Overview

Nofia OL3001 is a reactive phosphonate oligomer that is recommended for use in epoxy based formulations. It is available in either pellet or powder form.

Feature and Benefits of Nofia OL3001:

- Highly compatible with epoxy resins
- Acts as a hardener (crosslinking agent) for epoxy resins
- Good solubility in typical organic solvents used for processing
- High thermal stability
- Excellent adhesion to glass and fillers such as silica
- Maintains transparency

<table>
<thead>
<tr>
<th>Typical Properties Nofia OL3001</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
</tr>
<tr>
<td><strong>Phosphorus Content</strong></td>
</tr>
<tr>
<td><strong>Molecular Weight (Mn)</strong></td>
</tr>
<tr>
<td><strong>Glass Transition Temp</strong></td>
</tr>
<tr>
<td><strong>Hydroxyl Number</strong></td>
</tr>
<tr>
<td><strong>T at 5% weight loss</strong></td>
</tr>
<tr>
<td><strong>Soluble in:</strong></td>
</tr>
<tr>
<td><strong>Insoluble in:</strong></td>
</tr>
</tbody>
</table>
Properties for Nofia OL3001 in Epoxy Systems

Applications:
- Electrical laminates (copper clad laminates)
- Prepregs / composites
- Molded products
- Coatings and adhesives

Typical Properties of Nofia OL3001 based Epoxy formulations:
- Achieves high Tg
- Excellent dielectric properties (low Dk/Df)
- High peel strength
- Increases mechanical properties such as stiffness (modulus)
- Very good moisture and heat resistance
- Enables low coefficient of thermal expansion (CTE)

Typical level of addition:
- 15-35 wt% (depending on application)

Curing recommendations:
- Recommended catalyst: imidazole type
- Higher temperature curing: 190-200°C: 90-120 minutes
- Lower temperature curing: 140-165°C: 240-360 minutes
- Lower temperature curing requires higher loadings of catalyst > 0.5 wt%