

TECAMID 66 GF30 black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PA 66 (Polyamide 66)

Colour

black opaque

Density

1.34 g/cm³

Fillers

glass fibres

Main features

- very high stiffness
- resistant to many oils, greases and fuels
- good wear properties
- very high strength
- high dimensional stability
- good heat deflection temperature
- good weldable and bondable

Target Industries

- mechanical engineering
- aircraft and aerospace technology
- automotive industry

Data generated directly after machining (standard climate Germany).

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	91	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	5500	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	91	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	8	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	14	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	135	MPa	DIN EN ISO 178	(6) Specimen in 4mm thickness
Modulus of elasticity (flexural test)	2mm/min, 10 N	4700	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	25/46/104	MPa	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	4100	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	97	kJ/m ²	DIN EN ISO 179-1eU	5)
Ball indentation hardness		216	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		48	°C	DIN EN ISO 11357	1)
Melting temperature		254	°C	DIN EN ISO 11357	(2) Found in public sources.
Service temperature	short term	180	°C	-	2)
Service temperature	long term	110	°C	-	Individual testing regarding application conditions is mandatory.
Thermal expansion (CLTE)	23-60°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, long.	5	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Specific heat		1.2	J/(g*K)	ISO 22007-4:2008	
Thermal conductivity		0.39	W/(K*m)	ISO 22007-4:2008	
Electrical properties	parameter	value	unit	norm	comment
surface resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω	DIN IEC 60093	1)
volume resistivity	Silver electrode, 23°C, 12% r.h.	10 ¹⁴	Ω*cm	DIN IEC 60093	2)
Dielectric strength	23°C, 50% r.h.	35	kV/mm	ISO 60243-1	3)
Resistance to tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	550 / 475	V	DIN EN 60112	(1) Specimen in 20mm thickness (2) Due to the black colourant and moisture uptake of the material the electrical insulation properties cannot be 100% guaranteed, despite single measurements suggesting otherwise. (3) Specimen in 1mm thickness
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) 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.
Flammability (UL94)	corresponding to	HB		DIN IEC 60695-11-10;	3)

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