

TECAMID 66/X GF 50 black

Chemical Designation:	Polyamide 66 (Nylon 66)
DIN Abbreviation:	PA 66 + PA6I/6T
Colour, Filler:	Black 50% glass fibres

TECAMID 66/X GF 50 is a 50% glass fibre reinforced semi-crystalline engineering plastic with high strength and varied applications.

Main characteristics:	<ul style="list-style-type: none">• High thermal and mechanical capacity• Good heat deformation resistance• Resistant to many oils, greases, diesel, petrol, cleaning fluids	<ul style="list-style-type: none">• High fatigue strength• Very rigid• Very high dimensional stability• Abrasion resistant• Very creep resistant• Easily machined• UV and weather resistant
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Preferred fields: Mechanical engineering, transport and conveyor technology, printing machinery, packaging and paper processing machinery, automotive engineering, electronics, textile machinery, precision engineering,

Applications:	<ul style="list-style-type: none">• Diverse machine parts• Back up rings• Mounting pieces	<ul style="list-style-type: none">• Friction rings• Distance pieces• Support rings
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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

Properties	Unit	Test method DIN EN ISO / ASTM	Dry / wet
Mechanical			
Density	g/cm ³	527 / D 792	1.35
Tensile strength at yield	MPa	527 / D 638	
Tensile strength at break	MPa	527 / D 638	210
Elongation at break	%	527 / D 638	3
Modulus of elasticity in tension	MPa	527 / D 638	170000
Modulus of elasticity in flexure	MPa	178 / D 790	
Ball indentation hardness	MPa	2039 / 1	175
Impact strength (Charpy)	kJ/m ²	179 / D 256	85
Creep rupture strength after 1000 hrs with static load	MPa		
Time yield limit for 1% elongation after 1000 hrs.	MPa		
Coefficient of friction against hardened and ground steel p = 0,05 N/mm ² , v = 0,6 m/s	–		
Wear conditions as above	µm/km		
Thermal			
Crystalline melting point	°C	DIN 53 736	
Glass transition temperature	°C	DIN 53 736	
Heat distortion temperature Method A Method B	°C °C	R 75 R 75	

Properties	Unit	Test method DIN EN 150 / ASTM	Dry / wet
Thermal			
Max. service temperature short term long term	°C °C		200 130
Coefficient of thermal conductivity	W/(m · K)		
Specific heat	J/(g · K)		
Coefficient of thermal expansion	10 ⁻⁵ /K	DIN 53 483 / D 696	1.5
Electrical			
Dielectric constant at 10 ⁵ Hz		DIN 53 483	
Dielectric loss factor at 10 ⁵ Hz		DIN 53 483	
Specific volume resistance	Ω · cm	DIN 60093	
Surface resistance	Ω	DIN 60093	
Dielectric strength 1 mm	kV/mm	ASTM 149	
Tracking resistance		53 480	
Miscellaneous			
Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity)	%	62	1.5
Water absorption at saturation at 23 °C	%	62	5.5
Resistance to hot water, washing soda			limited resistance
Flammability according to UL standard 94			HB
Resistance to weathering			resistant

* after storage in a standard 23/50 atmosphere (DIN 50 014) to equilibrium

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg. glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication