

Vinseal

VINSEAL* cellulose fiber is a unique lost-circulation material and plugging agent that can be used in all mud systems to bridge and seal permeable formations. VINSEAL additive is especially applicable in oil- and synthetic-base mud systems with additions of VINSEAL additive having minimal effects on rheological and electrical stability (ES) values. It helps to reduce fluid loss, enhance filter cake quality, and minimize differential pressure sticking tendencies, especially when drilling depleted zones. VINSEAL additive is available in Fine, Medium, and Coarse grades for optimal performance in bridging and sealing pores and pore throats of permeable formations.

Typical Physical Properties

Physical appearanceBrownish-red powder
 Solubility in water.....Insoluble

| Grade | Nominal Particle Size Distribution (PSD) Parameters** | | |
|--------|---|-----------------|-----------------|
| | D ₁₀ | D ₅₀ | D ₉₀ |
| Fine | 10 | 70 | 300 |
| Medium | 40 | 300 | 650 |
| Coarse | 500 | 700 | 1000 |

Applications

VINSEAL additive is a superior lost-circulation material and bridging agent. It is highly effective when used for drilling high-permeability/high-porosity zones. The product is available in three different grind sizes: Fine, Medium, and Coarse. Each grind size has a specially selected particle size distribution optimized to seal a wide range of formations. Unlike conventional fibrous lost-circulation materials, VINSEAL additive does not adversely impact the electrical stability of an invert emulsion system.

VINSEAL additive is designed to bridge and seal permeable formations, reducing the possibility of stuck pipe, controlling lost circulation, and providing filtration control. It is compatible with water-, oil-, and synthetic-base mud systems. Concentrations in the 20 to 35 lb/bbl (57 to 100 kg/m3) range are recommended for more severe lost circulation.

For most applications, VINSEAL Fine additive is recommended due to its special particle size distribution. Very high-permeability formations, such as fractured carbonates and conglomerate zones, may require the Medium- or Coarse-grade products.

After the initial treatment, periodic treatments should be carried out to maintain the desired concentration. Significant quantities of VINSEAL MEDIUM and VINSEAL COARSE additive will be removed by fine-mesh shale shaker screens (100 mesh or finer).

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Eastern Hemisphere
 Gamle Forusvei 43
 N-4033 Stavanger,
 Norway
 Phone: +47-51-57-73-00
 Fax: +47-51-57-74-51

Western Hemisphere
 P.O. Box 42842
 Houston, Texas 77242-2842
 Phone: 281-561-1300
 Fax: 281-561-1441
 www.miswaco.slb.com



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VINSEAL additive should be added to the mud system through a mixing hopper into a pit where good agitation occurs, such as the suction pit. It also can be pumped as LCM pills for severe lost circulation.

Like any other products, pilot testing for compatibility with and impact on mud properties is recommended before adding high concentrations.

The recommended treatment is 2 to 5 lb/bbl (6 to 14 kg/ m3). For seepage losses, normal treatments are from 10 to 20 lb/bbl (29 to 57 kg/ m3)

Advantages

- Has minimal effects on mud rheology and electrical stability at normal dosages
- Effective bridging and sealing agent for a wide range of formations
- Available in Fine, Medium, and Coarse grades for optimal performance
- Easily mixed and dispersed into mud systems
- Can be used in water-, oil-, and synthetic-based mud systems
- One-sack product with no other additive requirements
- Compatible with all mud systems and other lost-circulation materials
- Fine-grade easily passes through most shaker screens

Limitations

- Can be removed from the circulating system by shale shakers and solids-control equipment, especially when using the Medium and Coarse grades with fine-mesh screens (<100 mesh); requires close monitoring of shale shaker

Toxicity and Handling

Information on biological data can be provided upon request.

Handle in accordance with the Material Safety Data Sheet (MSDS) and general requirements for working with industrial reagents

Packaging and Storage

VINSEAL material is packaged in 25-lb (11.34-kg), multi-wall, paper sacks.

Store in a dry location away from sources of heat or ignition and minimize dust.

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