



POLYMER INDUSTRIES

PEI

TYPICAL PROPERTIES

Property	Test Method	Units	PEI Unfilled Polyetherimide	PEI Rg-30 30% Glass Fiber Reinforced PEI
Mechanical				
Specific Gravity	ASTM-D792	---	1.27	1.51
Tensile Strength	ASTM-D638	psi	15,200	17,000
Tensile Elongation	ASTM-D638	%	60-80	13
Tensile Modulus	ASTM-D638	psi	500,000	800,000
Flexural Strength	ASTM-D790	psi	22,000	27,000
Flexural Modulus	ASTM-D790	psi	480,000	850,000
Compression Strength	ASTM-D695	psi	22,000	30,700
Izod Notched Impact	ASTM-D256	ft.- lb./in.	1.0	1.6
Rockwell Hardness	ASTM-D785	M or R scale	M109 (R123)	M114 (R127)
Thermal				
Coef. Of Linear Thermal Expansion	ASTM-D696	in./in./°F	3.1x10 ⁻⁵	1.1x10 ⁻⁵
Max Continuous Temp.	Internal Std.	°F	340	340
Heat Defl. Temp. @ 264 psi	ASTM-D648	°F	392	410
Melting Point	ASTM-D3418	°F	426	442
Electrical				
Dielectric Strength-Short Term	ASTM-D149	volts/mil	830	770
Dielectric Constant @ 60 Hz	ASTM-D150	---	3.2	3.7
Dielectric Constant @ 10 ⁶ Hz	ASTM-D150	---	3.15	3.7
Dissipation Factor @ 60 Hz	ASTM-D150	---	0.001	0.0015
Volume Resistivity	ASTM-D257	ohm-cm	>10 ¹⁷	>10 ¹⁶
Miscellaneous				
Water Absorption/24 hours	ASTM-D570	%	0.25	0.16
Water Absorption @ Saturation	ASTM-D570	%	1.25	0.9
Flammability	UL-94	---	V-0 (0.125")	V-0 (0.125")
Agency Compliance				
FDA	---	---	Yes	NO
USDA	---	---	Yes	NO

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