

# TECATEC PEEK MT CW50 black - Stock Shapes (rods, plates, tubes)

## Chemical Designation

PEEK (Polyetheretherketone)

## Colour

black opaque

## Density

1.52 g/cm<sup>3</sup>

production process: compression moulding

## Main features

- biocompatible
- very high strength
- high dimensional stability
- very good sterilisable
- inherent flame retardant
- good heat deflection temperature

## Target Industries

- mechanical engineering
- medical technology

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min, 50 N; average of warp and w eft	500	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min; average of warp and w eft	51700	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Flexural strength	10mm/min, 10 N; average of warp and w eft	750	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	10mm/min, 10 N; average of warp and w eft	48000	MPa	DIN EN ISO 178	
Compression modulus	10mm/min, 5 N; average of warp and w eft	3900	MPa	EN ISO 604	
Compression modulus	10mm/min, 5 N; thickness	2400	MPa	EN ISO 604	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		143	°C	DIN EN ISO 11357	1) (1) Found in public sources.
Melting temperature		343	°C	DIN EN ISO 11357	
Service temperature	long term	260	°C		
Thermal expansion (CLTE)	23-80°C, w arp	0,5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-80°C, fill	0,5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-80°C, thickness	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Other properties	parameter	value	unit	norm	comment
Water absorption	48h, 80°C	0.15	%	DIN EN ISO 62	(1) + good resistance
Resistance to hot water/ bases		+	-	-	1) (2) - poor resistance
Resistance to weathering		-	-	-	2) (3) Corresponding means no listing at UL (yellow card).
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	3) The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.

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