

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
Modulus of elasticity (tensile test)	1mm/min	4400	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen. (3) Specimen 10x10x10mm
Tensile strength at yield	50mm/min	114	MPa	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at yield (tensile test)	50mm/min	4	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Elongation at break (tensile test)	50mm/min	12	%	DIN EN ISO 527-2	n.b. = not broken
Flexural strength	2mm/min, 10 N	171	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
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	24/44/103
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.
Melting temperature		340	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	short term	300	°C		Individual testing regarding application conditions is mandatory.
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
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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