

TECADUR PBT GF30 natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PBT (Polybutylene terephthalate)

Colour

grey-white opaque

Density

1.46 g/cm³

Fillers

glass fibres

Main features

- high dimensional stability
- very high strength
- good chemical resistance
- very high stiffness
- good weldable and bondable
- not hot water resistant over 60°C

Target Industries

- electronics
- mechanical engineering
- automotive industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	46	MPa	DIN EN ISO 527-2	
Modulus of elasticity (tensile test)	1mm/min	3400	MPa	DIN EN ISO 527-2	1)
Tensile strength at yield	50mm/min	46	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	6	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	78	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3400	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	20/38/76	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2800	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	37	kJ/m ²	DIN EN ISO 179-1eU	5)
Shore hardness	D	77		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Melting temperature		224	°C	DIN EN ISO 11357	
Service temperature	short term	200	°C		1)
Service temperature	long term	110	°C		
Thermal expansion (CLTE)	23-60°C, long.	8	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	10	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.2	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.33	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹⁴	Ω	-	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.02 / 0.04	%	DIN EN ISO 62	1)
Resistance to hot water/ bases		-	-	-	2)
Resistance to weathering		-	-	-	
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

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