

## TECAMID 66 GF15 FR black - Stock Shapes (rods, plates, tubes)

### Chemical Designation

PA 66 (Polyamide 66)

### Colour

black opaque

### Density

1.31 g/cm<sup>3</sup>

### Fillers

flame retardant (halogen free), glass fibres

### Main features

- flame retardant as per FAR 25.853
- low smoke emissions
- resistant to many oils, greases and fuels
- high strength
- good mechanical properties

### Target Industries

- aircraft and aerospace interiors
- aircraft and aerospace technology
- mechanical engineering
- transportation

Mechanical properties	parameter	value	unit	norm	comment
Tensile strength	50mm/min	54	MPa	DIN EN ISO 527-2	(1) For tensile test: specimen type 1b
Modulus of elasticity (tensile test)	1mm/min	3700	MPa	DIN EN ISO 527-2	1) (2) For flexural test: support span 64mm, norm specimen.
Tensile strength at yield	50mm/min	54	MPa	DIN EN ISO 527-2	(3) Specimen 10x10x10mm
Elongation at yield (tensile test)	50mm/min	7	%	DIN EN ISO 527-2	(4) Specimen 10x10x50mm, modulus range between 0.5 and 1% compression.
Elongation at break (tensile test)	50mm/min	7	%	DIN EN ISO 527-2	(5) For Charpy test: support span 64mm, norm specimen.
Flexural strength	2mm/min, 10 N	103	MPa	DIN EN ISO 178	2) (6) Specimen in 4mm thickness
Modulus of elasticity (flexural test)	2mm/min, 10 N	3500	MPa	DIN EN ISO 178	
Compression strength	1% / 2% / 5%	23/42/90	%	EN ISO 604	3)
Compression modulus	5mm/min, 10 N	1600	MPa	EN ISO 604	4)
Impact strength (Charpy)	max. 7,5J	40	kJ/m <sup>2</sup>	DIN EN ISO 179-1eU	5)
Impact strength (Charpy)	max. 7,5J	4	kJ/m <sup>2</sup>	DIN EN ISO 179-1eA	
Ball indentation hardness		199	MPa	ISO 2039-1	6)
Thermal properties	parameter	value	unit	norm	comment
Melting temperature		261	°C	DIN EN ISO 11357	(1) Found in public sources. Individual testing regarding application conditions is mandatory.
Service temperature	short term	180	°C	-	1)
Service temperature	long term	110	°C	-	
Thermal expansion (CLTE)	23-60°C, longitudinal	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Thermal expansion (CLTE)	23-100°C, longitudinal	5	10 <sup>-5</sup> K <sup>-1</sup>	DIN EN ISO 11359-1;2	
Other properties	parameter	value	unit	norm	comment
Water absorption	24h / 96h (23°C)	0.36/0.76	%	DIN EN ISO 62	(1) 4 mm test specimen
Flammability	15 seconds Horizontal Bunsen Burner test	pass		AITM 2.0003	1) (2) 3 mm test specimen
Flammability	60 seconds Vertical Bunsen Burner test 25.853 (a) Amdt 25-116 App F Part 1(a)(1)(i)	pass		FAR 25.853	2) (3) 4 mm test specimen
Flammability	60 seconds Vertical Bunsen Burner test	pass		AITM 2.0002A	3) (4) 4 mm test specimen
Flammability	Specific Optical Smoke Density	pass		AITM 2.0007B	4) (5) 4 mm test specimen
Flammability	Gas Toxicity, as Per Airbus directive ABD0031	pass		AITM 3.0005	5)

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