Perlast® G75TX
Black multi-purpose ultra-high temperature perfluoroelastomer

Description
Perlast® G75TX is the ultimate ‘next generation’ perfluoroelastomer, offering a combination of excellent chemical resistance and ultra-high temperature stability, simultaneously extending the operating limits in all aspects.

Perlast® G75TX has been formulated to provide increased resistance to a broad range of chemicals by carefully controlling the molecular architecture. In addition, this perfluoroelastomer has low permeability and as a result, it is less prone to swelling, leading to extended in-service performance in, for example, valves, pumps and mechanical seals.

Perlast® G75TX is suitable for both dynamic and static applications and can be fully moulded into O-rings (any size up to 2.5m/8ft external diameter) and custom shapes.

Key Attributes
- Very high temperature resistance
- Ultra low compression set
- Excellent chemical resistance to a broad range of chemicals
- Exceptional acid and amine resistance
- Superior mechanical properties
- Long-term sealing efficiency at high temperatures
- Extremely low out-gassing properties
- Good steam resistance (ASME BPE 2000)

Typical Applications
- Aerospace – Inter-stage seal assemblies (static O-rings)
- Chemical Processing – Pumps
- Diesel – Pre-heat chambers
- Semiconductor – Gas abatement systems (static)
- Oil & Gas – High temperature down-hole environments
- Mechanical seals
- Exhaust valve seats
- High temperature environments
- Electrical bulkhead feed-throughs

Other materials in this range
Perlast® G75B (black high temperature up to +325°C)
Perlast® G75H (white high temperature up to +320°C)

Note: Perfluoroelastomers are not suitable for use with molten alkali metals.

*For extended operation at high temperature please consult the PPE technical team.

Typical Material Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>ASTM</th>
<th>ISO</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material Type</td>
<td>FFKM</td>
<td>FFPM</td>
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<tr>
<td>Colour</td>
<td></td>
<td></td>
<td>Black</td>
</tr>
<tr>
<td>Hardness: (&quot;IRHD) (Shore A)</td>
<td>D1415</td>
<td>ISO48</td>
<td>75</td>
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<tr>
<td></td>
<td>D2240</td>
<td>ISO7619</td>
<td>75</td>
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<tr>
<td>Tensile Strength (MPa)</td>
<td>D412</td>
<td>ISO37</td>
<td>14.0</td>
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<tr>
<td>Elongation at break (%)</td>
<td>D412</td>
<td>ISO37</td>
<td>130</td>
</tr>
<tr>
<td>100% Modulus (MPa)</td>
<td>D412</td>
<td>ISO37</td>
<td>11.0</td>
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<tr>
<td>Compression Set: 72 hrs @ 200°C (392°F)</td>
<td>D395</td>
<td>ISO815</td>
<td>8.0</td>
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<tr>
<td>Minimum Operating Temperature</td>
<td></td>
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<td>-15°C (+5°F)</td>
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<tr>
<td>Maximum Operating Temperature*</td>
<td></td>
<td></td>
<td>+327°C (+620°F)</td>
</tr>
<tr>
<td>Coefficient of Thermal Expansion (°C⁻¹)</td>
<td></td>
<td></td>
<td>3.8x10⁴</td>
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</tbody>
</table>

SPECIAL NOTE: This information is to the best of our knowledge accurate and reliable. However, PPE Ltd makes no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer’s application. It is the customer’s responsibility to evaluate parts prior to use, especially in applications where failure may result in injury and/or damage. It should also be noted that all elastomeric parts have a finite life, therefore a regular program of inspection and replacement is strongly recommended. The material properties above should not to be used for specification purposes.

Perlast® is a registered trademark of Precision Polymer Engineering Limited.