

TECADUR PBT GF 30

Chemical Designation : Polybutyleneterephthalate
 DIN-Abbreviation: PBT GF 30
 Colours, fillers: grey, 30% glass fibres

Main features

- | very strong
 - | high dimensional stability
 - | resistant to numerous solvents
 - | very abrasion resistant
 - | easily machined
 - | very rigid
 - | easily welded
 - | tough
 - | easily bonded
 - | not resistant to hot water over 60° C
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Preferred Fields

- | mechanical engineering
 - | transport and conveyor technology
 - | precision engineering
 - | automotive engineering
 - | electrical engineering
 - | domestic appliance
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Applications

Switch parts, tool carriers, housing parts, rollers, contact strips, plugs, insulators, distance pieces, support rings, bearing plate

Properties

Mechanical	dry / moist	standard
Tensile strength at yield		MPa
Elongation at yield		%

Tensile strength at break	135	MPa	DIN EN ISO 527
Elongation at break	2,5	%	DIN EN ISO 527
Modulus of elasticity in tension	10000	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	190		DIN 53 456 (Kugeldruckhärte)
Impact strength 23° C (Charpy)	60	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	57	MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,24		
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		°C	
Glass transition temperature	60	°C	DIN 53 765
Heat distortion temperature HDT, Method A	210	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B	225	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	200	°C	
long term	110	°C	
Thermal conductivity (23° C)		W/(K·m)	
Specific heat (23° C)	1,5	J/g.K	
Coefficient of thermal expansion (23-55°C)	3,5	10 ⁻⁵ 1/K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10 ⁶ Hz)	3,8		DIN 53 483, IEC-250
Dielectric loss factor (10 ⁶ Hz)	0,009		DIN 53 483, IEC-250
Specific volume resistance	10 ¹³	Ω *cm	DIN IEC 60093
Surface resistance	10 ¹⁵	Ω	DIN IEC 60093
Dielectric strength	50	kV/mm	DIN 53 481, IEC-243, VDE 0303 Teil 2
Resistance to tracking	KB 225 KC 550		DIN 53 480, VDE 0303 Teil 1

Miscellaneous	dry / moist		standard
Density	1,53	g/cm ³	DIN 53 479
Moisture absorption (23°C/50RH)	0,15	%	DIN EN ISO 62
Water absorption to equilibrium	0,35	%	
Flammability acc. to UL standard 94	HB		

(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.
