

# TECAMID 66/X GF50 black - Stock Shapes (rods, plates, tubes)

## Chemical Designation

PA 66 (Polyamide 66)

## Colour

black opaque

## Density

1.61 g/cm<sup>3</sup>

## Fillers

glass fibres

## Main features

- good heat deflection temperature
- high thermal and mechanical capacity
- resistant to many oils, greases and fuels
- high dimensional stability
- high fatigue strength
- good machinability
- very high strength
- very high creep resistant

## Target Industries

- mechanical engineering
- automotive industry
- electronics

Data generated directly after machining  
(standard climate Germany).

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	115	MPa	DIN EN ISO 527-2	
Modulus of elasticity (tensile test)	1mm/min	8700	MPa	DIN EN ISO 527-2	1)
Tensile strength at yield	50mm/min	115	MPa	DIN EN ISO 527-2	
Elongation at yield (tensile test)	50mm/min	2	%	DIN EN ISO 527-2	
Elongation at break (tensile test)	50mm/min	2	%	DIN EN ISO 527-2	
Flexural strength	2mm/min, 10 N	200	MPa	DIN EN ISO 178	2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	9000	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	28/56/141	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	6200	MPa	EN ISO 604	4)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		78	°C	DIN EN ISO 11357	1)
Melting temperature		256	°C	DIN EN ISO 11357	
Service temperature	short term	200	°C		2)
Service temperature	long term	130	°C		
Thermal expansion (CLTE)	23-60°C, long.	4	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity		10 <sup>14</sup>	Ω	DIN IEC 60093	
volume resistivity		10 <sup>14</sup>	Ω*cm	DIN IEC 60093	1)
					(1) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise.
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.1 / 0.2	%	DIN EN ISO 62	1)
Resistance to hot water/ bases	-	-	-		2)
Resistance to weathering	(+)	-	-		3)
Flammability (UL94)	listed (value at 0.85mm)	HB		DIN IEC 60695-11-10;	4)
					(1) Ø ca. 50mm, h=13mm (2) - poor resistance (3) (+) limited resistance (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory.

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