

Technical Data Sheet

GEHR PEI Ultem®



I. Physical Properties

	Test method	Unit	Value
1. Specific gravity	ASTM D792	g/cm ³	1.27
2.a Water Absorption (saturation)	ASTM D570	%	1.3
2.b Humidity Absorption (saturation)			0.25
3.a Maximum permissible service temp.	UL 746B	°F	338
3.b Lower permissible service temp.			-58

II. Mechanical Properties

1. Tensile strength at yield	ASTM D638	psi	16,000
2. Tensile Modulus			520,000
3. Elongation at yield		%	7.0
4. Tensile strength at break		psi	-
5. Elongation at break		%	60
6. Impact strength	ASTM D256	ft-lb/in	25
7. Notch impact strength		ft-lb/in	1.0
8. Rockwell hardness	ASTM D785	R-Scale	109
9. Shore-D	ASTM D2240	-	82
10. Flexural strength	ASTM D790	psi	24,000
11. Flexural Modulus			510,000

III. Thermal Properties

1. Vicat-softening point	VST/B/50	ASTM D1525	°F	426
	VST/A/50			-
2. Heat deflection temperature	HDT/B (66 psi)	ASTM D648	°F	410
	HDT/A (264 psi)			394
3. Coefficient of linear thermal expansion		ASTM D696	in/in/°F *10 ⁻⁵	3.1
4. Thermal conductivity at 73 °F		ASTM C177	BTU/hr-ft*°F	1.5
5. Glass transition temperature		ASTM D3418	°F	422
6. Melting temperature				422

IV. Electrical Properties

1. Volume resistivity	ASTM D257	Ω*cm	10 ¹⁷
2. Surface resistivity		Ω	≥10 ¹³
3. Dielectric constant at 1MHz	ASTM D150	-	3.15
4. Dielectric loss factor at 1 MHz		-	0.0012
5. Dielectric strength	ASTM D149	V/mil	830
6. Tracking resistance	IEC 60112	Grade	CTI 150

V. Additional Data

1. Bondability	-	-	yes
2. Compliances	FDA	-	no
	NSF	-	51
3. Flammability	UL 94	-	V-0
4. Limited Oxygen Index (LOI)	ASTM D2863	%	47
5. UV stabilization	-	-	yes

All values are attributes of the used raw materials.

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