

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

Chemical Designation

PA 66 (Polyamide 66)

Colour

black opaque

Density

1.31 g/cm³

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 ² | DIN EN ISO 179-1eU | 5) |
| Impact strength (Charpy) | max. 7.5J | 4 | kJ/m ² | 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. |
| Service temperature | long term | 110 | °C | - | Individual testing regarding application conditions is mandatory. |
| Service temperature | short term | 180 | °C | - | 1) |
| Thermal expansion (CLTE) | 23-60°C, longitudinal | 5 | 10 ⁻⁵ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | 23-100°C, longitudinal | 5 | 10 ⁻⁵ K ⁻¹ | 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 | 60 seconds Vertical Bunsen Burner test | pass | | AITM 2.0002A | 1) (2) 4 mm test specimen |
| Flammability | 15 seconds Horizontal Bunsen Burner test | pass | | AITM 2.0003 | 2) (3) 4 mm test specimen |
| Flammability | Specific Optical Smoke Density | pass | | AITM 2.0007B | 3) (4) 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 | 4) (5) 4 mm test specimen |
| Flammability | Gas Toxicity, as Per Airbus directive ABD0031 | pass | | AITM 3.0005 | 5) |

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