

TECAPAI® CM XP403 green - Stock Shapes (rods, plates, tubes)

Chemical Designation

PAI (Polyamide-imide)

Colour

green

Density

1.41 g/cm³

Fillers

unreinforced

production process: compression moulding

Main features

- good wear properties
- excellent strength and stiffness
- excellent dimensional stability
- very good thermal stability
- excellent chemical resistance

Target Industries

- electronics
- aircraft and aerospace technology
- oil and gas industry
- chemical and refinery industry
- process engineering

<i>Mechanical properties</i>	<i>condition</i>	<i>value</i>		<i>test method</i>	<i>comment</i>
Modulus of elasticity (tensile test)		537,000	psi	ASTM D 638	
Tensile strength at break		17,700	psi	ASTM D 638	
Elongation at break (tensile test)		6.4	%	ASTM D 638	
Flexural strength		21,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)		567,000	psi	ASTM D 790	
Compression strength	10% strain	25,000	psi	ASTM D 695	
Compression strength	1% strain	4,500	psi	ASTM D 695	
Compression modulus		374,000	psi	ASTM D 695	
Impact strength (Izod)	notched	1.2	ft-lbs/in	ASTM D 256	
Shore hardness	D scale	90		ASTM D 2240	
Coefficient of friction	dynamic	0.19		ASTM D 1894	
Coefficient of friction	static	0.18		ASTM D 1894	
<i>Thermal properties</i>	<i>condition</i>	<i>value</i>		<i>test method</i>	<i>comment</i>
Glass transition temperature		529	°F	ASTM D3418	
Deflection temperature	@ 264 psi	494	°F	ASTM D 648	
Thermal expansion (CLTE)	range -40 °F to 302 °F	2.15	*10 ⁻⁵ in/in/°F	ASTM E 831	
<i>Electrical properties</i>	<i>condition</i>	<i>value</i>		<i>test method</i>	<i>comment</i>
Dielectric strength		348	V/mil	ASTM D 149	
Dissipation factor	@ 1 MHz	0.014		ASTM D 150	
Surface resistivity		10 ¹³	Ω/sq	ASTM D 257	
Dielectric constant	@ 1 MHz	3.34		ASTM D 150	
<i>Other properties</i>	<i>condition</i>	<i>value</i>		<i>test method</i>	<i>comment</i>
Limiting PV		10,000	psi-fpm	ASTM D 3702	1)
Moisture absorption	saturation	1.7	%	ASTM D 570	2)
Moisture absorption	24 hr immersion	0.2	%	ASTM D 570	
Flammability (UL94)	3.2 mm	V-0		-	

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