**VpCI®-646**

**PRODUCT DESCRIPTION**
VpCI-646 is a highly water-soluble formulation that provides a combination of corrosion and scale protection for cooling and industrial process water systems.

VpCI-646 multimetal corrosion inhibitors provide protection to ferrous and non-ferrous metals; in the liquid phase, vapor phase, and at the interface, providing excellent corrosion protection not only to the areas of direct solution contact, but also to inaccessible areas such as headspaces and standby systems. This unique product also incorporates a blend of anti-scalants, designed to decrease scale deposit formation and to maintain heat transfer efficiency.

VpCI-646 contains no chromates or other heavy metals. It is environmentally friendly for use without sacrificing operational efficiency or economy. It offers effectiveness similar to chromate treatment without the problems of fouling encountered in conventional non-chromate systems. The chemistry of Cortec VpCI-646 is easily compatible with the chemistry of the majority of current commercial cooling systems.

Low dosages provide superior effectiveness over an extremely broad range of waters, assuring economical use and ease of control.

**FEATURES**
- Based on VpCl technology corrosion inhibitors
- Contains no chromates or heavy metals
- Eliminates cost for chromate reduction and sludge disposal
- Provides corrosion protection and system cleanliness
- Protects ferrous and non-ferrous metals from corrosion and pitting
- Protects against sludge and scale deposits
- Provides more efficient heat transfer
- Conserves water through reuse and higher cycles of concentration
- Offers low dosage economy, 20 to 250 parts per million (ppm)
- Available in liquid form for easy, direct application to systems without premixing
- Reduces maintenance time and costs
- Offers simple and easy operator control

**TYPICAL APPLICATIONS**
VpCI-646 can be used for cooling systems where corrosion or scale may be a problem, and also for standby systems with head space requiring vapor phase corrosion protection.

**METHOD OF APPLICATION**
VpCI-646 should be continuously added at a rate of 20 to 250 parts per million. The effective pH range for VpCI-646 added to cooling systems is between 6.5 and 9.5.
TYPICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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<tbody>
<tr>
<td>Appearance</td>
<td>Brown liquid</td>
</tr>
<tr>
<td>Non-volatile Content</td>
<td>41-46%</td>
</tr>
<tr>
<td>pH</td>
<td>9.8-10.3</td>
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<tr>
<td>Solubility in Water</td>
<td>100%</td>
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<tr>
<td>Density</td>
<td>9.0-9.2 lb/gal (1.08-1.10kg/l)</td>
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</tbody>
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PACKAGING

VpCI-646 concentrate is packaged in 5 gallon (19 liter) plastic containers and 55 gallon (208 liter) metal drums. Store product in a tightly closed container in heated warehouse to avoid freezing. Shelf life is 36 months.

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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