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

Chemical Designation
PAI (Polyamide-imide)

Colour
green

Density
1.41 g/cm^3

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

Mechanical properties	parameter	value	unit	norm	comment
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)	Text	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	static	0.18		ASTM D 1894	
Coefficient of friction	dynamic	0.19		ASTM D 1894	

Thermal properties	parameter	value	unit	norm	comment
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	

Electrical properties	parameter	value	unit	norm	comment
Dielectric strength		348	V/mil	ASTM D 149	
Dissipation factor	@ 1 MHz	0.014		ASTM D 150	
Dielectric constant	@ 1 MHz	3.34		ASTM D 150	
Surface resistivity		10^{13}	Ω/sq	ASTM D 257	

Other properties	parameter	value	unit	norm		comment
Limiting PV		10,000	psi-fpm	ASTM D 3702	1)	(1) Calculated using a factor of safety of 4 with a testing speed 100 fpm. (2) Value obtained at steady state condition
Moisture absorption	24 hr immersion	0.26	%	ASTM D 570		
Moisture absorption	saturation	1.66	%	ASTM D 570	2)	
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.

Ensinger Inc. Headquarters
365 Meadowlands Boulevard
Washington, PA 15301, USA

Phone 800-243-3221 Sales
Phone 800-869-4029 Technical
Fax 724-746-9209
sales@ensingerusa.com

Date: 2023/04/19

Version: A2