Aluminum Chloride (AlCl₃)

Additive Used in Fines Control Acid

Aluminum chloride is one of the additives used to prepare Fines Control Acid. The aluminum chloride is added to the Fines Control Acid system to retard the reaction of the HF acid on formation minerals.

Features

In preparing Fines Control Acid, 32°Be aluminum chloride solutions are usually used. This is equivalent to a 50% solution of aluminum chloride hexahydrate (AlCl₃·6H₂O). If more dilute aluminum chloride solutions are used, the quantity used must be adjusted so as to obtain an aluminum chloride content equivalent to that of the 32°Be solution.

Compatibilities

Use of the Fines Control Acid system is restricted at higher temperatures only by corrosion inhibitor limitations and formation mineral stability.

Benefits

Fines Control Acid, of which aluminum chloride is a constituent, is an HF acid system designed for several specific applications. These applications include the following:

- Deeper penetration of live HF acid into the formation
- Retarded reaction with sand and silica to promote deep damage removal and improve compatibility with feldspar-containing formations
- Minimized damage to formation consolidation—it reacts less with the sand that holds the formation together

32°Be Aluminum Chloride Solution Product Specifications

<table>
<thead>
<tr>
<th>SAP Part No.</th>
<th>100003631 (55 gal)</th>
<th>Specific Gravity</th>
<th>1.27</th>
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<tbody>
<tr>
<td>Form</td>
<td>Clear to straw colored liquid</td>
<td>Density</td>
<td>10.58 lb/gal</td>
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<tr>
<td>Odor</td>
<td>Mild acidic</td>
<td>Boiling Point</td>
<td>212°F</td>
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<tr>
<td>pH</td>
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