

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

Chemical Designation

PEEK (Polyetheretherketone)

Colour

ivory opaque

Density

1.42 g/cm³

Main features

- high creep resistance
- very good chemical resistance
- resistance against high energy radiation
- good slide and wear properties
- very good stress cracking resistance
- hydrolysis and superheated steam resistant
- good machinability
- very good sterilisable

Target Industries

- medical technology
- food technology
- mechanical engineering

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	114	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b (2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm (4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression. (5) For Charpy test: support span 64mm, norm specimen. n.b. = not broken (6) Specimen in 4mm thickness
Modulus of elasticity (tensile test)	1mm/min	4400	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	114	MPa	DIN EN ISO 527-2	
Elongation at yield (tensile test)	50mm/min	4	%	DIN EN ISO 527-2	
Elongation at break (tensile test)	50mm/min	12	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	171	MPa	DIN EN ISO 178	
Modulus of elasticity (flexural test)	2mm/min, 10 N	4400	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	/	MPa	EN ISO 604	
Compression modulus	5mm/min, 10 N	3400	MPa	EN ISO 604	
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	
Notched impact strength (Charpy)	max. 7,5J	4	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		250	MPa	ISO 2039-1	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		150	°C	DIN EN ISO 11357	(1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory.
Melting temperature		340	°C	DIN EN ISO 11357	
Service temperature	short term	300	°C		
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	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹⁴	Ω	-	
volume resistivity		10 ¹⁴	Ω*cm	-	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	DIN EN ISO 62	(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		+	-		
Resistance to weathering		-	-		
Flammability (UL94)	corresponding to	V0	-	DIN IEC 60695-11-10;	

→ TECAPEEK products are based on Victrex® PEEK polymer.

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