

TECAPEI™ GF20 Nat (Sabic Ultem® 2200 Series) - ALL

Chemical Designation

PEI (Polyetherimide)

Colour

beige

Density

1.42 g/cm³

Fillers

glass fibres

Main features

high dielectric strength
inherent flame resistance
high thermal and mechanical capacity
excellent mechanical properties

Target Industries

automotive industry
aircraft and aerospace technology
electrical engineering
mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	@ 73 °F	690,000	psi	ASTM D 638	(1) publicly sourced data
Tensile strength at break	@ 73 °F	17,000	psi	ASTM D 638	
Elongation at break	@ 73 °F	4	%	ASTM D 638	
Flexural strength	@ 73 °F	27,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)	@ 73 °F	700,000	psi	ASTM D 790	
Rockwell hardness	@ 73 °F, M scale	114		ASTM D 785	1)
Thermal properties	parameter	value	unit	norm	comment
Vicat softening point		428	°F	ASTM D 1525	1) (1) publicly sourced data
Deflection temperature	@66 psi unannealed	410	°F	ASTM D 648	2) (2) publicly sourced data
Deflection temperature	@264 psi	410	°F	ASTM D 648	3) (3) publicly sourced data
Electrical properties	parameter	value	unit	norm	comment
Volume resistivity	@ 73 °F	1e+16	Ω*cm	ASTM D 257	1) (1) publicly sourced data
Dielectric strength	in oil, 62 mils	670	V/mil	ASTM D 149	2) (2) publicly sourced data
Dissipation factor	@ 73 °F, 1 kHz	0.0015		ASTM D 150	3) (3) publicly sourced data
Dissipation factor		0.0049		ASTM D 150	4) (4) publicly sourced data
Other properties	parameter	value	unit	norm	comment
Moisture absorption	@ 73 °F, 24 hrs	0.19	%	ASTM D 570	1) (1) Publicly sourced data

Ensinger Inc. Headquarters
365 Meadowlands Boulevard
Washington, PA 15301, USA

Phone 800-243-3221 Sales
Phone 800-869-4029 Technical
Fax 724-746-9209
sales@ensinger-ind.com

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