can have concentrations between 15 and 40 ppb of FIBER SEAL depending on the nature of the loss zone. When problems with seepage exist, 4 to 8 ppb may be necessary to maintain while drilling

Function

The FIBER SEAL particles flow into the fractures with the whole mud and form bridges and mating closing off the fractures and porous regions preventing additional losses of fluid.

Typical Physical Properties

Appearance.....Tan powder
Specific Gravity1.4-1.65
Bulk Density.....35.5 pcf

Safe Handling Recommendations

Protect from heat, sparks, fire, and oxidizers. Utilize normal precautions for employee protection when handling chemical products. Use of appropriate equipment is recommended for employee comfort and protection. See Material Safety Data Sheet (MSDS) for this product prior to use.

Packaging

FIBER SEAL is sold in 25 pound multi-walled sacks