PTFE
LOW FRICTION PLASTIC

PTFE (polytetrafluoroethylene) is a soft, low friction, fluoropolymer with outstanding chemical and weathering resistance. PTFE is stable at temperatures up to 500 F and is often used in high temperature environments. PTFE also has excellent electrical insulating properties.

PTFE Material Options

Virgin (Unfilled) Grade PTFE – Unfilled PTFE, made from virgin PTFE resin, is extremely soft and formable and is often used for chemical resistance seals and gaskets.

Glass-Filled PTFE – Glass-filled PTFE has enhanced strength and stiffness.

Bearing Grades of PTFE – Bearing grades of PTFE have extremely low friction and high service temperatures. They are frequently specified for high performance bearings and bushings, particularly in applications that require resistance to corrosive chemicals.

PTFE is widely used in:
- Seals and Gaskets
- Valve and fitting components
- Pump parts
- Manifolds
- Semiconductor Equipment
- Scientific Instrumentation
- Chemical resistant gaskets
- Bearing and bushings

Performance Characteristics:
- Outstanding chemical resistance
- Extremely low friction
- Soft and conformable
- Good weathering resistance
- Performs well at elevated temperatures

Common Brands:
- Teflon®
- Rulon®
- Fluorosint®

Available in:
- Flat gaskets and seals
- Molded parts
- O-Rings
- Sheets, rolls and strip

TYPICAL PROPERTIES OF PTFE

<table>
<thead>
<tr>
<th>Property</th>
<th>Units</th>
<th>ASTM Test</th>
<th>PTFE</th>
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<tbody>
<tr>
<td>Tensile Strength</td>
<td>psi</td>
<td>D638</td>
<td>1,500 - 3,000</td>
</tr>
<tr>
<td>Flexural Modulus</td>
<td>psi</td>
<td>D790</td>
<td>72,000</td>
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<tr>
<td>Izod Impact (Notched)</td>
<td>ft-lbs/in of notch</td>
<td>D256</td>
<td>3.5</td>
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<tr>
<td>Heat Deflection Temperature @ 66 psi</td>
<td>°F</td>
<td>D648</td>
<td>250</td>
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<tr>
<td>Maximum Continuous Service Temperature Air</td>
<td>°F</td>
<td>D696</td>
<td>500</td>
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<tr>
<td>Water Absorption (immersion 24 hours)</td>
<td>%</td>
<td>D570</td>
<td>&lt;0.01</td>
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<tr>
<td>Coefficient of Linear Thermal Expansion</td>
<td>in/in/Fx10⁻⁵</td>
<td>D696</td>
<td>8.9</td>
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<tr>
<td>Coefficient of Friction (dynamic)</td>
<td></td>
<td></td>
<td>0.10</td>
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Values may vary according to brand name. Please ask your Auburn representative for more specific information about an individual brand.