

## TECAPAI® CM XP440 black-green - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PAI (Polyamide-imide)

### Colour

black green

### Density

1.46 g/cm<sup>3</sup>

### Fillers

graphite, PTFE

production process: compression moulding

### Main features

- excellent wear properties
- very good thermal stability
- excellent dimensional stability
- good machinability

### Target Industries

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

<i>Mechanical properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Modulus of elasticity (tensile test)		580,000	psi	ASTM D 638	
Tensile strength at break		9,300	psi	ASTM D 638	
Elongation at break (tensile test)		3.1	%	ASTM D 638	
Flexural strength		15,000	psi	ASTM D 790	
Modulus of elasticity (flexural test)		580,000	psi	ASTM D 790	
Compression strength	1% strain	4,500	psi	ASTM D 695	
Compression strength	10% strain	22,000	psi	ASTM D 695	
Compression modulus		350,000	psi	ASTM D 695	
Impact strength (Izod)	notched	0.6	ft-lbs/in	ASTM D 256	
Shore hardness	D scale	88		ASTM D 2240	
Coefficient of friction	static	0.14		ASTM D 1894	
Coefficient of friction	dynamic	0.18		ASTM D 1894	
<i>Thermal properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Glass transition temperature		529	°F	ASTM D3418	
Deflection temperature	@ 264 psi	500	°F	ASTM D 648	
Thermal expansion (CLTE)	-40 °F to 302 °F	1.94	*10 <sup>-5</sup> in/in/°F	ASTM E 831	
<i>Other properties</i>	<i>condition</i>	<i>value</i>	<i>unit</i>	<i>test method</i>	<i>comment</i>
Limiting PV		9,300	psi-fpm	ASTM D 3702	1) (1) Calculated using a factor of safety of 4 with a testing speed 100 fpm.
Moisture absorption	24 hr immersion	0.2	%	ASTM D 570	
Moisture absorption	saturation	1.6	%	ASTM D 570	
Flammability (UL94)	3.3 mm	V-0		-	

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