The Dual Spacer™ system’s primary application is as a low-viscosity, weighted spacer (flush) for primary and secondary cementing operations. Dual Spacer system can also be designed to displace water- and oil-based muds.

Features
Dual Spacer system can be formulated with fresh water, seawater, 3% KCl, and salt concentrations as high as saturation in well temperatures ranging from 60° to 500°F (16° to 260°C). Its rheological properties typically allow it to be pumped in turbulence at reasonable displacement rates. These properties help improve mud displacement while maintaining drilling fluid/cement slurry isolation.

Applications
Dual Spacer system interacts with the following supplementary additives:

Dual Spacer Mixing Aid additive. Dual Spacer Mixing Aid additive helps improve surface suspension properties during low-shear mixing operations in offshore sludging pits or after batch-mixing operations featuring bulk-blended Dual Spacer system.

Retarders. When Dual Spacer system is pumped at elevated temperatures, a retarder may need to be added to counteract the dilution effect occurring at the cement-spacer interface. Otherwise, pump time could be significantly reduced.

Surfactants. When oil-based muds are displaced, surfactants reduce interfacial viscosity and preferentially water-wet the pipe and formation, which promotes better cement bonding.

Defoamers. Adding defoamers such as D-Air 3000™, D-Air 4000, or NF-6™, helps combat the foaming tendencies of a surfactant-laden Dual Spacer system.

Benefits
Dual Spacer system can be used over a wide temperature range.

Dual Spacer System—Product Specifications

<table>
<thead>
<tr>
<th>Part No.</th>
<th>100003654</th>
<th>Bulk Density</th>
<th>31.10 lb/ft³</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>tan, solid powder</td>
<td>Packaging</td>
<td>51-lb bag</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>2.270 lb/gal</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.halliburton.com

Sales of Halliburton products and services will be in accord solely with the terms and conditions contained in the contract between Halliburton and the customer that is applicable to the sale.