Formic Acid

Organic Acid

Formic acid is an organic acid used in high-temperature sour-gas wells. Formic acid provides an alternative to hydrochloric acid (HCl), which causes chloride cracking of the stainless-steel tubulars often used in sour-gas wells.

Applications

Formic acid can be used at temperatures up to 430°F (221°C). Formic acid concentrations should not exceed 12%.

Benefits

Formic acid can provide the following benefits:

• It can be mixed with other acids, such as hydrofluoric acid (HF), HCl, and acetic acid.

• As a perforating fluid, formic acid is less corrosive than HCl and more efficient than acetic acid.

• Corrosion data indicate that formic acid is safe for extended contact times at temperatures up to 175°F (79.4°C) when properly inhibited.

Formic Acid—Product Specifications

<table>
<thead>
<tr>
<th>Part No. (Cargo tank)</th>
<th>Specific Gravity</th>
<th>Bulk Density</th>
<th>Boiling Point</th>
<th>Freeze Point</th>
<th>Flash Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part No. (Cargo tank)</td>
<td>1.207 (90%)</td>
<td>10.05 lb/gal (90%)</td>
<td>215°F (101°C) (90%)</td>
<td>50°F (10°C) (90%)</td>
<td>121°F (49°C) (90%)</td>
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<tr>
<td>Form</td>
<td>Clear, colorless liquid</td>
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<td>NIS.834 (12%)</td>
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