QUTOPLEX® - High Performance Plastic Materials. We produce high quality solutions from high performance materials. Few companies can offer the range of high performance / high temperature plastics found at Minnesota Rubber and Plastics. Our customers have come to rely on our ability to develop, design and produce their components and assemblies, cost-effectively, from a wide range of material offerings.

Features & Benefits

- Conformability
- Chemical resistance
- ISO 10995
- Dimensional stability
- FDA compliant
- USP Class VI
- Flexibility
- Injection moldable
- Lightweight
- Metal replacement
- Noise reducing
- Self lubricating
- Temperature extremes
- Hydrolytic stability
- Sterilization resistance

Applications

- Bearings
- Bushings
- Retainers
- Thrust washers
- Rotary seal rings
- Gears
- Poppets
- Valves
- Pumps
- Compressors
- Fuel systems
- Transmissions
- Medical instruments
- Plumbing fixtures
- Potable water
- Filtration equipment

High Performance Thermoplastics – Qutoplex®

Polyether Ether Ketone – PEEK
Polysulfone – PSU
Polythalamide – PPA

Polyphenylsulfone – PPSU
Thermoplastic Polyimides – TPI*
Polyphenylene Sulfide - PPS

Metal to Qutoplex® Conversions
Using Our Design Expertise

Qutoplex® Assemblies

Material Data @ Room Temperature

Comparative Strengths & Weaknesses

<table>
<thead>
<tr>
<th>Mechanical Properties</th>
<th>Chemical</th>
<th>Steam</th>
<th>Radiation</th>
<th>Wear</th>
<th>UV</th>
<th>Colorability</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPI*</td>
<td>Excellent</td>
<td>Very Good</td>
<td>Fair</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>PEEK</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Good</td>
<td>Good</td>
</tr>
<tr>
<td>PPS</td>
<td>Very Good</td>
<td>Excellent</td>
<td>Excellent</td>
<td>Good</td>
<td>Fair</td>
<td>Fair</td>
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<tr>
<td>PPA</td>
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<td>Fair</td>
<td>Fair</td>
</tr>
</tbody>
</table>

Temperature Comparison

<table>
<thead>
<tr>
<th>Polymer</th>
<th>Continuous Use Temperature F (°C)</th>
<th>Glass Transition Temperature F (°C)</th>
<th>Heat Deflection Temperature at 264 psi (1.80 MPa) F (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TPI*</td>
<td>428 (220)</td>
<td>536 (280)</td>
<td>539 (282)</td>
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<tr>
<td>PEEK</td>
<td>464 (240)</td>
<td>298 (148)</td>
<td>599 (315)</td>
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<tr>
<td>PPS</td>
<td>392 (200)</td>
<td>194 (90)</td>
<td>509 (265)</td>
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<tr>
<td>PPA</td>
<td>266 (130)</td>
<td>257 (125)</td>
<td>536 (280)</td>
</tr>
<tr>
<td>PPSU</td>
<td>320 (160)</td>
<td>428 (220)</td>
<td>410 (210)</td>
</tr>
<tr>
<td>PSU</td>
<td>284 (140)</td>
<td>365 (185)</td>
<td>358 (181)</td>
</tr>
</tbody>
</table>

All thermal properties are for 30% glass filled product.
All materials are available in multiple fill levels.
All natural colors, unpigmented, please let us know if a specific color is needed.
*This includes PolyAmide-Imide – PAI. Minnesota Rubber and Plastics is a certified molder of Torlon® PAI.