

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. → good machinability

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	(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 (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.

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on extruded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at www.ensingerplastics.com. Technical changes reserved.

Manufactured by: Ensinger Group,
a German based plastic manufacturer

Represented by:
Ensinger Asia Holding Pte Ltd.
(Singapore Branch)
for Asia Pacific other than Japan+China

63 Hillview Avenue #02-03
Lam Soon Industrial Building
Singapore 669569
Tel +65 65524177
Fax +65 65525177
www.ensingerplastics.com/en-sg/

Date: 2023/07/19

Version: AB