<table>
<thead>
<tr>
<th>Description</th>
<th>Maximum Service Temperature (°F)&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Uses</th>
<th>Thicknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portland Cement Mortar&lt;sup&gt;2&lt;/sup&gt; with Sealcoat without Sealcoat</td>
<td>150°, 212°</td>
<td><strong>Common:</strong> Drinking Water Sea Water Non-Septic Gravity Sewers Sanitary Sewer Force Mains Reclaimed Water</td>
<td>Standard or Double (ANSI/AWWA C104/A21.4)</td>
</tr>
<tr>
<td>Fusion-Bonded Epoxy (Fittings Only)</td>
<td>120° - 150°&lt;sup&gt;1&lt;/sup&gt;</td>
<td><strong>Common:</strong> Drinking Water Non-Septic Gravity Sewers Sanitary Sewer Force Mains Reclaimed Water</td>
<td>(ANSI/AWWA C116/A21.16)&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Petroleum Asphalt Coating</td>
<td>150°</td>
<td><strong>Common:</strong> Air</td>
<td>1 mil (nominal)</td>
</tr>
<tr>
<td>Ceramic Quartz Filled Amine Cured Novalac Epoxy&lt;sup&gt;3&lt;/sup&gt;</td>
<td>120° - 150°&lt;sup&gt;1&lt;/sup&gt;</td>
<td><strong>Common:</strong> Septic Sewers Acids Alkali Waste Pickling Brine <strong>Other Acceptable Services:</strong> Reclaimed Water</td>
<td>40 mil (nominal)</td>
</tr>
</tbody>
</table>

<sup>1</sup>Maximum service temperatures listed are intended as general guidelines which may vary depending on service conditions and lining formulation. Consult pipe manufacturer for specific recommendations.

<sup>2</sup>ASTM C150 Type V sulfate resisting cement is recommended for seawater applications and some reclaimed water applications. Consult pipe manufacturer for specific reclaimed water recommendations.

<sup>3</sup>Consult pipe manufacturer for specific service use and material details.

<sup>4</sup>Recommended lining thicknesses may vary depending on service conditions, epoxy formulation, diameter, and other variables. Consult fitting manufacturer for specific recommendations.
For more information contact DIPRA or any of its member companies.

**Ductile Iron Pipe Research Association**

An association of quality producers dedicated to the highest pipe standards through a program of continuing research and service to water and wastewater professionals.

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