BRIDGEFORM Single-Sack Wellbore Strengthening System

Improves drilling efficiency and controls subsurface losses in differentially pressured formations

The BRIDGEFORM™ single-sack wellbore strengthening system uses a custom-engineered formula to improve wellbore stability in differentially pressured formations. The BRIDGEFORM technology is the next generation of the field-proven Baker Hughes MAX-BRIDGE™ system. The BRIDGEFORM system significantly reduces induced losses and has the ability in certain applications to eliminate casing by combining two sections with different pressure profiles. The BRIDGEFORM system mitigates the risk of differential sticking while maximizing wellbore stability and enhancing rates of penetration.

The dry, single-sack BRIDGEFORM system not only eases logistics and mixing, but also improves performance and efficiency. The system is equally effective in both water-based and oil-based systems, showing minimal effect on rheology while also maintaining emulsion stability in OBM systems. Additionally, it also reduces high-pressure/high-temperature (HP/HT) fluid loss, minimizing formation damage through its “low invasion/spurt loss” mechanism.

Recommended treatment levels:
The BRIDGEFORM system can be applied directly to the hopper with concentrations ranging from 5 to 20 lbm/bbl to be maintained in the system based on drilling conditions. Sweeps can be done using 30 to 50 lbm/bbl as needed. BRIDGEFORM is the preferred combination with Baker Hughes AutoTrak Curve™ system.

Environmental information:
For information concerning environmental regulations applicable to this product, contact the Health, Safety, and Environmental department of Baker Hughes.

Safe handling recommendations:
Take normal precautions and use appropriate personal protective equipment. See Safety Data Sheet (SDS) before use.

Properties/Specifications

<table>
<thead>
<tr>
<th>Properties/Specifications</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Dark gray powder</td>
</tr>
<tr>
<td>Specific gravity</td>
<td>1.5-1.7 g/cc</td>
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<tr>
<td>Solubility</td>
<td>Partially soluble in water</td>
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<tr>
<td>Packaging</td>
<td>25 lbm sack</td>
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Applications
- Mature fields and sensitive reservoir formations
- High-temperature wells up to and in excess of 350°F
- Wells that exhibit narrow equivalent circulating densities/formation pressure windows

Features and benefits
- Single-sack dry solution
  - Simplifies use and logistics
  - Tolerates extreme storage temperatures
  - Creates a smaller product footprint on the rig
- Multifunctional product
  - Increases ROP in deviated/lateral wells
  - Applicable in all drilling fluid environments
- Optimized wellbore strengthening
  - Reduces fluid invasion into the formation
  - Improves wellbore stability in microfractured shale
  - Minimizes induced losses in depleted, fractured, and permeable formations
- Mitigates drilling risks under extreme, overbalanced conditions