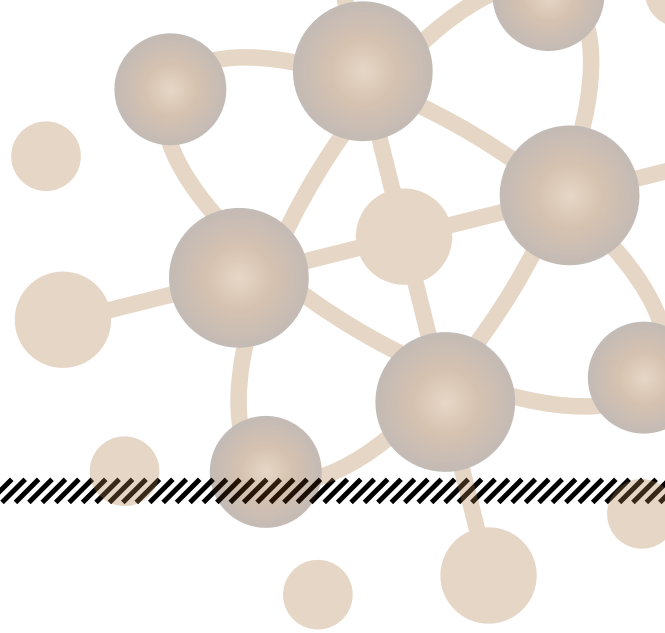


# FRACSEAL®



## PRODUCT DATA

### Description and Application

FRACSEAL® is a finely sized (micronised) organic cellulose fibers that is used to:

- Minimizing fluid invasion
- Stabilizing unconsolidated sand formations
- Reducing torque and drag in highly deviated wells
- Stabilizing shale
- Stabilizing coal beds
- Improving return permeability

### Preventing Stuck Pipe

It is to be added in the active mud system for borehole protection by reinforcing / strengthening the filter cake. The FRACSEAL® fibers matrix within the thin wall cake will form an impermeable filter cake resulting in a very minimum fluid invasion (loss) into the formation. As a result, FRACSEAL® is ideal for drilling into various formations such as shale, coal, unconsolidated sand and limestone. FRACSEAL® is also non damaging and in fact gives better return when drilling through the payzone. This is due to the matrix of the FRACSEAL® fibers trapping fine colloidal solids preventing it from invading the pores. The external cake is easily removed when the well is brought into production.

### Recommended Treatment

It is recommended mixing 8-10ppb of FRACSEAL® in the active mud system for borehole stability and prevention of various problems such as sloughing of shale and coal as well as drilling through depleted or unconsolidated sand formation. The concentration can be increased up to 20ppb in the active mud when drilling through high matrix permeability formations.

### Typical Physical & Chemical Properties

Color ..... light tan/brown  
 Form ..... fine cellulose fibers  
 pH in water (10ppb) ..... 6.5 - 7.5

### Environmental, Safety Handling and Shipping Reference

Use of appropriate respirator, gloves and goggles is recommended for employee comfort and protection. FRACSEAL® is non-toxic and is considered to be harmless in the marine ecosystem. FRACSEAL® does not have a restricted classification for transportation by international or domestic regulatory agencies.

### Packaging

FRACSEAL® is packaged in 25 lbs (11.34 kg) multi-wall paper bags.



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