Technical Data Sheet

EPIKOTE™ Resin 872, 872-X-75

Product Description
EPIKOTE Resin 872, a semi-solid at room temperature, is an epoxy resin, which has been produced from bisphenol A, epichlorohydrin and a flexibilising co-reactant. EPIKOTE 872 is also available as the 75% m/m solution in xylene, EPIKOTE 872-X-75.

Application Areas/Suggested Uses
EPIKOTE 872 is usually used in admixture with the liquid EPIKOTE resin grades in formulations where improved flexibility and retention of flexibility on ageing are prime requirements. Such formulations are used in solvent-borne amine (or amine adduct) cured coatings. Cured compositions containing EPIKOTE 872 show good resistance to water and many chemicals although this is lower than that of unflexibilised systems.

Benefits
- Imparts highly flexiblility
- Use as sole resin or in admixture
- Imparts good water resistance
- High solids coating application

Sales Specifications

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
<th>Test Method/Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKOTE 872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epoxy group content</td>
<td>mmol/kg</td>
<td>1465 – 1705</td>
<td>SMS 2026</td>
</tr>
<tr>
<td>Viscosity at 25°C**</td>
<td>mPa.s*</td>
<td>1750 - 2750</td>
<td>ASTM D445</td>
</tr>
<tr>
<td>Colour**</td>
<td>Gardner</td>
<td>5 max</td>
<td>ASTM D1544</td>
</tr>
<tr>
<td>EPIKOTE 872-X-75</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non volatile content</td>
<td>% m/m</td>
<td>74.0 – 76.0</td>
<td>SMS 1524</td>
</tr>
<tr>
<td>Epoxy group content</td>
<td>mmol/kg</td>
<td>1465 – 1705</td>
<td>SMS 2026</td>
</tr>
<tr>
<td>Viscosity at 25°C***</td>
<td>mPa.s*</td>
<td>1750 - 2750</td>
<td>ASTM D445</td>
</tr>
<tr>
<td>Colour**</td>
<td>Gardner</td>
<td>5 max</td>
<td>ASTM D1544</td>
</tr>
<tr>
<td>Appearance</td>
<td></td>
<td>Free from dirt</td>
<td>LPM 5037</td>
</tr>
</tbody>
</table>

* 1 mPa.s = 1 cPoise
** 75% m/m solution in xylene, prepared to SMS 1595
*** as supplied

Typical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Unit</th>
<th>Value</th>
<th>Test Method/Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKOTE 872</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epoxy equivalent</td>
<td>g/equivalent*</td>
<td>587 - 683</td>
<td>SMS 2026</td>
</tr>
<tr>
<td>Density at 25°C</td>
<td>kg/l</td>
<td>1.07</td>
<td>ASTM D4052</td>
</tr>
</tbody>
</table>

## Density at 25°C kg/l

<table>
<thead>
<tr>
<th>Flash point (PMCC) °C</th>
<th>&gt;255</th>
<th>ASTM D93</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viscosity</td>
<td></td>
<td>ASTM D445</td>
</tr>
<tr>
<td>70°C Pa.s</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>80°C Pa.s</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>90°C Pa.s</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>100°C Pa.s</td>
<td>2.4</td>
<td></td>
</tr>
</tbody>
</table>

Compatibility of EPIKOTE 872 with other grades of EPIKOTE resin

<table>
<thead>
<tr>
<th>EPIKOTE 872 / other grade giving clear films on amine cure</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPIKOTE 828</td>
<td>Compatible in all proportions</td>
</tr>
<tr>
<td>EPIKOTE 1001</td>
<td>Between 99/1 and 75/25</td>
</tr>
<tr>
<td>EPIKOTE 1002</td>
<td>Between 99/1 and 90/10</td>
</tr>
<tr>
<td>EPIKOTE 1004</td>
<td>Between 99/1 and 95/5</td>
</tr>
<tr>
<td>EPIKOTE 1007</td>
<td>Incompatible in all proportions</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EPIKOTE 872-X-75</th>
<th>Epoxy equivalent g/equivalent*</th>
<th>587 - 683</th>
<th>ASTM D1652</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density at 25°C kg/l</td>
<td>1.01</td>
<td>SMS 1347</td>
<td></td>
</tr>
<tr>
<td>Flash point (Abel) °C</td>
<td>24</td>
<td>IP 170</td>
<td></td>
</tr>
</tbody>
</table>

* number of grams of resin containing 1 equivalent of epoxide (Weight per equivalent, WPE, is an alternative term).

### Safety, Storage & Handling

Please refer to the MSDS for the most current Safety and Handling information.

EPIKOTE Resin 872 and EPIKOTE Resin 872-X-75 should be stored at room temperature in conditions such that moisture is excluded, in the original containers kept tightly closed. Under these conditions the shelf life should be a minimum of three years from date of certification.