
PRODUCT DESCRIPTION

S-11/S-11 Org are corrosion inhibitors for aqueous systems with low pH levels. S-11 is a proprietary blend of acetylenic alcohols, salts of quaternary amines, and nonionic surfactants. S-11 Org is a proprietary blend of salts of alkyl pyridines.

S-11/S-11 Org are suitable replacements for propargyl alcohol. They are less toxic and more environmentally acceptable.

S-11 Org is also available in powder form S-11P. This powder is especially useful in sulfamic acid solution.

Addition of these products in proper concentrations to the acidic solutions provide corrosion protection during entire operation process.

FEATURES

• Economical
• Environmentally friendly
• Multi-metal protection
• Miscible with most hydrocarbons
• Replacement for propargyl alcohol

APPLICATION

S-11 prevents corrosion in mineral acids, such as nitric, hydrochloric, sulfuric, and phosphoric.

S-11 Org is especially effective in organic acids such as acetic, citric, formic, tartaric; also in sulfamic, phosporic acids, and EDTA.

S-11/S-11 Org does not affect the pH level so it will not affect the technological processes. Usually, S-11/S-11 Org are used at a concentration level of 0.1-1.0% by weight of total formula, and can be post-added if desired.

The concentration of inhibitor required depends on the concentration of the acid and operation conditions. In general, S-11/S-11 Org are effective at low concentrations, but at temperatures over 200°F (93°C), higher concentrations of S-11/S-11 Org corrosion inhibitors may be needed (0.50-1.0% for S-11 and 1-4% for S-11 Org). However, the most effective concentrations are best determined by laboratory tests.

TYPICAL APPLICATIONS

Examples of applications include acid pickling, chemical cleaning, additive for water-based coatings, and inks that have a pH less than 5.

PHYSICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>S-11</th>
<th>S-11 Org</th>
<th>S-11 P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear dark brown liquid</td>
<td>Opaque dark brown liquid</td>
<td>Off white powder</td>
</tr>
<tr>
<td>Flash point, TCC</td>
<td>106°F (41°C)</td>
<td>N.E.</td>
<td>N.E.</td>
</tr>
<tr>
<td>Odor</td>
<td>Mild</td>
<td>Pungent</td>
<td>N.E.</td>
</tr>
<tr>
<td>Pour Point</td>
<td>&lt; -40°F (-40°C)</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Density</td>
<td>8.5-8.7 lb/gal (1.02-1.04 kg/l)</td>
<td>9.45-9.5 lb/gal (1.13-1.15 kg/l)</td>
<td>N.A</td>
</tr>
<tr>
<td>pH</td>
<td>N.E.</td>
<td>1-2 (neat)</td>
<td>N.E.</td>
</tr>
</tbody>
</table>

PACKAGING

S-11 and S-11 Org are available in 5 gallon (19 liter) pails, 55 gallon (208 liter) drums, liquid totes, and bulk.

S-11P is available in 5 lb (2.3 kg), 50 lb (22.7 kg), and 100 lb (45.4 kg) packages.
FOR INDUSTRIAL USE ONLY
KEEP OUT OF REACH OF CHILDREN
KEEP CONTAINER TIGHTLY CLOSED
NOT FOR INTERNAL CONSUMPTION
CONSULT SAFETY DATA SHEET FOR MORE INFORMATION

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Distributed by:

4119 White Bear Parkway, St. Paul, MN 55110 USA
Phone (651) 429-1100, Fax (651) 429-1122
Toll Free (800) 4-CORTEC, E-mail info@cortecvci.com
http://www.cortecvci.com

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