# Quadrant EPP Duratron® PAI T6030 Polyamide-imide, glass reinforced, extruded (ASTM Product Data Sheet)

**Categories:** Polymer, Thermoplastic; Polyamide-imide (PAI); Polyamide-imide, Glass Filled

<table>
<thead>
<tr>
<th>Physical Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Gravity</td>
<td>1.60 g/cc</td>
<td>1.60 g/cc</td>
<td>ASTM D792</td>
</tr>
<tr>
<td>Water Absorption</td>
<td>0.30 %</td>
<td>0.30 %</td>
<td>Immersion, 24hr, ASTM D570(2)</td>
</tr>
<tr>
<td>Water Absorption at Saturation</td>
<td>1.5 %</td>
<td>1.5 %</td>
<td>Immersion; ASTM D570(2)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mechanical Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardness, Rockwell E</td>
<td>90</td>
<td>90</td>
<td>ASTM D786</td>
</tr>
<tr>
<td>Tensile Strength</td>
<td>159 MPa</td>
<td>23000 psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Tensile Strength at 150°C (302°F)</td>
<td>124 MPa</td>
<td>18000 psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Tensile Strength at 65°C (150°F)</td>
<td>138 MPa</td>
<td>20000 psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Elongation at Break</td>
<td>4.0 %</td>
<td>4.0 %</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Tensile Modulus</td>
<td>6.89 GPa</td>
<td>1000 ksi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>207 MPa</td>
<td>30000 psi</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>6.75 GPa</td>
<td>580 ksi</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Compressive Strength</td>
<td>275 MPa</td>
<td>40000 psi</td>
<td>10% Def; ASTM D695</td>
</tr>
<tr>
<td>Compressive Modulus</td>
<td>4.83 GPa</td>
<td>700 ksi</td>
<td>ASTM D695</td>
</tr>
<tr>
<td>Izod Impact, Notched</td>
<td>0.534 J/cm</td>
<td>1.00 ft-lb/in</td>
<td>ASTM D256 Type A</td>
</tr>
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<table>
<thead>
<tr>
<th>Electrical Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Resistivity per Square</td>
<td>&gt;= 1e+13 ohm</td>
<td>&gt;= 1e+13 ohm</td>
<td>EOS/ESD S11.11</td>
</tr>
<tr>
<td>Dielectric Strength</td>
<td>27.6 kV/mm</td>
<td>700 kV/m</td>
<td>Short Term; ASTM D149</td>
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</table>

<table>
<thead>
<tr>
<th>Thermal Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE, linear</td>
<td>16.2 μm/m°C</td>
<td>9.00 μm/°F</td>
<td>ASTM E831</td>
</tr>
<tr>
<td>@Temperature -40°C to 149°C</td>
<td>0.36 W/m-K</td>
<td>2.60 BTU-in/hr-ft°F</td>
<td>ASTM F433</td>
</tr>
<tr>
<td>Maximum Service Temperature, Air</td>
<td>260 °C</td>
<td>500 °F</td>
<td>Long Term</td>
</tr>
<tr>
<td>Deflection Temperature at 1.8 MPa (264 psi)</td>
<td>277 °C</td>
<td>530 °F</td>
<td>ASTM D648</td>
</tr>
<tr>
<td>Glass Transition Temp, Tg</td>
<td>275 °C</td>
<td>527 °F</td>
<td>ASTM D3418</td>
</tr>
<tr>
<td>Flammability, UL94</td>
<td>V-0</td>
<td>V-0</td>
<td>Estimated Rating</td>
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<table>
<thead>
<tr>
<th>Compliance Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>3A-Dairy</td>
<td>No</td>
<td>No</td>
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</tr>
<tr>
<td>Canada AG</td>
<td>No</td>
<td>No</td>
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<tr>
<td>FDA</td>
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<tr>
<td>NSF</td>
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<td>USDA</td>
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<tr>
<td>USP Class VI</td>
<td>No</td>
<td>No</td>
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<table>
<thead>
<tr>
<th>Chemical Resistance Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Acids, Strong (pH 1-3)</td>
<td>Limited</td>
<td>Limited</td>
<td></td>
</tr>
<tr>
<td>Acids, Weak</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>Alcohols</td>
<td>Acceptable</td>
<td>Acceptable</td>
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</tr>
<tr>
<td>Alkalies, Strong (pH 11-14)</td>
<td>Unacceptable</td>
<td>Unacceptable</td>
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</tr>
<tr>
<td>Alkalies, Weak</td>
<td>Limited</td>
<td>Limited</td>
<td></td>
</tr>
<tr>
<td>Chlorinated Solvents</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>Conductive / Static Dissipative</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Continuous Sunlight</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>Hot Water / Steam</td>
<td>Limited</td>
<td>Limited</td>
<td></td>
</tr>
<tr>
<td>Hydrocarbons - Aiphatic</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>Hydrocarbons - Aromatic</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
</tr>
<tr>
<td>Inorganic Salt Solutions</td>
<td>Acceptable</td>
<td>Acceptable</td>
<td></td>
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<tr>
<td>Ketones, Esters</td>
<td>Acceptable</td>
<td>Acceptable</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Descriptive Properties</th>
<th>Metric</th>
<th>English</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Machinability</td>
<td>8</td>
<td>1-10, 1=Easier to Machine</td>
<td></td>
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</table>