

PRODUCT DESCRIPTION

CyberSeal™ lost circulation material (LCM) is used in the CyberDrill® synthetic-based or OptiDrill™ oil-based drilling fluid systems. The CyberSeal cellulose fiber is specially designed to bridge and seal permeable formations without adversely affecting fluid rheology or electrical stability. It is effective when used alone or in combination with NewSeal™-sized carbon particles or NewCarb™-sized carbonate.

BENEFITS

- Controls seepage and lost circulation in synthetic-based and diesel- or mineral oil-based drilling fluids
- Causes no adverse effect on electrical stability (ES) or rheological properties
- Provides filtration control
- Enhances filter cake quality
- Minimizes differential sticking in depleted zones
- Reduces likelihood of stuck pipe

APPLICATION

CyberSeal’s particle size distribution optimizes its ability to bridge and plug porous formations. It also is effective when used in combination with NewSeal-sized carbon particles or NewCarb-sized carbonate. Shale shakers may remove some product when fine screens are used. CyberSeal material mixes easily through the hopper.

TREATMENT RECOMMENDATION

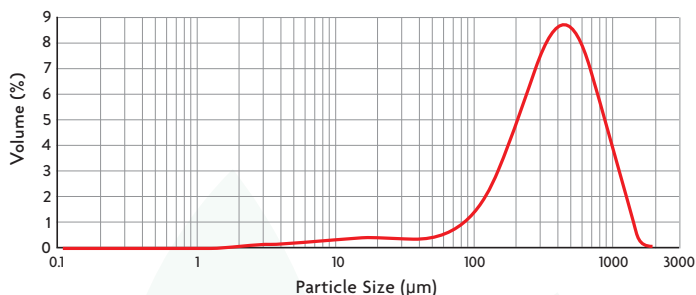
Typical treatment levels range from 2-5 lb/bbl when used to control seepage losses. For severe lost circulation, up to 35 lb/bbl may be required.

Normal conditions.....	2-10 lb/bbl
Seepage.....	10-20 lb/bbl
Severe lost circulation.....	20-35 lb/bbl

NOTE: The most important aspect of combating lost circulation is utilizing the correct particle size. Consequently, it is recommended that a combination of materials be added to ensure a good particle size distribution (PSD).

PARTICLE SIZE DISTRIBUTION

Retained on 20 Mesh	0%
Retained on 40 Mesh	15%
Retained on 80 Mesh	76%
Passing 80 Mesh	9%



TYPICAL PHYSICAL PROPERTIES

Appearance.....Reddish-brown powder
Water Solubility..... Insoluble

HANDLING AND STORAGE

Minimize exposure to dust. Store in cool, dry area away from ignition sources and strong oxidizing agents. Use appropriate hygiene, clothing and personal protective equipment suitable for work being done. Review the SDS thoroughly before using this product.

PACKAGING

CyberSeal LCM is available in 25-pound (11.3-kilogram) multi-walled bags.