High Performance Polymer (P-78)

A high temperature/high performance thermoplastic, P-78 is an unfilled compression-molded material with a maximum service temperature of 650°F (343°C.) However, depending on the application, higher services temperatures for P-78 may be possible.

P-78 is a good candidate material for “unique” high temperature applications, but is NOT recommended for use as a spring-energized seal material due to low elongation.

Chemical Compatibility
P-78 has acceptable service in ketones, hydrocarbons, and ethers, but has limited to unacceptable service in acids and alkalis.

FDA compliance
P-78 is not “FDA compliant.” (Request Research Report 50-640 for Bal Seal’s definition of FDA compliant).

Mechanical Properties
The mechanical properties of P-78 at ambient temperatures are:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tensile Strength</td>
<td>20,000 psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Elongation</td>
<td>3%</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Rockwell Hardness</td>
<td>M125</td>
<td>ASTM D785</td>
</tr>
</tbody>
</table>

Color
Black

Cost
$$$$$

Advantages of P-78
- Exceptional heat resistance and property retention over 400°F (205°C)
- Superior wear resistance and load–carrying capabilities at extreme temperatures
- Excellent ultrasonic transparency

Potential Applications
Chemical Process and Petrochemical Industry
Electric Connectors
Bearing Seal Applications
Bushings at High Temperature
Valve Seats

Other Information
For additional information, please contact our Technical Sales Representative at (949) 460-2100.
Bal Seal maintains a vast library of material references and testing information.