INFORMATION

SLICK-SEAL
SIZED CELLULOSE FIBER LUBRICANT

DESCRIPTION
SLICK-SEAL is a highly effective, non-polluting and non-toxic fibrous lubricant which provides excellent lubrication properties with the added benefit of seepage loss control. It’s typical properties are as follows:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Light yellow to Brown fiberous powder</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.5</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>12 lbs / cu. ft. (uncompacted)</td>
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<tr>
<td></td>
<td>25 lbs / cu. ft (compacted)</td>
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</table>

APPLICATION
SLICK-SEAL is a non-polluting drilling fluid lubricant for use in water-based mud systems. It is based on a mineral oil lubricant that has been preabsorbed on micronized cellulose fibers. SLICK-SEAL is a specially developed product which allows the lubricant to be carried and concentrated in the wall cake as the fibers are filtered.

The fibers in SLICK-SEAL provide the system with the added benefit of seepage loss control in low pressure depleted sands. This is very important in these areas where seepage control and lubricity are required to avoid differential sticking. In addition, SLICK-SEAL minimizes the need for free liquid lubricants to be used in the system.

RECOMMENDED TREATMENT
SLICK-SEAL is typically added at a loading range of 1 to 6 lbs/bbl for torque and drag problems. The well can be maintained with approximately 100 to 200 lbs/tour. If excessive torque and drag problems are encountered downhole, treat by slugging a pill of SLICK-SEAL downhole and circulating up the annulus slowly.

It is to be noted, however, that concentrations will vary with problem severity and hole condition.
BENEFITS

- Reduction of torque and drag in directional wells.
- Reduction in swelling and sloughing of sensitive shales.
- Effective in freeing stuck pipe when mixed with oil spotting fluids.
- Effective in minimizing differentially stuck pipe by providing seepage loss control and lubrication.

PACKAGING

SLICK-SEAL is packaged in either 40 lb. or 50 lb. multi-wall polyethylene bags. Alternative packaging is available upon request.

SLICK-SEAL is a Messina trademark