TECAPEI™ GF30

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			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Low smoke High tensile strength High strength Machinable Heat resistance, high amorphous Flame retardancy		
Uses	Electrical/Electronic Applications Aircraft applications Application in Automobile Field Medical/nursing supplies		
Forms	Shapes		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.51	g/cm³	ASTM D792
Water Absorption			ASTM D570
23°C, 24 hr	0.16	%	ASTM D570
Equilibrium, 23°C	0.90	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	110		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	6210	MPa	ASTM D638
Tensile Strength (Break, 23°C)	124	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	3.0	%	ASTM D638
Flexural Modulus (23°C)	5860	MPa	ASTM D790
Flexural Strength (23°C)	193	MPa	ASTM D790
Compressive Strength	212	MPa	ASTM D695
Impact	**Nominal Value**	**Unit**	**Test Method**

Notched Izod Impact (23°C)	59	J/m	ASTM D256
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, unannealed, 6.10mm, injection molding	212	°C	ASTM D648
1.8 MPa, unannealed, 6.35mm	209	°C	ASTM D648
CLTE - Flow	2.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity [1]	0.22	W/m/K	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity [2] (1.59 mm)	3.0E+16	ohms·cm	ASTM D257
Dielectric Strength [3]			ASTM D149
in Air	30	kV/mm	ASTM D149
in Oil	25	kV/mm	ASTM D149
Dielectric Constant [4] (1 kHz)	3.70		ASTM D150
Dissipation Factor [5] (23°C, 1 kHz)	1.5E-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.	Injection Molded		
4.	50% RH, Injection Molded		
5.	50% RH, Injection Molded		

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