

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>condition</i>	<i>value</i>	<i>test method</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		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>condition</i>	<i>value</i>	<i>test method</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>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Dielectric strength		500 V/mil	ASTM D 149	
Dissipation factor	@ 1 MHz	0.006	ASTM D 150	
Dielectric constant	@ 1 MHz	3.8	ASTM D 150	
Surface resistivity		10 ¹³ Ω/sq	ASTM D 257	
<i>Other properties</i>	<i>condition</i>	<i>value</i>	<i>test method</i>	<i>comment</i>
Moisture absorption	saturation	1.8 %	ASTM D 570	
Moisture absorption	24 hr immersion	0.2 %	ASTM D 570	
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.

Version: A1