DCA-32014 Microemulsion

ADVANCED FLOWBACK AND CHEMISTRY

OVERVIEW
DCA-32014 microemulsion is our advanced offering for flowback technology. Utilizing proprietary microemulsion technology, DCA-32014 microemulsion expands the reservoir contact area and helps improve fluid flow to increase recovery factors.

DCA-32014 microemulsion has been developed to help deliver deeper reservoir penetration, thus contacting and treating more of the reservoir and maximizing the effectiveness of the created fracture network.

PERFORMANCE-DRIVEN CHEMISTRY
DCA-32014 microemulsion is designed to provide quick recovery benefits while effectively providing reservoir conditioning for flow. Through our use of proprietary formulations, this line of permeability enhancers can deliver:

» Deeper reservoir penetration by traveling farther into the propagated fracture
» Increased fracture network and fracture network conditioning
» Increased flow through porous media to increase recovery factors
» Reduced interfacial tension and lower capillary pressure, enabling improved recovery

Through the use of innovative, non-ionic formulations, DCA-32014 microemulsion offers chemistry that is compatible with a wide array of stimulation fluids and other chemical additives.

DCA-32014 Surfactant Specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid, optically transparent, single phase</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.91752</td>
</tr>
<tr>
<td>Density</td>
<td>7.657</td>
</tr>
<tr>
<td>Flash Point (°F/°C)</td>
<td>93.2/34</td>
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<tr>
<td>Freezing Point (°F/°C)</td>
<td>-47.6/-44.2</td>
</tr>
<tr>
<td>Absolute Volume (gal/lbm)</td>
<td>0.1306</td>
</tr>
<tr>
<td>pH</td>
<td>6.5 to 8, 10% in water</td>
</tr>
<tr>
<td>Ionic Charge</td>
<td>Non-ionic</td>
</tr>
</tbody>
</table>

For more information, contact your local Halliburton representative or visit us on the web at www.halliburton.com

Features

» Helps increase flow through porous media
» Helps stimulate flow in reservoir microporosity
» Helps reduce interfacial tension and lower capillary pressure

Benefits

» Deeper penetration of flow-enhancing chemistry into complex fracture networks to help increase stimulated reservoir volume
» Broadly compatible with stimulation fluids and other Halliburton chemical additives
» Helps effectively condition fracture network through reservoir porosity wettability to help enhance inflow and effective fracture conductivity
» Quicker production returns

STIMULATION | Custom Chemistry for Stimulation

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