TECAPEEK MT grey - Stock Shapes (rods, plates, tubes)

Chemical Designation
PEEK (Polyetheretherketone)

Colour
grey opaque

Density
1.32 g/cm^3

The compound is in the phase of validation.
The characteristic values of this product may change.

Main features
- biocompatible
- high creep resistance
- very good chemical resistance
- good slide and wear properties
- very good stress cracking resistance
- hydrolysis and superheated steam resistant
- good machinability

Target Industries
- medical technology

Mechanical properties	parameter	value	unit	norm		comment
Tensile strength	50mm/min	118	MPa	DIN EN ISO 527-2		(1) For tensile test: specimen type 1b (2) For Charpy test: support span 64mm, norm specimen. n.b. = not broken
Modulus of elasticity (tensile test)	1mm/min	4100	MPa	DIN EN ISO 527-2	1)	
Tensile strength at yield	50mm/min	118	MPa	DIN EN ISO 527-2		
Elongation at yield (tensile test)	50mm/min	5	%	DIN EN ISO 527-2		
Elongation at break (tensile test)	50mm/min	15	%	DIN EN ISO 527-2		
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m^2	DIN EN ISO 179-1eU	2)	
Shore hardness	D	89		DIN EN ISO 868		

Thermal properties	parameter	value	unit	norm		comment
Glass transition temperature		151	°C	DIN EN ISO 11357	1)	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		341	°C	DIN EN ISO 11357		
Service temperature	short term	300	°C		2)	
Service temperature	long term	260	°C			
Thermal expansion (CLTE)	23-60°C, long.	5	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	23-100°C, long.	5	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Thermal expansion (CLTE)	100-150°C, long.	7	10^{-5} K^{-1}	DIN EN ISO 11359-1;2		
Specific heat		1.1	J/(g*K)	ISO 22007-4:2008		
Thermal conductivity		0.27	W/(K*m)	ISO 22007-4:2008		

Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10^{12}	Ω	-	

Other properties	parameter	value	unit	norm		comment
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	DIN EN ISO 62	1)	(1) Ø ca. 50mm, h=13mm (2) + good resistance (3) - poor resistance (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.
Resistance to hot water/ bases		+		-	2)	
Resistance to weathering		-		-	3)	
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	4)	

- TECAPEEK products are based on Victrex® PEEK polymer.

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