

TECAMID 66 GF 30 black

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|-----------------------|------------------------------|
| Chemical Designation: | Polyamide 66 (Nylon 66) |
| DIN Abbreviation: | PA 66 GF 30 |
| Colour, Filler: | Black 30% glass fibres |

TECAMID 66 GF 30 is a 30% glass fibre reinforced semi-crystalline engineering plastic with high strength and varied applications.

- Main characteristics:
- Very strong
 - Very rigid
 - Resistant to many oils, greases, diesel, petrol, cleaning fluids
 - Not electrically insulating
 - Good dimensional accuracy
 - Very abrasion resistant
 - Good heat distortion resistance
 - Easily machined
 - Easily bonded
 - UV and weather resistant

Preferred fields: Mechanical engineering, automotive engineering, transport and conveyor technology, gears, couplings and engine construction, textile, packaging and paper processing machinery, precision engineering, electrical tools

- Applications:
- Diverse machine parts
 - Levers
 - Thermal insulators
 - Wiper blades
 - Housing parts
 - Distance pieces
 - Friction rings
 - Support rings

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The following information corresponds with our current knowledge and indicates our products and possible applications. We cannot give a legally binding guarantee of certain properties or the suitability for a specific application. Existing commercial patents must be observed. A definitive quality guarantee is given in our general conditions of sales. Unless otherwise stated, these values represent averages taken from injection moulding samples. We reserve the right of technical alterations.

| Properties | Unit | Test method DIN EN ISO / ASTM | Dry / wet |
|---|-------------------|-------------------------------------|-------------|
| Mechanical | | | |
| Density | g/cm ³ | 527 / D 792 | 1.35 |
| Tensile strength at yield | MPa | 527 / D 638 | |
| Tensile strength at break | MPa | 527 / D 638 | 160 / 140* |
| Elongation at break | % | 527 / D 638 | 3 |
| Modulus of elasticity in tension | MPa | 527 / D 638 | 8000 / 7500 |
| Modulus of elasticity in flexure | MPa | 178 / D 790 | |
| Ball indentation hardness | MPa | 2039 / 1 | 175 |
| Impact strength | kJ/m ² | 179 / D 256 | 70 |
| Creep rupture strength after 1000 hrs with static load | MPa | | |
| Time yield limit for 1% elongation after 1000 hrs. | MPa | | 40 |
| Coefficient of friction against hardened and ground steel p = 0,05 N/mm ² , v = 0,6 m/s | – | | 0.45 - 0.5 |
| Wear conditions as above | µm/km | | |
| Thermal | | | |
| Crystalline melting point | °C | DIN 53 736 | 260 |
| Glass transition temperature | °C | DIN 53 736 | 72 / 5* |
| Heat distortion temperature Method A Method B | °C °C | R 75 R 75 | 250 250 |

| Properties | Unit | Test method DIN EN 150 / ASTM | Dry / wet |
|---|---------------------|-------------------------------------|--------------------|
| Thermal | | | |
| Max. service temperature short term long term | °C °C | | 170 110 |
| Coefficient of thermal conductivity | W/(m · K) | | 0.27 |
| Specific heat | J/(g · K) | | 1.5 |
| Coefficient of thermal expansion | 10 ⁻⁵ /K | DIN 53 483 / D 696 | 2-3 |
| Electrical | | | |
| Dielectric constant at 10 ⁵ Hz | | DIN 53 483 | |
| Dielectric loss factor at 10 ⁵ Hz | | DIN 53 483 | |
| Specific volume resistance | Ω · cm | DIN 60093 | |
| Surface resistance | Ω | DIN 60093 | |
| Dielectric strength 1 mm | kV/mm | ASTM 149 | |
| Tracking resistance | | 53 480 | |
| Miscellaneous | | | |
| Moisture absorption: Equilibrium in standard atmosphere (23 °C / 50 % relative humidity) | % | 62 | 1.5 |
| Water absorption at saturation at 23 °C | % | 62 | 5.5 |
| Resistance to hot water, washing soda | | | limited resistance |
| Flammability according to UL standard 94 | | | HB |
| Resistance to weathering | | | resistant |

* after storage in a standard 23/50 atmosphere (DIN 50 014) to equilibrium

ENSINGER: Production and stock programme

- Semi-finished product, finished parts, injection moulded parts and profiles in more than 500 materials and modifications.
- Engineering plastics: PA extruded or cast, POM, PC, PET, PBT, PPE, PP, PE
- High temperature plastics: PI, TPI, PEEK, PPS, PES, PPSU, PEI, PSU, PVDF, PCTFE, PTFE
- Stock length: Standard 3 metres. Cast rod and sheet 2 mts. Tube up to 3.5 mts. PE, PP, PVC, and PTFE 2 mts
- Pressed/sintered semi-finished product: PI, PEEK, PPS, PTFE/PI and modifications, as well as PCTFE in special sizes ie, large discs, tubes and rings with diameters up to about 1400 mm
- Material modifications: eg. glass, carbon and aramid fibre, talc, MoS₂, graphite, PTFE, PE, silicone oil, internal lubrication