What's Special About EPO-TEK® UV Curing Epoxies

Benefits of an epoxy-based UV curing adhesive system

Excellent adhesion and reliability
- Due to the epoxy backbone (rather than acrylate backbone)

Low shrinkage
- Average shrinkage is approximately 1-5% (acrylate is typically 10-15%)
- Low shrinkage leads to low internal stress aiding adhesion

Not subject to oxygen inhibition
- Cationic photoinitiators are not quenched by oxygen

Capable of “Dark” Cure
- Cation creates the “living polymer” and continues to be active in the absence of UV light
- Enables a small degree of curing in areas never seen by the UV light, for a limited distance

Most are thermally post-curable
- Greater degree of conversion than UV cure alone (initial UV cure is required for best thermal post cure results)

Effect after UV cure with a thermal post cure on shadowed areas

*With proper optimization through:
- UV lamp selection
- Using a UV source that generates heat
- Warming the formulation or substrate before application
- Down stream thermal curing following UV exposure—May also improve water resistance

For complete listing of UV products visit EPO-TEK.com

Epoxy UVs can be cured in ≤ 1 minute*

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- UV lamp selection
- Using a UV source that generates heat
- Warming the formulation or substrate before application
- Down stream thermal curing following UV exposure—May also improve water resistance
### Additional Epoxy UV Benefits

#### Die Shear Increases Over Time*

*Above test results for OG116-31 show a die shear increase over time after 30 second UV cure. This type of result is representative of the EPO-TEK® epoxy-based UV line.

#### Both Thin And Thick Sections Can Be Cured With Epoxy UV's

**Thin Section**

UV passes easily through highly mobile polymer chains, *cures well.*

**Thick Section**

Using a lower intensity, longer wave length and longer cure time, *a good cure can be achieved.*

#### Selecting Best UV Lamps/Cure Time

<table>
<thead>
<tr>
<th>Product</th>
<th>365nm Flood LED</th>
<th>Pulsed Hg Lamp</th>
<th>F Style Hg Flood Cure</th>
<th>F Style Hg Spot Cure</th>
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</table>

Cure Time (min): <1 ★★★★★ 1-3 ★★★ 3-5 ★★ 5-10 ★ >10 ◆

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For additional information, please visit us at: www.epotek.com, or email our Technical Services Group at: techserv@epotek.com

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