**AC L2061-B**

UV-Curable, High Refractive Index Optical Resin

**PRODUCT DESCRIPTION:**
- Base chemistry: acrylate, radical polymerization
- One component resin ready for use, solvent-free, UV curing

**PRODUCT USE:**
- Nano imprinting
- Lens making
- Lens and prism bonding

**FEATURES:**
- High Tg, high refractive index, good flow properties, high heat stability and high hardness

**UV-VIS and NIR spectra:**
L2061-B 125 micron free-standing film

**Refractive index vs. temperature**
L2061-B RI vs 1000/T

**Calculated Refractive Index (R.I) L2061-B**

<table>
<thead>
<tr>
<th>Wavelength (nm)</th>
<th>Function (T is temperature in °C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>589</td>
<td>R.I. = 1.5562 + 13.81/(273+T)</td>
</tr>
<tr>
<td>486</td>
<td>R.I. = 1.5636 + 16.40/(273+T)</td>
</tr>
<tr>
<td>656</td>
<td>R.I. = 1.5419 + 16.38/(273+T)</td>
</tr>
</tbody>
</table>

**UV CURING CONDITIONS:** L2061-B is required to cure in nitrogen or in the absence of air.

*Metal halide/Mercury UV: UV-A (320-400 nm), intensity: 50-1,000 mW/cm²*

*or LED-365 nm, UV light intensity: 100 to 1,000 mW/ cm²*

<table>
<thead>
<tr>
<th>LED-365 nm</th>
<th>UV intensity(mW/cm²)</th>
<th>time (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>20 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 200</td>
<td>10 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 300</td>
<td>7 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 400</td>
<td>5 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 500</td>
<td>4 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 1,000</td>
<td>2 sec or more</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Metal Halide/Mercury(UV-A: 320-400 nm)</th>
<th>UV intensity(mW/cm²)</th>
<th>time (sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>40 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 100</td>
<td>20 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 200</td>
<td>10 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 500</td>
<td>5 sec or more</td>
<td></td>
</tr>
<tr>
<td>or 1,000</td>
<td>2 sec or more</td>
<td></td>
</tr>
</tbody>
</table>

**TYPICAL PROPERTIES**

**Uncured resin**
- Viscosity at 25 °C, mPa.s or cps: 1,800 to 2,200
- Density (g/mL): 1.1
- Shelf life (20 - 30°C): 6 months
- Pot life or working life (20 - 30°C): 3 months

**Cured film**
- Appearance of cured adhesive: optically clear
- Shrinkage (linear, %): < 1
- Hardness – Shore D: 95
- Glass transition temperature (DMA, °C): 130

**Refractive index of cured film (25 °C)**
- @ 589 nm (D): 1.602
- @ 486 nm: 1.618
- @ 656 nm: 1.597

**Abbe Number at 25 °C (Vₐ):** 27

**Depth of cure:** >5 mm

**Coefficient of thermal expansion (DMA)**
- below Tg (x10⁻⁶), °C⁻¹: 35
- above Tg (x10⁻⁶), °C⁻¹: 175

**Physical properties tested at 25°C, 50% RH (ASTM D638)**
- Elongation (%): 18
- Young’s Modulus, psi: 200,000

**Operating temperature, °C:** -40 to 140

**GENERAL USAGE INFORMATION:**
- **Shipment:** no restriction on shipment
- **Storage:** After receipt in black syringes or amber HDPE bottles, room temperature storage (15-30°C) in the original container is required.

**SAFETY AND HANDLING**

The uncured adhesive can be cleaned with isopropyl alcohol (IPA), methyl ethyl ketone (MEK), acetone, or xylene. Avoid direct skin and eye contact. Use only in well ventilated areas. Use protective clothing, **gloves and safety goggles**. Read **Safety Data Sheet** before handling.

The information presented here represents our best available information and is believed to be reliable, but it and does not constitute any guarantee or warranty. Inasmuch as Addison Clear Wave has no control over the exact manner in which others may use this information, it does not guarantee the results to be obtained. Nor does the company make any expressed or implied warrants of merchantability, or fitness for a particular purpose concerning the effects or results of such use. Purchasers are further responsible for determining the suitability of the product for its intended use and the appropriate manner of utilizing the production processes and applications so as to ensure safety, quality and effectiveness. Addison Clear Wave makes no warranties and assumes no liability in connection with the use or inability to use this product.