

TYPICAL ROOM TEMPERATURE PROPERTIES OF POLYPHENYLENE SULFIDE (PPS)

Ranges indicate properties dependent on grade.

— TEST METHOD —		Property	VALUE	
ISO	ASTM		SI	English
1183	D792	Specific gravity	1.35-1.75	1.35-1.75
527	D638	Tensile strength	69-121 MPa	10.0-13.5 kpsi
527	D638	Elongation at break (%)	1.5-15	1.5-15
527	D638	Tensile modulus	2.2-5.5 GPa	0.32-0.80 Mpsi
178	D790	Flexural modulus	2.6-6.9 GPa	0.37-1.00 Mpsi
604	D695	Compressive modulus	2.8-9.0 GPa	0.41-1.30 Mpsi
180/1A	D256	Notched Izod impact	32-54 J/m	0.6-1.0 ft-lb/in ²
2039-2	D785	Hardness, Rockwell	M93-M95	M93-M95
—	—	Coefficient of friction dynamic	0.20-0.40	0.20-0.40
—	E831 (TMA)	Coefficient of linear thermal expansion × 10⁻⁵	2.2-5.0 mm/mm-°C	1.2-2.8 in/in-°F
75	D648	Heat deflection temperature		
		At 1.8 MPa (264 psi)	121-254°C	250-490°F
—	D3418	Glass transition temperature	90°C	194°F
—	D3418	Melting point	282°C	540°F
—	—	Continuous service temperature in air	218°C	425°F
—	UL 94	Flammability		
		At 3.1 mm (0.125") estimated	V-0	V-0
IEC 243	D149	Dielectric strength	conductive – 21 kV/mm	conductive – 540 V/mil
IEC 93	D257	Volume resistivity	10 ⁴ -4×10 ¹⁶ ohm-cm	10 ⁴ -1×10 ¹⁷ ohm-in
IEC 250	D150	Dielectric constant		
		At 1 MHz	conductive – 3.0	conductive – 3.0
IEC 250	D150	Dissipation factor		
		At 1 MHz	conductive – 0.0013	conductive – 0.0013
62	D570	Water absorption, 24 h, 1/8-in thk (%)	0.01-0.02	0.01-0.02

Taken from *Engineering Plastic Products – Stock Shapes for Machining*, Quadrant Engineering Plastic Products, 1996.