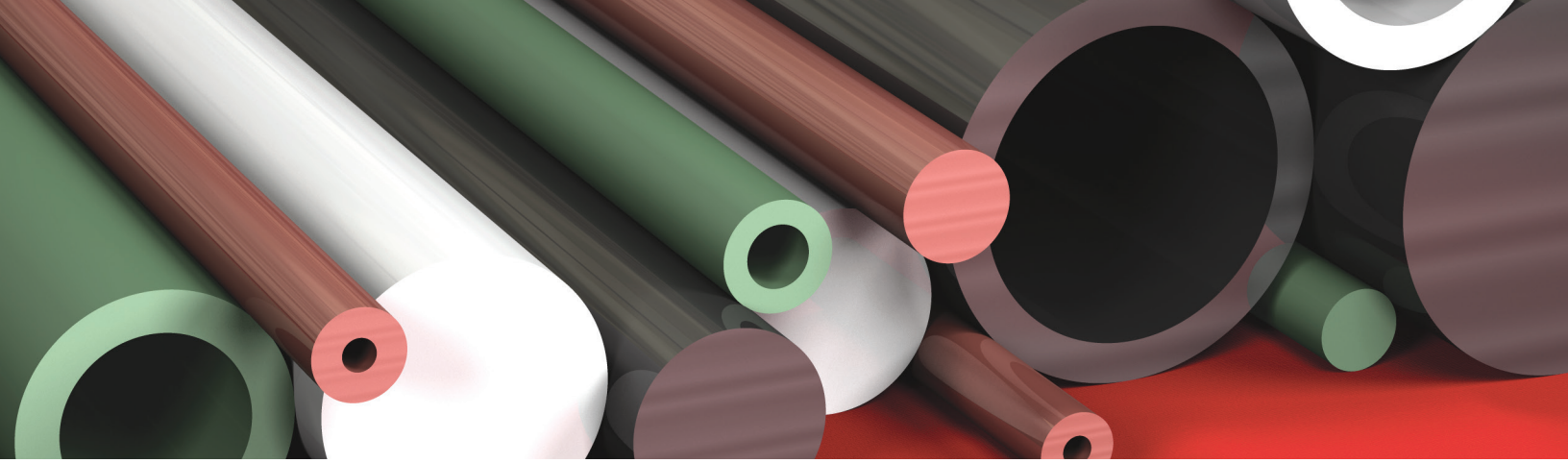

PTFE RODS & TUBES

MFP Seals produces PTFE Rods and Tubes in an extensive range of sizes, colors, and PTFE materials (Polytetrafluoroethylene), including our T1000 (virgin PTFE). A T1000 Rod or Tube is a low friction product that is inert to most liquids and corrosives, and is also non-contaminating, making it the ideal material for use in applications where metals and alloys would corrode quickly. Capable of withstanding temperatures from -328°F up to +500°F, T1000 can handle an extremely wide range of environments and is often used in high temperature applications.

While T1000 Rods and Tubes are white in color, they can also be made from blended materials to meet the customers' application needs. Adding a filler will generally color the Rod or Tube to match the filler, but other custom colors can also be achieved. You must request custom colors prior to fabrication. Certain fillers or colors may affect the physical properties of the material. Please inform us if testing of a certain blend is required.

To ensure fast and efficient service, MFP Seals stocks a wide range of molded and extruded tubes and rods, in virgin PTFE as well as blended compounds. Give MFP Seals a call today, and we can work with you to suggest the best solution for your particular Rod or Tube application.

T1000 (Virgin PTFE)			
Properties	**Unit**	**Method**	**Typical Value**
PHYSICAL - MECHANICAL			
Density	g/cm^3	ASTM D792	2.14 - 2.18
Hardness - Shore D	points	ASTM D2240	51 - 60
Tensile strength - CD	MPa	ISO 527	≥ 20
Elongation at break - CD	%	ISO 527	>200
Compressive strength at 1% deformation - CD	psi	ASTM D695	580 - 725
Deformation under load at room temperature after 24 hours at 13.7 N/mm^2 - CD	%	ASTM D621	14 - 17
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Deformation under load at 260°C, after 24 hours at 41 N/mm^2 - CD	%	ASTM D621	
Permanent deformation as above after 24 hours of rest at room temperature - CD	%	ASTM D621	7 - 8
Impact strength Izod	J/m	ASTM D256	153
TRIBIOLOGICAL			
Dynamic coefficient of friction	/	ASTM D1894 ASTM D3702	0.06
Wear factor K	/	ASTM D3702	2.900
PV limit at 3 m/min at 30 m/min at 300 m/min	$N/mm^2 \cdot m/min$	/	2.4 4.2 5.7
THERMAL			
Service Temperature (min - max)	°F	/	-328 / +500
Thermal expansion coefficient (linear) 25 - 100°C	10^{-5}in/in/°F	ASTM D696	6.625 - 7.206
ELECTRICAL			
Dielectric strength (specimen 0.5 mm thick)	KV/mm	ASTM D149	≥ 40
Dielectric Constant at 60 Hz and 106 Hz	/	ASTM D150	2.05 - 2.10
Volume Resistivity	Ω • cm	ASTM D257	10^{18}
Surface Resistivity	Ω	ASTM D257	10^{17}

CD = Cross Direction

The data we are herewith providing are all based on laboratory testing and are proposed to technical designers as possible and useful advice. Deviations from the values indicated may occur, but they do not constitute themselves either detriment of quality or reason for rejection.

MFP SEALS®
MARTIN FLUID POWER

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