Perm A™ Conformance Additive

Perm A™ conformance additive is the monomer in PermSeal™ and PermTrol™ services, both of which are in-situ polymerized gelation systems that reduce permeability to water. PermSeal service is used in hydrocarbon-producing wells, and PermTrol service is used in waterflood and carbon dioxide (CO₂) water-alternating-gas (WAG) injection wells. PermTrol service also diverts injection fluids for greater sweep efficiency.

**Applications**

Perm A conformance additive can be used in PermSeal and PermTrol service solutions at bottomhole injection temperatures (BHITs) between 65° and 200°F (18° and 93°C). The typical additive concentration for PermTrol service is 6%, and the typical additive concentration for PermSeal service is 15%.

When used to formulate a PermSeal or PermTrol service solution, Perm A conformance additive can provide the following benefits:

- water-thin placement
- deep matrix penetration
- in-situ polymerization
- resistance to hydrogen sulfide (H₂S), carbon dioxide (CO₂), and acid
- chemical removal

### Perm A™ Conformance Additive—Product Specifications

<table>
<thead>
<tr>
<th>Part No. (55-gal drum)</th>
<th>Specific Gravity</th>
<th>pH</th>
<th>Boiling Point</th>
<th>Flash Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>100012270</td>
<td>1.100</td>
<td>3 to 4</td>
<td>410°F (210°C)</td>
<td>214°F (101°C)</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>9.16 lb/gal</td>
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</tbody>
</table>

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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.