

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)
Tensile strength at break	5mm/min	176	MPa	DIN EN ISO 527-2	
Elongation at break (tensile test)	5mm/min	2,8	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	296	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	9900	MPa	DIN EN ISO 178	
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		-	

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on compression moulded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com. Technical changes reserved.

Manufactured by: Ensinger Group,
a German based plastic manufacturer

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/

Date: 2019/09/04

Version: AA