

TECAPET TF

Chemical Designation :
 DIN-Abbreviation:
 Colours, fillers:

Polyethylene terephthalate
 PET
 grey, solid lubricant

Main features

- | | |
|----------------------------------|---------------------------------------|
| very strong | very good sliding properties |
| wear resistant | very rigid |
| very tough | not resistant to hot water over 60° C |
| resistant to numerous detergents | good weldability |
| very good electrical insulation | very easily machined |

Preferred Fields

- | | |
|------------------------|-----------------------------------|
| machine construction | transport and conveyor technology |
| precision engineering | automotive engineering |
| electrical engineering | domestic appliance |
| | |

Applications

Connectors, friction plates, tool carriers, housing parts, rollers, plain bearing, gear wheels, insulators, agitators and kneading elements, seals

Properties

Mechanical	dry / moist	standard
Tensile strength at yield	73	MPa DIN EN ISO 527
Elongation at yield	5	% DIN EN ISO 527

Tensile strength at break		MPa	
Elongation at break		%	
Modulus of elasticity in tension	2900	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness			
Impact strength 23° C (Charpy)	40	KJ/m ²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load		MPa	
Time yield limit for 1% elongation after 1000 h		MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,1		
Wear p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground		µm/km	

Thermal	dry / moist		standard
Crystalline melting point	255	°C	
Glass transition temperature	70	°C	DIN 53 765
Heat distortion temperature HDT, Method A		°C	
Heat distortion temperature HDT, Method B		°C	
Max. service temperature			
short term		°C	
long term		°C	
Thermal conductivity (23° C)		W/(K.m)	
Specific heat (23° C)		J/g.K	
Coefficient of thermal expansion (23–55°C)		10 ⁻⁵ 1/K	

Properties

Electrical dry / moist standard

Dielectric constant (10^6 Hz)

Dielectric loss factor (10^6 Hz)

Specific volume resistance $\Omega \cdot \text{cm}$

Surface resistance Ω

Dielectric strength kV/mm

Resistance to tracking

Miscellaneous dry / moist standard

Density 1,44 g/cm³ DIN 53 479

Moisture absorption 0,25 % DIN EN ISO 62
(23°C/50RH)

Water absorption to equilibrium 0,5 % DIN EN ISO 62

Flammability acc. to UL
standard 94

(1) Testing of semi-finished products

The above information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of chemical resistance, of certain properties and the suitability of our products and their applications. Our products are not destined for use in medical and dental implants. Existing commercial patents must be observed. Unless otherwise stated, these values represent averages taken from injection moulding samples, dry as moulded. We reserve the right to make technical alterations.
