DI-TROL
Divalent brine system primary viscosifier additive

APPLICATIONS
- The DI-TROL* divalent brine system primary viscosifier additive functions as both a viscosifier and fluid loss additive in the DIPRO* high-density divalent reservoir drill-in fluid. Treatment level is normally 8–12 lbm/bbl [22.8–34.2 kg/m³] for reservoir drill-in fluid applications. DI-TROL additive can be used as the primary viscosifier in a divalent brine fluid loss control pill.
- When mixing temperature is less than 105 degF [40.5 degC] brine should be heated prior to adding DI-TROL additive or can be mixed in the freshwater portion prior to adding divalent brine. Either of these techniques allow DI-TROL additive to yield completely.

ADVANTAGES
- Easily removed by chemical breaker treatments
- Serves dual function of viscosifier and filtrate reducer
- Works synergistically with DI-BALANCE* divalent brine system secondary viscosifier to enhance the low shear rate viscosity (LSRV)
- Can be used above 250 degF [121 degC] with thermal stabilizers

LIMITATIONS
- May require special mixing procedures such as high shear or heat

The DI-TROL additive is a specially processed, high-molecular-weight, branched-chain starch derivative that generates elevated LSRV without the need for additional viscosifiers such as xanthan gum. DI-TROL additive also controls filtrate loss in the DIPRO fluid.

When used in conjunction with a bridging agent such as calcium carbonate, DI-TROL additive provides a thin, pliable, easily removed filter cake. DI-TROL additive should be used in calcium chloride, calcium bromide, zinc bromide, and divalent field brines. DI-TROL additive can also be used to viscosify sodium chloride and sodium bromide brines.

Toxicity and handling
Bioassay information is available upon request. Handle as an industrial chemical, wearing protective equipment and observing the precautions described on the Material Safety Data Sheet (MSDS).

Packaging and storage
DI-TROL additive is packaged in 25-lbm [11.3-kg] and 50-lbm [22.7-kg] multiwall paper sacks. Store in a dry location away from sources of heat or ignition, and minimize dust.

The storage of breakers containing this agent in any type of metal container should be avoided, especially over a long period of time. Plastic containers should be used for storage.

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance</td>
<td>White powder</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.5</td>
</tr>
<tr>
<td>Solubility in water</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Mark of M-I L.L.C., a Schlumberger company
Copyright © 2020 M-I L.L.C. All rights reserved. 20-MI-798552