EnvaCor® imidazolines—
corrosion inhibitor intermediates
designed to protect asset integrity in the oilfield industry.

We have a variety of product offerings to fit your needs.

EnvaCor imidazolines are derived from Ingevity tall oil fatty acids and various amines. Imidazolines are thermally stable, nitrogenous bases. The lipophilic nature of these imidazolines allows them to solubilize in nonpolar solvents, and to disperse in aqueous systems. The hydrophilic-lipophilic balance varies between each imidazoline type.

Under appropriate conditions, basic EnvaCor imidazolines are neutralized with acidic components. The produced neutralized salts effectively adsorb onto metal surfaces, forming a passivating and protective lipophilic film. EnvaCor imidazolines are typically neutralized with EnvaDym® dimer and trimer acids or Tenax® for optimum film persistency.

Features and Benefits
- Excellent base for corrosion inhibitor formulations
- 100 percent active
- Low viscosity
- Hydrophobic
- Soluble in nonpolar solvents as base
- Acid salts offer water solubility

Imidazoline Types
- Hydroxyethyl
  TOFA: AEEA 11
- Aminoethyl
  TOFA: DETA 11
- Polyethylenamine
  TOFA: TEPA 11
### EnvaCor Product Line (Typical Properties)

<table>
<thead>
<tr>
<th>Product</th>
<th>Amine</th>
<th>TOFA: Amine Ratio</th>
<th>Amine Value(^1) (mg KOH/g)</th>
<th>% Ring Closure(^2)</th>
<th>Viscosity at 25 C (cP)</th>
<th>Features and Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydroxyethyl Imidazoline</strong></td>
<td></td>
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<tr>
<td>EnvaCor 2057</td>
<td>AEEA</td>
<td>1:1</td>
<td>155-170</td>
<td>&gt;70</td>
<td>400</td>
<td>Most water dispersible, often quaternized</td>
</tr>
<tr>
<td><strong>Aminoethyl Imidazolines</strong></td>
<td></td>
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</tr>
<tr>
<td>EnvaCor 653</td>
<td>DETA</td>
<td>1:1</td>
<td>170-210</td>
<td>&gt;60</td>
<td>200</td>
<td>Standard imidazoline</td>
</tr>
<tr>
<td>EnvaCor 703</td>
<td>DETA</td>
<td>1:1</td>
<td>195-210</td>
<td>&gt;68</td>
<td>200</td>
<td>High amine value (AV) good for film persistency</td>
</tr>
<tr>
<td>EnvaCor 653HA</td>
<td>DETA</td>
<td>1:1</td>
<td>200-225</td>
<td>&gt;60</td>
<td>200</td>
<td>Higher AV good for film persistency</td>
</tr>
<tr>
<td>EnvaCor 695</td>
<td>TEPA</td>
<td>1:1</td>
<td>240-265</td>
<td>&gt;68</td>
<td>1000</td>
<td>Highest AV good for film persistency, pour point suppressant, water dispersible</td>
</tr>
</tbody>
</table>

\(^1\)By titrimetric method to a potentiometric endpoint using standard HCl.
\(^2\)By FTIR

If you don’t see something that fits your needs, we have the ability to customize a solution unique to you.

Contact us at 800-458-4034 or oilfield@ingevity.com to request a sample today.