**Methanol Brine Corrosion Inhibitor**

Description

Methanol Brine Corrosion Inhibitor is a unique corrosion inhibitor developed to protect system metal from corrosion that is aggravated by the presence of methanol & oxygen gas (air) that is introduced with methanol brine as well as being effective against hydrogen sulfide (H2S) and Carbon dioxide (CO2) corrosion.

Hydrogen sulfide (H2S) directly reacts with iron to form iron sulfide, the reaction is:-

\[ \text{H}_2\text{S} + \text{Fe} \rightarrow \text{FeS} + \text{H}_2 \]

Secondly, carbon dioxide (CO2) also dissolves in water to form H2CO3 which reacts with iron or steel to form FeCO3, the reaction is:-

\[ \text{H}_2\text{CO}_3 + \text{Fe} \rightarrow \text{FeCO}_3 + \text{H}_2 \]

The type of rusting experienced by the metal in Methanol Brine HTF System are (1) Pitting corrosion which is caused due to formation of acids in the presence of Carbon dioxide and (2) Oxidation corrosion - caused due to reaction of metal with oxygen or air. Methanol Brine Corrosion Inhibitor is very effective to provide corrosion protection from this type of corrosion, without affecting the antifreezing property of methanol brine

CSL’s Methanol Brine Corrosion Inhibitor helps to prevent following consequences:-

1. Leakage / burst in heat exchangers.
2. Plugging or clogging of heat exchanger tubes with rust flakes & reduced flow rate
3. Reduced heat transfer
4. Methanol fouling
<table>
<thead>
<tr>
<th>Specification</th>
<th>Chemical Type</th>
<th>Methanol Brine Corrosion Inhibitor</th>
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</thead>
<tbody>
<tr>
<td>Form</td>
<td>Liquid</td>
<td></td>
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<tr>
<td>Specific Gravity</td>
<td>1.0 ± 0.1</td>
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<tr>
<td>pH (neat)</td>
<td>9.5 – 11</td>
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<tr>
<td>Solubility</td>
<td>Completely Soluble in Methanol and Water</td>
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**Major Benefits**

- Minimum metal loss
- Excellent heat transfer efficiency & flow rate
- Long and extended brine life