

Techtron® PSBG PPS

Polymer; Thermoplastic; Polyphenylene Sulfide; Compression Molded, Bearing Grade

Physical Properties	Metric	English	Comments
Specific Gravity	1.52 g/cc	1.52 g/cc	ASTM D792
Water Absorption	0.020 %	0.020 %	Immersion, 24 hr; ASTM D570(2)
Water Absorption at Saturation	0.030%	0.030%	Immersion; ASTM D570(2)
Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	93	93	ASTM D785
Hardness, Rockwell R	126	126	ASTM D785
Hardness, Shore D	86	86	ASTM D2240
Tensile Strength	34.5 MPa	5,000 psi	ASTM D638
Tensile Strength at 150°C (300°C)	3.45 MPa	500 psi	ASTM D638
Tensile Strength at 65°C (150°C)	20.7 MPa	3,000 psi	ASTM D638
Elongation at Break	1.0 %	1.0 %	ASTM D638
Tensile Modulus	6.34 GPa	920 ksi	ASTM D638
Flexural Strength	68.9 MPa	10,000 psi	ASTM D790
Flexural Modulus	5.65 GPa	820 ksi	ASTM D790
Compressive Strength	103 MPa	15,000 psi	10% Def.; ASTM D695
Compressive Modulus	5.52 GPa	800 ksi	ASTM D695
Izod Impact, Notched	0.534 J/cm	1.00 ft-lb/in	ASTM D256 Type A
Coefficient of Friction, Dynamic	0.20	0.20	Dry vs Steel; QTM 55007
K (wear) Factor	1610 x 10 ⁻⁹ mm ³ /N-M	800 x 10 ⁻¹⁰ in ³ -min/ft-lb-hr	QTM 55010
Limiting Pressure Velocity	0.876 MPa-m/sec	25,000 psi-ft/min	4:1 Safety Factor; QTM 55007
Electrical Properties	Metric	English	Comments
Surface Resistivity per Square	<= 1.00e +05	<= 1.00e +05	EOS/ESD S11.11
Thermal Properties	Metric	English	Comments
CTE, Linear	30.6 µm/m-°C @Temperature -40.0 - 149 oC	17.0 µin/in-°F @Temperature -40.0 - 300 oF	ASTM E831
Thermal Conductivity	0.255 W/m-K	1.77 BTU-in/hr-ft ² -°F	ASTM F433
Melting Point	282 °C	540 °F	Crystalline, Peak; ASTM D3418
Max Service Temperature, Air	232 °C	450 °F	Long Term
Deflection Temperature at 1.8 MPa (264 psi)	254 °C	490 °F	ASTM D648
Flammability, UL94	V-0	V-0	1/8 inch (Estimated Rating)
Compliance Properties	Metric	English	Comments
3-A Dairy	No	No	
Canada AG	No	No	
FDA	No	No	
NSF	No	No	
USDA	No	No	
USP Class VI	No	No	

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations should contact Alro Plastics and/or Quadrant EPP directly. This data sheet is for reference only in helping if a material may be suitable for an application. Proper material testing is the only way to know for sure and is the recommended way to go when implementing a new material for an application. Material samples may also be available for testing, please contact Alro Plastics for samples.

