LEXAN™ 8A37 FILM

PRODUCT DATASHEET

DESCRIPTION

LEXAN™ 8A37 Film is a one side brushed, one side polished transparent polycarbonate film. It offers high temperature resistance, excellent dimensional stability, as well as good printability without pretreatment making it an excellent candidate for multi-layer printing for applications such as overlays, floor graphics, high-performance labels and in-mould decoration. It can be screen printed using traditional solvent based or water based inks, as well as UV or infrared drying inks and offers ease of processing for thermoforming, embossing, die-cutting, hydro-forming and bending. The brushed 1st surface allows processors and OEMs alike to achieve a brushed metal appearance by back printing, laminating, or spraying with metallic inks, adhesives, or paint.

TYPICAL PROPERTY VALUES

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>ASTM TEST METHOD</th>
<th>UNITS (USCS)</th>
<th>VALUE</th>
<th>ISO TEST METHOD</th>
<th>UNITS (SI)</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MECHANICAL</strong></td>
<td></td>
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<tr>
<td>Tensile Strength @ Yield</td>
<td>ASTM D882</td>
<td>psi</td>
<td>8500</td>
<td>ISO 527</td>
<td>MPa</td>
<td>62</td>
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<tr>
<td>Ultimate</td>
<td>ASTM D882</td>
<td>psi</td>
<td>9000</td>
<td>ISO 527</td>
<td>MPa</td>
<td>65</td>
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<tr>
<td>Tensile Modulus</td>
<td>ASTM D882</td>
<td>psi</td>
<td>300000</td>
<td>ISO 527</td>
<td>MPa</td>
<td>2100</td>
</tr>
<tr>
<td>Tensile Elongation at Break</td>
<td>ASTM D882</td>
<td>%</td>
<td>100-155</td>
<td>ISO 527</td>
<td>%</td>
<td>100</td>
</tr>
<tr>
<td>Gardner Impact Strength at 0.03&quot; (0.75 mm)</td>
<td>ASTM D3029</td>
<td>ft-lb</td>
<td>23</td>
<td>ISO 6603-1</td>
<td>J</td>
<td>31</td>
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<tr>
<td>Tear Strength Initiation</td>
<td>ASTM D1004</td>
<td>lb/mil</td>
<td>1.4-1.8</td>
<td>kN/m</td>
<td>245</td>
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<tr>
<td>Propagation</td>
<td>ASTM D1922</td>
<td>g/mil</td>
<td>30-55</td>
<td>kN/m</td>
<td>10-20</td>
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<tr>
<td>Puncture Resistance (Dynatup)</td>
<td>ASTM D3763</td>
<td>ft-lb</td>
<td>9</td>
<td>J</td>
<td>12</td>
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<tr>
<td>Fold Endurance (MIT)</td>
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<tr>
<td>0.010&quot; (0.25 mm)</td>
<td>ASTM D2176-69</td>
<td>double folds</td>
<td>120</td>
<td></td>
<td></td>
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<tr>
<td>0.020&quot; (0.50 mm)</td>
<td>ASTM D2176-69</td>
<td>double folds</td>
<td>30</td>
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<tr>
<td><strong>THERMAL</strong></td>
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<tr>
<td>Coefficient of Thermal Conductivity</td>
<td>ASTM D5470</td>
<td>Btu/hr/ft²/F°/in</td>
<td>1.35</td>
<td>W/m²K</td>
<td>0.2</td>
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<tr>
<td>Coefficient of Thermal Expansion</td>
<td>ASTM E831</td>
<td>(x105°F)</td>
<td>3.2</td>
<td>ISO 11359</td>
<td>(x10⁴ °C)</td>
<td>7</td>
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<tr>
<td>Specific Heat @40°F (4°C)</td>
<td>ASTM E1269</td>
<td>Btu/lb°F</td>
<td>0.3</td>
<td>KJ/Kg°C</td>
<td>1.25</td>
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<tr>
<td>Glass Transition Temperature</td>
<td>ASTM D3417 / D3418</td>
<td>°F</td>
<td>307</td>
<td>ISO 11357</td>
<td>°C</td>
<td>153</td>
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<tr>
<td>Vicat Softening Temperature, B</td>
<td>ASTM 1525-00</td>
<td>°F</td>
<td>323</td>
<td>ISO 75 Modified</td>
<td>°C</td>
<td>150</td>
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<tr>
<td>Heat Deflection Temp. by TMA at 1.8 Mpa</td>
<td></td>
<td>°F</td>
<td>290</td>
<td>°C</td>
<td>135</td>
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<tr>
<td>Britteness Temperature</td>
<td>ASTM D746</td>
<td>°F</td>
<td>-211</td>
<td>°C</td>
<td>-135</td>
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<tr>
<td><strong>PHYSICAL</strong></td>
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<tr>
<td>Density</td>
<td>ASTM D792</td>
<td>slug/ft³</td>
<td>2.3</td>
<td>ISO 1183</td>
<td>kg/m³</td>
<td>1200</td>
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<tr>
<td>Water Absorption, 24 hrs.</td>
<td>ASTM D570</td>
<td>% change</td>
<td>0.35</td>
<td>ISO 62</td>
<td>% change</td>
<td>0.35</td>
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<tr>
<td>Surface Energy(1st surface/2nd surface)</td>
<td>ASTM D5946-01</td>
<td></td>
<td>38/34</td>
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<tr>
<td>Surface Tension(1st surface/2nd surface)</td>
<td>Dyne Pens</td>
<td>Dyne</td>
<td>40-42</td>
<td>βθ-40</td>
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<td></td>
</tr>
</tbody>
</table>
## MANUFACTURING SPECIFICATIONS

<table>
<thead>
<tr>
<th>NOMINAL GAUGE RANGES</th>
<th>MIN./MAX LIMIT OF NOMINAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.010-0.015&quot; (0.250-0.375 mm)</td>
<td>± 10%</td>
</tr>
<tr>
<td>0.020&quot; (0.500 mm)</td>
<td>± 5%</td>
</tr>
</tbody>
</table>

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