

Polypropylene Glass Fiber 20% (PP GF20)

General

Polypropylene (PP) with 20% glass fiber reinforcement is a composite material created by adding glass fibers to the polypropylene matrix. This combination significantly improves the mechanical properties of the polypropylene, such as strength, stiffness and dimensional stability, while keeping the material lightweight. It shows good chemical resistance, is more heat-resistant, and has lower thermal expansion compared to pure polypropylene. This material is widely used in the automotive industry, construction and household appliances, where a combination of lightness and high performance is required.

advantageous

- Low density despite GF content- increased heat resistance to PP- good chemical resistance
- Better dimensional stability in the event of temperature fluctuations
- Lower warp effect due to GF proportion

unfavourable

- Embrittlement at sub-zero temperatures- Hardened nozzle required- Rougher surface
- More brittle than unreinforced PP

Some Processing Data

Printing temperature

200-240 °C

Heatbed temperature

90-110 °C

Drying temperature

Pre-drying not necessary

Drying time

Specifications

Shrinkage	- %
MFF (ISO 1133)	14 g/10min
Yield stress (ISO 527)	70 Mpa
Yield elongation (ISO 527)	5 %
Elongation at break (ISO 527)	5 %
Tensile modulus (ISO 178)	5300 Mpa
Dimensional stability temperature 1.82 MPa (ISO 75A)	140 °C
Vicat Softening Temperature A	- °C
Thermal conductivity 23°C	- W/(K*m)
Flammability (UL 94)	HB
Density (ASTM D792)	1.04 g/cm ³