

TECAMID 6 FRT black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PA 6 (Polyamide 6)

Colour

black opaque

Density

1.19 g/cm³

Fillers

flame retardant (halogen free)

Data generated directly after machining
(standard climate Germany).

Main features

- tested according to EN 45545
- resistant to many oils, greases and fuels
- good slide and wear properties
- high strength
- good machinability

Target Industries

- aircraft and aerospace technology
- transportation
- electronics
- mechanical engineering
- automotive industry

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	78	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	4200	MPa	DIN EN ISO 527-2	(2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	78	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	4	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	4	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	124	MPa	DIN EN ISO 178	(2)
Modulus of elasticity (flexural test)	2mm/min, 10 N	3800	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5% 5mm/min, 10 N	27/54/95	MPa	EN ISO 604	(3)
Compression modulus	5mm/min, 10 N	3000	MPa	EN ISO 604	(4)
Impact strength (Charpy)	max. 7.5J	62	kJ/m ²	DIN EN ISO 179-1eU	(5)
Shore hardness	D	82		DIN EN ISO 868	
Thermal properties	parameter	value	unit	norm	comment
Glass transition temperature		45	°C	DIN EN ISO 11357	(1)
Melting temperature		221	°C	DIN EN ISO 11357	
Service temperature	short term	160	°C		(2)
Service temperature	long term	100	°C		
Thermal expansion (CLTE)	23-60°C, long.	7	10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2	
Other properties	parameter	value	unit	norm	comment
Resistance to hot water/ bases		(+)		-	(1) (+) limited resistance
Resistance to weathering		-		-	(2) - poor resistance
Flammability	60 sec. Vertical Bunsen Burner test, 25.853 (a) and Appendix F, Part I, para. (a)(1)(i)	+		FAR 25.853	(3) compliant, tested on 1 mm thick test specimen
Flammability (UL94)	corresponding to	V0		DIN IEC 60695-11-10;	(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.
Flammability		R22 HL1 HL2, R23 HL3		EN 45545-2:2016	

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