

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

Chemical Designation

PCT-G (Poly Cyclohexylenedimethylene Terephthalate glycol-modified)

Colour

transparent

Density

1.18 g/cm³

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	n.b. = not broken (6) Specimen in 4mm thickness
Compression modulus	5mm/min, 10 N	1020	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	n.b.	kJ/m ²	DIN EN ISO 179-1eU	5)
Notched impact strength (Charpy)	max. 7,5J	94	kJ/m ²	DIN EN ISO 179-1eA	
Ball indentation hardness		81	%	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 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-60°C, longitudinal	8	10 ⁻⁵ K ⁻¹	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
Resistance to hot water/ bases		-	-	-	(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 weathering		-	-	-	2)
Flammability (UL94)	corresponding to	HB	-	-	3)

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