A New Generation of Epoxy Vinyl Ester Resins

DERAKANE MOMENTUM 470-300 resin is a novolac-based epoxy vinyl ester designed to provide exceptional mechanical properties at higher temperatures. This resin offers a high resistance to solvents and chemicals, good retention of strength and toughness at elevated temperatures, and excellent resistance to acidic oxidizing environments. DERAKANE MOMENTUM resins are a new generation of resins that can be used to improve fabrication efficiency and product quality. Their lighter color makes defects easier to see and correct while the resin is still workable. The longer shelf life provides additional flexibility to fabricators in storage and handling.

Typical Liquid Resin Properties

<table>
<thead>
<tr>
<th>Property(1)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density, 25°C/77°F</td>
<td>1.08 g/mL</td>
</tr>
<tr>
<td>Dynamic Viscosity, 25°C/77°F</td>
<td>325 mPa×s</td>
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<tr>
<td>Kinematic Viscosity</td>
<td>300 cSt</td>
</tr>
<tr>
<td>Styrene Content</td>
<td>33%</td>
</tr>
<tr>
<td>Shelf Life(2), Dark, 25°C/77°F</td>
<td>10 months</td>
</tr>
</tbody>
</table>

(1) Typical property values only, not to be construed as specifications.
(2) Unopened drum with no additives, promoters, accelerators, etc. added. Shelf life specified from date of manufacture.

Applications and Fabrication Techniques

- Suitable for such applications as high temperature chlorination or caustic scrubbing and storage, industrial waste treatment facilities and solvent/extraction processes used in mining.
- Used for hydrochloric acid transport, tank, truck and railcar linings, and gasohol storage.
- Recommended for most commercial FRP fabrication processes: hand lay-up, spray-up, pultrusion and resin transfer molding.
- Higher viscosity compared to DERAKANE 470-36 resin also facilitates filament winding and contact molding fabrications.
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Benefits

- An economical alternative to exotic alloys by allowing the use of lower-cost FRP over traditional materials.
- Resists solvents, chemicals and acidic oxidizing environments to provide long lasting, reliable equipment for corrosive materials.
- Retains strength and toughness at elevated temperatures which enables users to operate the equipment in a variety of applications.
- Contains only 33 weight percent styrene, resulting in reduced styrene emissions and allows fabricators to meet California’s South Coast Air Quality Management District Rule 1162.

Gel Time Formulations

The following table provides typical gel times for MEKP. "Starting point" formulations for MEKP, non-foaming MEKP alternatives, and BPO peroxides are available in separate product bulletins. These and other information are available at www.derakane.com.

"MEKP Alternative” Gel Time Table
Laminate Properties

Safety and Handling Consideration
This resin contains ingredients which could be harmful if mishandled. Contact with skin and eyes should be avoided and necessary protective equipment and clothing should be worn.
Ashland maintains Material Safety Data Sheets on all of its products. Material Safety Data Sheets contain health and safety information for your development of appropriate product handling procedures to protect your employees and customers. Our Material Safety Data Sheets should be read and understood by all of your supervisory personnel and employees before using Ashland’s products in your facilities.

Recommended Storage:
Drums - Store at temperatures below 27°C/80°F. Storage life decreases with increasing storage temperature. Avoid exposure
to heat sources such as direct sunlight or steam pipes. To avoid contamination of product with water, do not store outdoors. Keep sealed to prevent moisture pick-up and monomer loss. Rotate stock.

Bulk - See Ashland’s Bulk Storage and Handling Manual for Polyesters and Vinyl Esters. A copy of this may be obtained from Composite Polymers at (614) 790-3333.

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