purefil
of Switzerland

Polyamid 6 glass fiber 10% (**PA6 GF10**)

General

PA6 is the most commonly used polyamide. PA6 GF10 is a partially crystalline plastic that is additionally enriched with 10% glass fibers. PA6 has a very high moisture absorption, which also influences the properties. The PA6 GF10 filament should therefore be stored in airtight packaging and, if possible, pre-dried using a suitable filament dryer before 3D printing. In order to quickly achieve the final properties of the printed component, the printed object can be placed in a water bath. This accelerates water absorption, which otherwise takes between 4-6 weeks depending on the humidity. The moisture absorption significantly increases the elongation at break and the impact strength. Purefil PA6 GF10 has a dimensional stability temperature of up to 210°C and is therefore particularly suitable for high-temperature applications. Despite this high heat resistance, the printing temperature is only 240-280°C and can therefore be processed with most 3D printers.

advantageous

- Very high rigidity
- Extremely high heat resistance up to 210°C
- High hardness
- Low distortion
- Low shrinkage

disadvantageous

- Increased abrasion in the printing nozzle
- Hardened steel nozzle recommended
- Needs a warm room, or closed pressure room
- The component dimensions may change slightly due to moisture absorption (Expansion)

Processing data

Printing temperature
250-280 °C
Heizbett Temperatur
120-140 °C
Heated bed temperature
80°C
Drying time
4-8h

Technical specifications

Shrinkage (ISO 294-4)	0.4	**%**
MFR	-	g/10min
Yield stress (ISO 527-1,2)	97	MPa
Elongation at yield (ISO 527-1,2)	5	%
Elongation at break (ISO 527-1,2)	5	%
Tensile modulus (ISO 178)	6500	MPa
Heat deflection temperature 0.45 MPa (ISO 75-1,2)	210	°C
Vicat softening temperature A (ASTM D1525)	-	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)	HB	
Density (ISO 1183)	1.37	g/cm^3

purefil filaments are Made in Switzerland, by

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3d printing solutions