

RYTON

PolyPhenylene Sulfide (PPS) offers the broadest resistance to chemicals of any advanced engineering plastic. They have no known solvents below 392°F (200°C) and are inert to steam, strong bases, fuels and acids. Minimal moisture absorption and a very low coefficient of linear thermal expansion, combined with stress-relieving manufacturing, make PPS ideally suited for precise tolerance machined components.

PPS GRADES**40% Glass Reinforced PPS**

This product is the most recognized filled grade of PPS. It offers better dimensional stability and thermal performance than unfilled Techtron[®] PPS and maintains its strength to above 425°F (220°C).

Bearing Grade PPS

Bearing grade PPS is internally lubricated and carbon fiber reinforced offering a low coefficient of thermal expansion and uncompromised chemical resistance. It is well suited for thrust or wear applications or when an electrically conductive material is required.

NOTE:

Many other filled grades of PPS are also available in stock shape forms.

Contact us for more information about these products.

(see also Techtron unfilled PPS, bearing grade Techtron HPV, Ensifide/Tecatron PPS Specifications)

TYPICAL PROPERTIES of REPRESENTATIVE FILLED PPS GRADES

ASTM or UL test	Property	40% Glass Reinforced	Bearing Grade
PHYSICAL			
	Density (lb/in ³)	0.061	0.056
D792	(g/cm ³)	1.7	1.55
D570	Water Absorption, 24 hrs (%)	0.02	0.02
MECHANICAL			
D638	Tensile Strength (psi)	13,000	10,000
D638	Tensile Modulus (psi)	730,000	800,000
D638	Tensile Elongation at Break (%)	2	1.5
D790	Flexural Strength (psi)	23,000	15,000
D790	Flexural Modulus (psi)	1,000,000	1,000,000
D695	Compressive Strength (psi)	24,000	15,000
D695	Compressive Modulus (psi)	1,300,000	800,000
D785	Hardness, Rockwell	M94 / R125	M93 / R126
D256	IZOD Notched Impact (ft-lb/in)	1	1
THERMAL			
D696	Coefficient of Linear Thermal Expansion (x 10 ⁻⁵ in./in./°F)	2.5	1.2
D648	Heat Deflection Temp (°F / °C) at 264 psi	490 / 254	490 / 254
D3418	Glass Transition Temp (°F / °C)	n.a.	n.a.
-	Max Operating Temp (°F / °C)	450 / 232	450 / 232
	Thermal Conductivity (BTU-in/ft ² -hr-°F)	2.1	2.2
C177	(x 10 ⁻⁴ cal/cm-sec-°C)	7.23	7.57
UL94	Flammability Rating	V-O	V-O
ELECTRICAL			
D149	Dielectric Strength (V/mil) short time, 1/8" thick	385	-
D150	Dielectric Constant at 1 MHz	-	-
D150	Dissipation Factor at 1 MHz	-	-
D257	Volume Resistivity (ohm-cm)at 50% RH	-	-

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets.

All values at 73°F (23°C) unless otherwise noted.

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