

## TECADUR MT TR natural - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PCT-G (Poly Cyclohexylenedimethylene Terephthalate glycol-modified)

### Colour

transparent

### Density

1.18 g/cm<sup>3</sup>

### Main features

- good chemical resistance
- excellent impact strength
- high gamma radiation resistance

### Target Industries

- medical technology
- pharmaceutical industry
- chemical technology

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	1500	MPa	DIN EN ISO 527-2	1) (1) For tensile test: specimen type 1b
Tensile strength at yield	50mm/min	48	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Elongation at break (tensile test)	50mm/min	181	%	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Flexural strength	2mm/min, 10 N	63	MPa	DIN EN ISO 178	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Modulus of elasticity (flexural test)	2mm/min, 10 N	1420	MPa	DIN EN ISO 178	(5) For Charpy test: support span 64mm, norm specimen.
Compression strength	1% / 2% / 5% 5mm/min, 10 N	15/25/50	MPa	EN ISO 604	(6) Specimen in 4mm thickness n.b. = not broken
Compression modulus	5mm/min, 10 N	1020	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	94	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Ball indentation hardness		81	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		108	°C	DIN EN ISO 11357	
Thermal expansion (CLTE)	23-100°C, longitudinal	8	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-60°C, longitudinal	8	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Other properties	parameter	value	unit	norm	comment
Moisture absorption	24h / 96h (23°C)	0.09 / 1.74	%	DIN EN ISO 62	(1) - poor resistance (2) - poor resistance (3) 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		-	-	-	1)
Resistance to weathering		-	-	-	2)
Flammability (UL94)	corresponding to	HB	-	-	3)

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