

SUPPLY SERVICES

performance engineering products

TECAPET TF grey - Stock Shapes (rods, plates, tubes)

Chemical Designation

PET (Polyethylene terephthalate)

Colour

grey opaque

Density

1.43 g/cm³

Fillers

PTFE

Main features

- high strength
- good wear properties
- good chemical resistance
- high toughness
- good slide and wear properties
- high stiffness
- not hot water resistant over 60°C

Target Industries

- electronics
- food technology
- mechanical engineering
- automotive industry

Mechanical properties	parameter	value	unit	norm	comment
Modulus of elasticity (tensile test)	1mm/min	3200	MPa	DIN EN ISO 527-2	1)
Tensile strength	50mm/min	78	MPa	DIN EN ISO 527-2	
Tensile strength at yield	50mm/min	78	MPa	DIN EN ISO 527-2	
Elongation at yield	50mm/min	4	%	DIN EN ISO 527-2	
Elongation at break	50mm/min	6	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	119	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3300	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	21/38/86	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	2700	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7.5J	42	kJ/m ²	DIN EN ISO 179-1eU	5)
Ball indentation hardness		183	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		82	°C	DIN EN ISO 11357	1)
Melting temperature		249	°C	DIN EN ISO 11357	2)
Service temperature	short term	170	°C		2)
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		1.1	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.30	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 ¹⁴	Ω	DIN IEC 60093	
volume resistivity		10 ¹⁴	Ω*cm	DIN IEC 60093	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.02 / 0.03	%	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)