TECAPAI™ CM XP530 black-green - Stock Shapes

Chemical Designation
PAI (Polyamide-imide)

Colour
black green

Density
1.61 g/cm^3

Fillers
glass fibres

production process: compression moulding

Main features
- electrically insulating
- excellent strength and stiffness
- excellent dimensional stability
- very good thermal stability
- excellent chemical resistance

Target Industries
- semiconductor technology
- aircraft and aerospace technology
- oil and gas industry
- chemical and refinery industry
- process engineering

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)		900,000	psi	ASTM D 638	
Tensile strength at break		16,700	psi	ASTM D 638	
Elongation at break		3.2	%	ASTM D 638	
Flexural strength		25,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)		890,000	psi	ASTM D 790	
Compression strength	10% strain	30,000	psi	ASTM D 695	
Compression strength	1% strain	5,800	psi	ASTM D 695	
Compression modulus		550,000	psi	ASTM D 695	
Impact strength (Izod)	notched	0.9	ft-lbs/in	ASTM D 256	
Shore hardness	D scale	92		ASTM D 2240	

Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		529	°F	ASTM D3418	
Deflection temperature	@ 264 psi	515	°F	ASTM D 648	
Thermal expansion (CLTE)	range -40 °F to 302 °F	1.76	*10^{-5} in/in/°F	ASTM E 831	

Electrical properties	parameter	value	unit	norm	comment
Dielectric strength		500	V/mil	ASTM D 149	
Dissipation factor	@ 1 MHz	0.006		ASTM D 150	
Surface resistivity		10^{13}	Ω/sq	ASTM D 257	
Dielectric constant	@ 1 MHz	3.8		ASTM D 150	

Other properties	parameter	value	unit	norm	comment
Moisture absorption	24 hr immersion	0.2	%	ASTM D 570	
Moisture absorption	saturation	1.8	%	ASTM D 570	
Flammability (UL94)	3.2 mm	V-0		-	

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