

TECAPAI® CM XP530 black-green - Stock Shapes (rods, plates, tubes)

Chemical Designation

PAI (Polyamide-imide)

Colour

black green

Density

1.61 g/cm³

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

<i>Mechanical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Modulus of elasticity (tensile test)		900,000	psi	ASTM D 638	
Tensile strength at break		16,700	psi	ASTM D 638	
Elongation at break (tensile test)		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	1% strain	5,800	psi	ASTM D 695	
Compression strength	10% strain	30,000	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	
<i>Thermal properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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	
<i>Electrical properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
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	
<i>Other properties</i>	<i>parameter</i>	<i>value</i>	<i>unit</i>	<i>norm</i>	<i>comment</i>
Moisture absorption	24 hr immersion	0.17	%	ASTM D 570	(1) Value obtained at steady state condition
Moisture absorption	saturation	1.24	%	ASTM D 570	1)
Flammability (UL94)	3.2 mm	V-0		-	

This information reflects the current state of our knowledge and is intended only to assist and advise. It is given without obligation or liability. It does not assure or guarantee chemical resistance, quality of products or their suitability in any legally binding way. Values are not minimum or maximum values, but guidelines that can be used for comparative purposes in material selection. They are within the normal range of product properties and do not represent guaranteed property values. Testing under individual application circumstances is always recommended. Data is obtained from extruded shapes material unless otherwise noted. References to FDA compliance refer to the resins from which the products were made unless otherwise noted. All trade and patent rights should be observed. All rights reserved. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com.