

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

Chemical Designation

PEEK (Polyetheretherketone)

Colour

grey opaque

Density

1.32 g/cm³

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
Modulus of elasticity (tensile test)	1mm/min	4100	MPa	DIN EN ISO 527-2	(1) (2) For Charpy test: support span 64mm, norm specimen. n.b. = not broken
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)
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
Resistance to hot water/ bases		+		-	(2) + good resistance
Resistance to weathering		-		-	(3) - poor resistance
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	(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.

→ TECAPEEK products are based on Victrex® PEEK polymer.

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