

FGF PLA-X³

PLA-X³ is our industrial high-performance PLA which features extreme performance on speed, mechanical properties and high heat environments. Due to the composition of PLA-X³ the material is already highly crystalline after printing, which increases the stiffness of the material at higher temperatures. When you combine this with annealing the PLA-X³ the material reaches an HDT of 95°C+. Compared to other high temp. resistant PLA types PLA-X³ has the USP of negligible small shrinkage after annealing (the dimensional accuracy is superb). PLA-X³ has been specifically engineered for industrial applications where you want an easy to print filament with high mechanical properties. Objects that are printed with PLA-X³ will have a semi matte finish which not only looks great but helps concealing layer lines.

Material features:

- ABS matching mechanical properties
- Great heat resistance at higher temperatures
- HDT after annealing 95°C+
- Semi matte finish after printing
- Negligible shrinkage after annealing

Colours:

Colours on request. Ask your accountmanager.

Packaging:

FGF PLA-X³ is available in 20kg bag

Processing recommendations

Drying	8hr,50°C*. <500ppm
Zone 1 Temperature	170±20 °C
Zone 2 Temperature	195±20 °C
Zone 3 Temperature	195±20 °C
Mass temperature	196 °C
Die temperature	195±20 °C

Material properties

Description	Testmethod	Typical value
Specific gravity	ISO 1183	1,27 g/cc
MFR 210°C/2,16 kg	ISO 1133	6 g/10min
Tensile Strength at Yield	ISO 527	35,5 Mpa
Tensile Strength at Break	ISO 527	22 Mpa
Elongation-Strain at Yield	ISO 527	1%
Elongation-Strain at Break	ISO 527	70%
Tensile modulus	ISO 527	5100 Mpa
Impact strength - Charpy notched 23°C	ISO 179	8,9 kJ/m2
Vicat softening temperature	ISO 306 B50	N/A
Mold shrinkage	Internal method (ISO 294-4 based)	N/A

Additional info:

*As PLA materials crystallize, it is advised to either have an agitated dryer, or dry at a lower temperature for a longer period. This avoids that the pellets stick to each other during drying.

Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.