



THE GUND COMPANY

MANUFACTURERS & FABRICATORS OF ENGINEERED MATERIAL SOLUTIONS

Ultem™ 1000

Amorphous High Performance Plastic (PEI - Unreinforced)

PEI (Polyetherimide) is a thermoplastic and a member of the imide family (containing the O=C-N-C=O group). Ultem™ 1000 is a commercial grade of PEI. It is excellent for applications that require consistent dielectric properties over a wide frequency range, including reusable medical devices, analytical instruments, semiconductors, and electrical insulation. Though Ultem offers identical properties as generic PEI, it exceeds with exceptional resistance to environmental forces and high dielectric strength and stability. Applicable industries include medical, electronic, microwave, automotive, and aircraft. Ultem is FDA, USP Class VI and NSF compliant.

The Gund Company custom fabricates insulation materials to the exact specifications and drawings specified by our customers. We offer our customers the proper product for their specific application. A variety of dimensions and diameter sizes are available. Product colors vary according to material type.

		ASTM*		TYPICAL VALUES	
PROPERTIES		Test Method	Units	Ultem 1000	
PHYSICAL	Specific Gravity	ASTM D792	g/cm ³	1.2700	
	Water Absorption: 24 hr @ 73°F	ASTM D570	%	0.25	
	Water Absorption: Saturation @ 73°F	ASTM D570	%	1.25	
THERMAL	Coefficient of Linear Thermal Expansion	ASTM 696	µin/in-°F	31.0	
	Thermal Conductivity	ASTM D2214	BTU-in/ft ² .hr.°F	1.50	
	Heat Deflection Temperature (66 PSI)	ASTM D648	°F	410	
	Heat Deflection Temperature (264 PSI)	ASTM D648	°F	394	
	Vicat Softening Point	ASTM D1525	°F	426	
	Flammability: UL94 (3.2 mm)			V-0	
MECHANICAL	Rockwell M Hardness	ASTM D785		109	
	Ultimate Tensile Strength @ 73°F	ASTM D638	PSI	15,200	
	Elongation at Break @ 73°F	ASTM D638		40 / 7.5	
	Elongation at Yield	ASTM D638		40 / 7.5	
	Tensile Modulus of Elasticity @ 73°F	ASTM D638	KSI	430	
	Flexural Strength @ 73°F	ASTM D790	PSI	22,000	
	Flexural Modulus @ 73°F	ASTM D790	KSI	480	
	Compressive Strength	ASTM D695	PSI	21,900	
	Compressive Modulus	ASTM D695	KSI	480	
	Shear Strength	Ultimate	PSI	15,000	
IZOD Impact Strength Notched	ASTM D256	ft-lb/in	1.00		
ELECTRICAL	Volume Resistivity (1/16")	ASTM D257	Ohm-cm	10 ¹⁷	
	Dielectric Constant at 1000 Hz	ASTM D150		3.15	
	Dielectric Strength (Perp. in Oil / Air)	ASTM D149	V/mil	710 / 830	
	Dissipation Factor at 1000 Hz	ASTM D150		0.0013	

The data supplied are typical values. They are not to be considered specification values. All of the information, suggestions, and recommendations about these properties and uses of the products herein are based on tests and data believed to be accurate; however, the final determination regarding the suitability of any material described herein for the contemplated application, the manner of such use, and whether the use infringes any patents is the sole responsibility of the user. There is no warranty - expressed or implied - including, without limitation, warranties of merchantability or fitness for a particular purpose. Under no circumstances shall we be liable for incidental or consequential loss or damage.