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## Delrin® Homopolymer Material Specifications

Delrin® acetal homopolymer offers slightly higher mechanical properties than acetal copolymer, but may contain a low density center (also known as "center line porosity") especially in large cross-sections. The homopolymer also gives slightly less chemical resistance than copolymer acetal. For example, Delrin® is ideal for small diameter, thin-walled bushings that benefit from the additional strength and rigidity of homopolymer acetal. Delrin® is available in black and natural colors.

Physical Properties	Units	Test	Delrin® Homopolymer
Density	lb/in <sup>3</sup> g/cm <sup>3</sup>	D792	0.051 1.41
Water Absorption, 24 hrs.	%	D570	0.2

Mechanical Properties	Units	Test	Delrin® Homopolymer
Tensile Strength	psi	D638	11,000
Tensile Modulus	psi	D638	450,000
Tensile Elongation at Break	%	D638	30
Flexural Strength	psi	D790	13,000
Flexural Modulus	psi	D790	450,000
Compressive Strength	psi	D695	16,000
Compressive Modulus	psi	D695	450,000
Hardness Rockwell	-	D785	M89/R122
Izod Impact Notched	ft-lb/in	D256	1.0

Thermal Properties	Units	Test	Delrin® Homopolymer
Coefficient of Linear Thermal Expansion	x 10 <sup>-5</sup> in./in./°F	D696	4.70
Heat Deflection Temperature	@264 psi °F/°C	D648	250/121
Melting Temperature	°F/°C	D3418	347/175
Max. Use Temperature	°F/°C	-	180/82
Thermal Conductivity	BTU-in/ft <sup>2</sup> -hr-°F x 10 <sup>-4</sup> cal/cm-sec-°C	C177	2.5 8.6
Flammability Rating	-	UL94	HB

Electrical Properties	Units	Test	Delrin® Homopolymer
Dielectric Strength	(V/mil) short time, 1/8" thick	D149	450
Dielectric Constant	@1 MHz	D150	3.7
Dissipation Factor	@1 MHz	D150	0.005
Volume Resistivity	(ohm-cm) @50% RH	D257	10 <sup>15</sup>

\*\*The information provided in this table is a compilation of publicly available data. This information is provided for comparison purposes only, and is not intended to be warrantable. Further, Technical Products, Inc. disclaims any and all liability from errors, in accuracies, or omissions.