VeraVis
Branched synthetic polymer viscosifier and fluid loss additive

APPLICATIONS
- Drilling and logging in wells exceeding 300 degF [149 degC]
- Directional drilling and coiled tubing (CT) operations
- Filtration control

ADVANTAGES
- Stable above 400 degF [204 degC]
- Excellent rheological profile with elevated low-end readings essential for optimal hole cleaning
- Compatible with most completion fluids
- Tolerant to high concentrations of divalent ions
- Effective over a wide range of pH levels
- Compatible with most common mud-treating additives
- Resistant to bacterial attack; no biocide or preservative is necessary

VeraVis* branched synthetic polymer viscosifier and fluid loss additive is the primary viscosifier for the VeraTherm* high-temperature water-based drilling fluid. It also provides fluid loss control and helps produce a thin, ultra-low permeable filtercake. This additive is designed to provide optimal drilling and has the ability to perform extended-logging operations in wells with bottomhole temperature exceeding 300 degF [149 degC].

Unlike most conventional synthetic polymers, VeraVis additive exhibits an excellent rheological profile with elevated low-end readings (6 rpm, 3 rpm, and low-shear-rate viscosity) that are essential for optimal hole cleaning in directional drilling and CT applications.

The additive is compatible with most oilfield brines, including sodium chloride, sodium bromide, calcium chloride, calcium bromide, zinc bromide, and formate blends. However, as brines approach saturation, functionality may be impacted; pilot test for higher-salinity brine requirements.

Because VeraVis additive acts as the sole brine viscosifier and primary fluid-loss control additive, it is typically applied at concentrations between 5 and 12 lb/bbl (14.26 to 34.24 kg/m³). Concentrations will vary depending on the base brine, salinity, and application. Pilot testing and proper design procedures should be used to determine the optimal formulation.

Limitations
Efficiency may be compromised as base brine approaches saturation. A pilot test is required. This additive requires the use of shale inhibitor and proper solids control equipment to minimize the effect of reactive solids.

Toxicity and handling
Bioassay information is available on request. Handle as an industrial chemical, wearing protective equipment and observing the precautions described in the SDS.

Packaging and storage
VeraVis additive is packaged in 22-lb [10-kg] bags. Store in a dry, well-ventilated area. Keep container closed. Keep away from heat, sparks, and flames. Store away from incompatibles. Follow safe warehousing practices regarding palletizing, banding, shrink-wrapping, or stacking.

Typical Physical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Color</td>
<td>White</td>
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<tr>
<td>Specific gravity</td>
<td>1.26 to 1.27 sg</td>
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