

TECAPAI CM XP730 black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PAI (Polyamide-imide)

Colour

black opaque

Density

1.47 g/cm³

Fillers

carbon fibres

production process: compression moulding

Main features

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

Target Industries

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

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	12100	MPa	DIN EN ISO 527-2	1) (1) For tensile test: specimen type 1b
Tensile strength at break	5mm/min	176	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Elongation at break (tensile test)	5mm/min	2,8	%	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Flexural strength	2mm/min, 10 N	296	MPa	DIN EN ISO 178	2) (4) For Charpy test: support span 64mm, norm specimen.
Modulus of elasticity (flexural test)	2mm/min, 10 N	9900	MPa	DIN EN ISO 178	(5) Specimen in 4mm thickness
Compression strength	1% / 2% / 5%	18/46/136	MPa	EN ISO 604	3)
Impact strength (Charpy)	max. 7,5J	50	kJ/m ²	DIN EN ISO 179-1eU	4)
Ball indentation hardness		321	MPa	ISO 2039-1	5)
Shore hardness	D scale	94		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		286	°C	-	
Thermal expansion (CLTE)	23-60°C, longitudinal	2,3	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, longitudinal	2,1	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Other properties	parameter	value	unit	norm	comment
Moisture absorption	24h / 96h (23°C)	0,3 / 0,44	%	DIN EN ISO 62	
Flammability (UL94)	3,2 mm	V0		-	

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Represented by:
Ensinger Asia Holding Pte Ltd.
(Singapore Branch)
for Asia Pacific other than Japan+China

63 Hillview Avenue #02-03
Lam Soon Industrial Building
Singapore 669569
Tel +65 65524177
Fax +65 65525177
www.ensingerplastics.com/en-sg/

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