TECAPEEK ® CF30 black - Stock Shapes (rods, plates, tubes)

Chemical Designation
PEEK (Polyetheretherketone)

Colour
black opaque

Density
1.41 g/cm^3

Fillers
30% carbon fibres

Main features
- very good chemical resistance
- good heat deflection temperature
- inherent flame resistance
- hydrolysis and superheated steam resistant
- very high stiffness
- very high creep resistant
- high dimensional stability
- resistance against high energy radiation

Target Industries
- aircraft and aerospace technology
- automotive industry
- conveyor technology
- oil and gas industry
- mechanical engineering
- chemical plant engineering

Mechanical properties	condition	value	unit	test method		comment
Modulus of elasticity (tensile test)	@ 73 °F	920,000	psi	ASTM D 638		(1) Data from public source (2) data from public source (3) Data from public source (4) per ASTM D3846
Tensile strength at yield	@ 73 °F	17,500	psi	ASTM D 638		
Elongation at break (tensile test)	@ 73 °F	7.0	%	ASTM D 638		
Flexural strength	@ 73 °F	28,000	psi	ASTM D 790		
Modulus of elasticity (flexural test)	@ 73 °F	1,040,000	psi	ASTM D 790		
Compression strength	@ 10% strain, 73 F	24,000	psi	ASTM D 695		
Compression strength	@1% strain, 73 °F	2,700	psi	ASTM D 695		
Compression modulus	@ 73 °F	489,000	psi	ASTM D 695		
Impact strength (Izod)	@ 73 °F	1.16	ft-lbs/in	ASTM D 256		
Rockwell hardness	M Scale	107		ASTM D 785		
Coefficient of friction	@ 68 °F, Static, 50 psi	0.19		ASTM D 3702	1)	
Coefficient of friction	Dynamic, 40 psi, 50 fpm	0.13		ASTM D 3702	2)	
Wear (K) factor	40 psi, 50 fpm	60	*10^{-10} in^3 -min/ft-lb-hr	ASTM D 3702	3)	
Shear strength	@ 73 °F	14,100	psi	-	4)	

Thermal properties	condition	value	unit	test method		comment
Melting temperature		633	°F	-	1)	(1) Injection molded specimen (2) Injection molded specimen (3) Data obtained from public source (4) Data obtained from public source (5) Injection molded specimen (6) Injection molded specimen
Deflection temperature	@264 psi, 1/4	600	°F	ASTM D 648	2)	
Service temperature	Long Term	500	°F	-	3)	
Service temperature	short term	572	°F	-	4)	
Thermal expansion (CLTE)		0.80	*10^{-5} in/in/°F	ASTM D 696	5)	
Thermal conductivity		6.37	BTU-in/hr-ft^2-°F	ASTM C 177	6)	

Electrical properties	condition	value	unit	test method		comment
surface resistivity		1.0*10^8	Ω/square	-	1)	(1) Data obtained from public source

Other properties	condition	value	unit	test method		comment
Limiting PV	@ 68 °F	385,000	psi-fpm	-	1)	(1) 1200 in/min (2) Estimated
Moisture absorption	@ 24 hrs, 73 °F	0.06	%	ASTM D 570		
Flammability (UL94)		V0	%	-	2)	

- TECAPEEK products are based on Victrex® PEEK polymer.

Information about products and services sold by Ensinger, including without limitation information contained in this document do not constitute a warranty by Ensinger as to the quality and state or durability of products or services, or any guarantee of chemical resistance. Such information reflects the current state of our knowledge and is intended only to assist and advise the recipient. The recipient shall not be entitled to rely on Ensinger provided information and the recipient agrees to evaluate such information, to make an independent decision regarding the suitability of such information, products and services for its application, and only use such products, services and information pursuant to then current good product stewardship principles and all regulatory requirements applicable to the recipient's business. Values are 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. Data sheet values are subject to periodic review and 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: 2015/10/27

Version: A0