

Material Data Sheet, July 2010

TECANAT GF 30

Chemical Designation :	Polycarbonat
DIN-Abbreviation:	PC GF 30
Colours, fillers:	30% glasfibers

Main features

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|----------------------------------|--------------------------|
| good heat deformation resistance | rigid |
| good electrical insulation | easily welded and bonded |
| sensitive to stress cracking | |
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Preferred Fields

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| mechanical engineering | automotive engineering |
| transport and conveyor technology | textile machinery |
| packaging and paper processing machinery | electrical engineering |
| precision engineering | electrical tools |
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Applications

Diverse machine parts, housing parts, insulators, plugs, settings, support rings, wiper blades

Properties

Mechanical	dry / moist	standard	
Tensile strength at yield		MPa	
Elongation at yield		%	
Tensile strength at break	130	MPa	DIN EN ISO 527
Elongation at break	2,5	%	DIN EN ISO 527

Modulus of elasticity in tension	7500	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	148		ISO 2039/1 (Kugeldruck-Härte, 358N)
Impact strength 23° C (Charpy)	55	KJ/m ²	DIN EN ISO 179 (Charpy)
Creep rupture strength after 1000 h with static load	>50	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			
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	148	°C	DIN 53 765
Heat distortion temperature HDT, Method A	142	°C	ISO-R 75 Verfahren A (DIN 53 461)
Heat distortion temperature HDT, Method B		°C	
Max. service temperature			
short term	140	°C	
long term	120	°C	
Thermal conductivity (23° C)	0,26	W/(K·m)	
Specific heat (23° C)		J/g.K	
Coefficient of thermal expansion (23-55°C)	3	10 ⁻⁵ /K	DIN 53 752

Properties

Electrical	dry / moist		standard
Dielectric constant (10 ⁶ Hz)	3,3		DIN 53 483, IEC-250
Dielectric loss factor (10 ⁶ Hz)	0,009		DIN 53 483, IEC-250
Specific volume resistance	10 ¹⁶	*cm	DIN IEC 60093
Surface resistance	10 ¹⁴		DIN IEC 60093
Dielectric strength	30	kV/mm	DIN 53 481, IEC-243, VDE 0303 Teil 2
Resistance to tracking	KB 160		DIN 53 480, VDE 0303 Teil 1
Miscellaneous	dry / moist		standard
Density	1,42	g/cm ³	DIN 53 479
Moisture absorption (23°C/50RH)	0,1	%	DIN EN ISO 62
Water absorption to equilibrium	0,28	%	DIN EN ISO 62
Flammability acc. to UL standard 94	HB		

- (1) Testing of semi-finished products
(2) testing of injection moulded specimen

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.
