

TECAMID 6 GF 30

Chemical Designation :	Polyamide 6
DIN–Abbreviation:	PA 6 GF 30
Colours, fillers:	natural, 30% glass fibres

Main features

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|---|----------------------------------|
| strong | easily welded |
| resistant to many oils, greases, diesels and petrol | easily bonded |
| wear resistant | UV and weather resistant |
| high dimensional stability | good heat deformation resistance |
| electrically insulating | easily machined |
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Preferred Fields

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| mechanical engineering | domestic appliance |
| gears, couplings and engine construction | transport and conveyor technology |
| automotive engineering | electrical engineering |
| precision engineering | packaging and paper processing machinery |
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Applications

fixing parts, spacers

Properties

Mechanical	dry / moist	standard
Tensile strength at yield		MPa
Elongation at yield		%
Tensile strength at break	140 / 110	MPa DIN EN ISO 527

Elongation at break	2,5 / 5	%	DIN EN ISO 527
Modulus of elasticity in tension	8500 / 6000	MPa	DIN EN ISO 527
Modulus of elasticity after flexural test		MPa	
Hardness	147		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		MPa	
Time yield limit for 1% elongation after 1000 h	21–35	MPa	
Co-efficient of friction p = 0,05 N/mm ² v=0,6 m/s on steel, hardened and ground	0,46–0,52		
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 / 5	°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	220	°C	ISO-R 75 Verfahren B (DIN 53 461)
Max. service temperature			
short term	180	°C	
long term	100	°C	
Thermal conductivity (23° C)	0,28	W/(K·m)	
Specific heat (23° C)	1,5	J/g.K	
Coefficient of thermal expansion (23–55°C)	2–3	10 ⁻⁵ 1/K	

Properties

Electrical	dry / moist		standard
Dielectric constant (10^6 Hz)			
Dielectric loss factor (10^6 Hz)			
Specific volume resistance	$9 \cdot 10^{13}$	$\Omega \cdot \text{cm}$	DIN IEC 60093
Surface resistance	$5 \cdot 10^{13}$	Ω	DIN IEC 60093
Dielectric strength		kV/mm	
Resistance to tracking			

Miscellaneous	dry / moist		standard
Density	1,35	g/cm^3	DIN 53 479
Moisture absorption (23°C/50RH)	2,1	%	DIN EN ISO 62
Water absorption to equilibrium	6,6	%	DIN EN ISO 62
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.
