

TECAPEI™ TECAPEI™

Polyether Imide

Ensinger Inc.

Message:

TECAPEI™ is an amorphous thermoplastic polyetherimide (PEI) made from Sabic Innovative Plastics' Ultem® 1000 and 2000 series resins. The unreinforced 1000 series materials are translucent amber in color, and combine exceptional mechanical, thermal, and electrical properties. The addition of glass fiber reinforcement in the 2000 series, coupled with Ensinger's proprietary extrusion techniques, provides the TECAPEI™ with both greater tensile strength and rigidity, while also improving dimensional stability.

TECAPEI has many applications in medical, electronic/electrical, microwave, automotive, and aircraft industries.

General Information			
Features	Low smoke		
	High tensile strength		
	High strength		
	Machinable		
	Heat resistance, high		
	Compliance of Food Exposure		
	amorphous		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Aircraft applications		
	Application in Automobile Field		
	Medical/nursing supplies		
Agency Ratings	FDA not rated		
	NSF Not Rated		
	USP Class VI		
Forms	Shapes		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.27	g/cm ³	ASTM D792
Water Absorption			ASTM D570
23°C, 24 hr	0.25	%	ASTM D570
Equilibrium, 23°C	1.3	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	111		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2960	MPa	ASTM D638
Tensile Strength (Break, 23°C)	114	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	40	%	ASTM D638

Flexural Modulus (23°C)	3310	MPa	ASTM D790
Flexural Strength (23°C)	152	MPa	ASTM D790
Compressive Modulus	3310	MPa	ASTM D695
Compressive Strength	151	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	32	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.35mm	210	°C	ASTM D648
1.8 MPa, unannealed, 6.35mm	201	°C	ASTM D648
Vicat Softening Temperature	219	°C	ASTM D1525
CLTE - Flow	5.6E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.22	W/m/K	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity ¹ (1.59 mm)	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength ²			ASTM D149
in Air	33	kV/mm	ASTM D149
in Oil	28	kV/mm	ASTM D149
Dielectric Constant ³ (1 kHz)	3.15		ASTM D150
Dissipation Factor ⁴ (23°C, 1 kHz)	1.3E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		Internal method
Additional Information			
Data obtained from extruded shapes unless otherwise noted			
NOTE			
1.	Injection Molded		
2.	Injection Molded		
3.	50% RH		
4.	50% RH, Injection Molded		

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