**Lexan® Resin HF1140**  
**Asia Pacific: COMMERCIAL**

Ideal for disposables/short life cycles. Good clarity, heat resistance, property retention and dimensional stability. FDA food contact compliant in limited colors. Effective January 15th, 2007 this grade is no longer supported with biocompatibility information and should not be used for medical applications which require biocompatibility. Contact your GE representative for the alternative grade in the Lexan HP series.

### TYPICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Typical Value</th>
<th>Unit</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MECHANICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tensile Stress, yld, Type I, 50 mm/min</td>
<td>62</td>
<td>MPa</td>
<td>ASTM D 638</td>
</tr>
<tr>
<td>Tensile Stress, brk, Type I, 50 mm/min</td>
<td>65</td>
<td>MPa</td>
<td>ASTM D 638</td>
</tr>
<tr>
<td>Tensile Strain, brk, Type I, 50 mm/min</td>
<td>120</td>
<td>%</td>
<td>ASTM D 638</td>
</tr>
<tr>
<td>Flexural Stress, yld, 1.3 mm/min, 50 mm span</td>
<td>93</td>
<td>MPa</td>
<td>ASTM D 790</td>
</tr>
<tr>
<td>Flexural Modulus, 1.3 mm/min, 50 mm span</td>
<td>2300</td>
<td>MPa</td>
<td>ASTM D 790</td>
</tr>
<tr>
<td><strong>IMPACT</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Izod Impact, notched, 23°C</td>
<td>640</td>
<td>J/m</td>
<td>ASTM D 256</td>
</tr>
<tr>
<td>Tensile Impact, Type &quot;S&quot;</td>
<td>378</td>
<td>kJ/m²</td>
<td>ASTM D 1822</td>
</tr>
<tr>
<td>Instrumented Impact Energy @ peak, 23°C</td>
<td>54</td>
<td>J</td>
<td>ASTM D 3763</td>
</tr>
<tr>
<td><strong>THERMAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HDT, 1.82 MPa, 3.2mm, unannealed</td>
<td>126</td>
<td>°C</td>
<td>ASTM D 648</td>
</tr>
<tr>
<td>Relative Temp Index, Elec</td>
<td>130</td>
<td>°C</td>
<td>UL 746B</td>
</tr>
<tr>
<td>Relative Temp Index, Mech w/impact</td>
<td>130</td>
<td>°C</td>
<td>UL 746B</td>
</tr>
<tr>
<td>Relative Temp Index, Mech w/o impact</td>
<td>130</td>
<td>°C</td>
<td>UL 746B</td>
</tr>
<tr>
<td><strong>PHYSICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.2</td>
<td></td>
<td>ASTM D 792</td>
</tr>
<tr>
<td>Mold Shrinkage, flow, 3.2 mm</td>
<td>0.5 - 0.7</td>
<td>%</td>
<td>SABIC Method</td>
</tr>
<tr>
<td>Melt Flow Rate, 300°C/1.2 kgf</td>
<td>25</td>
<td>g/10 min</td>
<td>ASTM D 1238</td>
</tr>
<tr>
<td><strong>OPTICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light Transmission</td>
<td>88</td>
<td>%</td>
<td>ASTM D 1003</td>
</tr>
<tr>
<td>Haze</td>
<td>1</td>
<td></td>
<td>ASTM D 1003</td>
</tr>
<tr>
<td><strong>ELECTRICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hot Wire Ignition (PLC)</td>
<td>2</td>
<td>PLC Code</td>
<td>UL 746A</td>
</tr>
<tr>
<td>High Voltage Arc Track Rate (PLC)</td>
<td>2</td>
<td>PLC Code</td>
<td>UL 746A</td>
</tr>
<tr>
<td>High Ampere Arc Ign, surface (PLC)</td>
<td>1</td>
<td>PLC Code</td>
<td>UL 746A</td>
</tr>
<tr>
<td>Comparative Tracking Index (UL) (PLC)</td>
<td>2</td>
<td>PLC Code</td>
<td>UL 746A</td>
</tr>
</tbody>
</table>

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume rate, are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.

3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

4) Own measurement according to UL.

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Source: GMD, Last Update: 03/31/2000

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### Lexan® Resin HF1140

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<table>
<thead>
<tr>
<th>TYPICAL PROPERTIES ¹</th>
<th>TYPICAL VALUE</th>
<th>UNIT</th>
<th>STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FLAME CHARACTERISTICS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UL Recognized, 94V-2 Flame Class Rating (3)</td>
<td>1.09</td>
<td>mm</td>
<td>UL 94</td>
</tr>
<tr>
<td>CSA (See File for complete listing)</td>
<td>LS88480</td>
<td>File No.</td>
<td>CSA LISTED</td>
</tr>
</tbody>
</table>

1) Typical values only. Variations within normal tolerances are possible for various colours. All values are measured at least after 48 hours storage at 230°C/50% relative humidity. All properties, except the melt volume rate, are measured on injection moulded samples. All samples are prepared according to ISO 294.

2) Only typical data for material selection purpose. Not to be used for part or tool design.

3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

4) Own measurement according to UL.

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http://www.upmold.com
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<table>
<thead>
<tr>
<th>PROCESSING PARAMETERS</th>
<th>TYPICAL VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Injection Molding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drying Temperature</td>
<td>120</td>
<td>°C</td>
</tr>
<tr>
<td>Drying Time</td>
<td>3 - 4</td>
<td>hrs</td>
</tr>
<tr>
<td>Drying Time (Cumulative)</td>
<td>48</td>
<td>hrs</td>
</tr>
<tr>
<td>Maximum Moisture Content</td>
<td>0.02</td>
<td>%</td>
</tr>
<tr>
<td>Melt Temperature</td>
<td>270 - 295</td>
<td>°C</td>
</tr>
<tr>
<td>Nozzle Temperature</td>
<td>265 - 290</td>
<td>°C</td>
</tr>
<tr>
<td>Front - Zone 3 Temperature</td>
<td>270 - 295</td>
<td>°C</td>
</tr>
<tr>
<td>Middle - Zone 2 Temperature</td>
<td>260 - 280</td>
<td>°C</td>
</tr>
<tr>
<td>Rear - Zone 1 Temperature</td>
<td>250 - 270</td>
<td>°C</td>
</tr>
<tr>
<td>Mold Temperature</td>
<td>70 - 95</td>
<td>°C</td>
</tr>
<tr>
<td>Back Pressure</td>
<td>0.3 - 0.7</td>
<td>MPa</td>
</tr>
<tr>
<td>Screw Speed</td>
<td>40 - 70</td>
<td>rpm</td>
</tr>
<tr>
<td>Shot to Cylinder Size</td>
<td>40 - 60</td>
<td>%</td>
</tr>
<tr>
<td>Vent Depth</td>
<td>0.025 - 0.076</td>
<td>mm</td>
</tr>
</tbody>
</table>

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