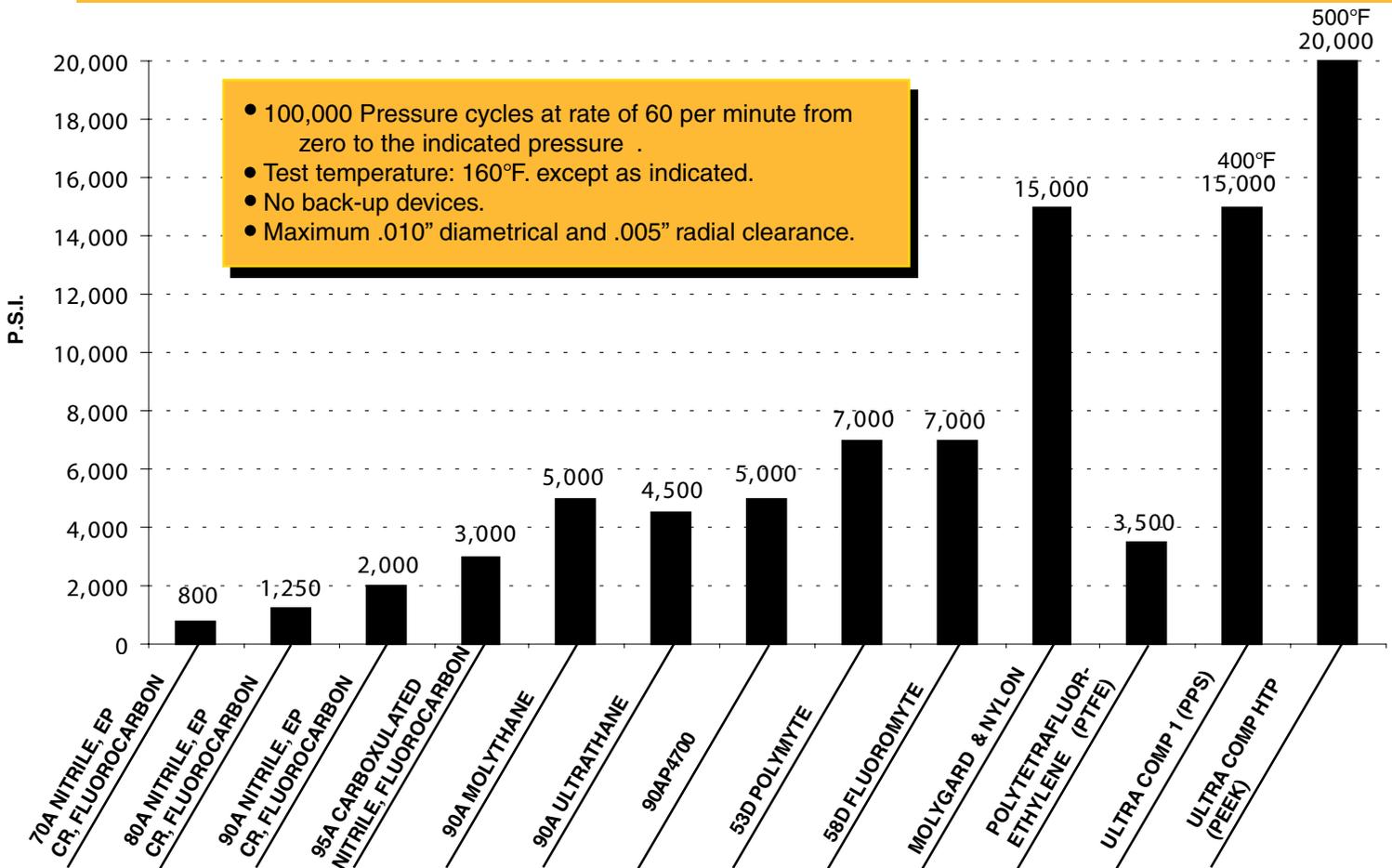


Material	Temperature Range	Description
<b>ELASTOMERIC MATERIALS</b>		
<b>Nitrile</b> (Buna N; NBR)	-65°F to +250°F some to 275°F (-54°C to +121°C)	Most common polymer used in petroleum fluids, water and gas service and hydraulic fluids. Good abrasion resistance, tensile strength and compression set resistance.
<b>Carboxylated Nitrile</b> (Nitroxile; internally lubed)	-20°F to 250°F some to 275°F (28°C to +121°C)	Carboxylated Nitriles are known for their extremely good abrasion resistance. Has excellent resistance to petroleum base oils, hydrocarbon fuels and water. Lubed versions offer exceptionally low friction characteristics (N4274).
<b>Ethylene Propylene</b> (EPM, EPDM)	-65°F to 300°F (-54°C to +149°C)	Good resistance to hydrogen-sulfide, brake fluid and carbon dioxide. Excellent resistance to hot steam, water, water base fluids, weak acids and alkalis. New formulations allow for use in steam to 600°F.
<b>Fluorocarbons</b>  (Serviceable to 450°F/232°C with lowered service life)	-20°F to +400°F (-29°C to +204°C)	Resistance to corrosive gases and fluids is superior to Nitriles. Has good breadth of chemical resistance and wide temperature range. New formulations give excellent results in down-hole oilfield applications.
<b>Chloroprene</b> (Neoprene; CR)	-45°F to +300°F (-43°C to +149°C)	Limited application in fluids such as liquified petroleum gases (LPG), ammonia (amines) and many freons. Oxidation resistance is excellent. Oil resistance moderate.
<b>ELASTO PLASTIC MATERIALS</b>		
Polyurethanes (AU; EU; Urethane) - have excellent resistance to petroleum oils, hydrocarbon fluids and fuels, oxygen, ozone and weathering		
<b>P4300</b>	-40°F to +275°F (-40°C to +135°C)	High performance Polyurethane designed for better physical properties. Improved compression set and rebound properties give increased sealing capabilities.
<b>P4700</b>	-31°F to +225°F (-35°C to +110°C)	Superior Polyurethane designed for enhanced physical properties. Increased sealing capabilities resulting from improved compression set and rebound properties.
<b>P4693</b>	-35°F to +200°F (-54°C to +94°C)	Premium Polyurethane formulated for improved physical properties. Improved compression set and rebound properties gives increased sealing capability.
<b>Molythane</b>	-65°F to +200°F (-54°C to +94°C)	Improved blend of Polyurethane compounded for high extrusion resistance. Excellent wear and abrasion resistance.
<b>Ultrathane</b>	-65°F to +225°F (-54°C to +107°C)	Unique blend of Polyurethane impregnated with a proprietary internal lubricant. This blend gives lower friction, reduces heat build-up which reduces wear.
<b>PLASTIC ALLOY MATERIALS</b>		
Parker technology, alloying of more rigid thermoplastic materials with organo-plastic materials, yields compounds that meet requirements for pressure response and stability with increased thermal and chemical resistance. Have tensile properties and toughness approaching that of Polyurethane elastomers.		
<b>PolyMyte</b> (Note - 3 types available) 48D durometer hardness 53D durometer hardness 65D durometer hardness	-65°F to +275°F (-54°C to +135°C) (Low temperature brittle point -90°F/-68°C)	Polyester alloy. High tear strength, abrasion and extrusion resistance. Excellent resistance to petroleum fluids, many phosphate ester fluids, some chlorinated hydraulic fluids, up to 180°F in water, oxygen, common solvents, dilute bases and mineral acids. Good resistance to hostile environments.
<b>FluoroMyte</b>	-65°F to +300°F (-54°C to +147°C)	Comparable physical properties to PolyMyte. Higher temperature capabilities and less friction than PolyMyte.

Material	Temperature Range	Description
----------	-------------------	-------------

**OTHER PARKER MATERIALS**

<b>Molygard</b>	-65°F to +250°F (-54°C to +121°C)	Proprietary compound of filled nylon material for load bearing and anti-extrusion.
<b>Nylatron</b> (Nylon)	-65°F to +250°F (-54°C to +121°C)	Abrasion resistant for anti-extrusion devices, bearings or engineered parts. Resistant to most petroleum based fluids. May be used with phosphate ester hydraulic fluids, ketones, alkalis and weak acids
<b>Polytetrafluoroethylene</b> (PTFE)	Cryogenic to +400°F (Cryogenic to +204°C)	Used in wiper rings or in anti-extrusion devices, either filled or unfilled. Outstanding chemical resistance, offers extremely low friction.
<b>UltraCOMP I</b> Polyphenylene Sulfide (PPS)	-65°F to +400°F (-54°C to +260°C)	Used for replacing brass, bronze or other metallic members in sealing and back-up systems. Can be reinforced with materials such as glass, PTFE and Molybdenum-disulfide.
<b>UltraCOMP HTP</b> Polyaryletherketone (PEEK)	-65°F to +500°F (-54°C to +260°C)	High temperature and pressure compound. Also available in glass-filled and carbon filled versions. Good extrusion resistance at high temperatures. Has excellent chemical resistance at high temperatures. Suitable as back-up devices and special sealing elements.



**Build With The Best!**

Parker Hannifin Corporation  
**Engineered Polymer Systems Division**  
 P.O. Box 30505  
 Salt Lake City, UT 84130-0505  
 Phone: (801) 972-3000  
 Fax: (801) 972-4777