



PLA-CF

Carbon-Fiber Reinforced PLA for Rigid Parts with Matte Surface Finish

PLA-CF is a carbon fiber reinforced PLA designed to combine easy printability, high stiffness, and a professional matte finish. Ideal for functional prototypes, rigid parts, and components with a premium appearance.

3D FDM PRINTING



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Main Features

- ✓ Carbon fiber reinforced formulation
- ✓ High stiffness and flexural strength
- ✓ Matte finish with no visible layers
- ✓ Good dimensional stability
- ✓ Ideal for aesthetic and functional components

Applications

- ✓ High-precision rigid and functional prototypes
- ✓ Mechanical models with high flexural strength
- ✓ Technical components with matte surface finish
- ✓ Lightweight structural parts

Based on currently available data, the information in this document is considered accurate. Fasipol makes no explicit or implicit warranties regarding the results obtained from its use or the accuracy of such results.

Certified Company
UNI EN ISO
9001:2023



Technical Data

PHYSICAL PROPERTIES	METHOD	VALUE
Density	ISO 1183	1.22 g/cm ³
Melt Index (210 °C, 2.16 kg)	-	3.7 ± 0.6 g/10 min
Melting Temperature	DSC (10 °C/min)	165 °C
Glass Transition Temperature	DSC (10 °C/min)	63 °C
Vicat Softening Temperature	ISO 306	69 °C
Heat Deflection Temp. (1.8 MPa)	ISO 75	54 °C
Heat Deflection Temp. (0.45 MPa)	ISO 75	55 °C
Saturated Water Absorption	25 °C, 55% RH	0.42 %

MECHANICAL PROPERTIES	METHOD	VALUE
Young's Modulus (X-Y)	ISO 527	2790 ± 120 MPa
Young's Modulus (Z)	ISO 527	2160 ± 90 MPa
Tensile Strength (X-Y)	ISO 527	38 ± 4 MPa
Tensile Strength (Z)	ISO 527	26 ± 2 MPa
Elongation at Break (X-Y)	ISO 527	8.4 ± 3.2 %
Elongation at Break (Z)	ISO 527	3.6 ± 0.7 %
Flexural Modulus (X-Y)	ISO 178	3950 ± 190 MPa
Flexural Modulus (Z)	ISO 178	2260 ± 180 MPa
Flexural Strength (X-Y)	ISO 178	89 ± 4 MPa
Flexural Strength (Z)	ISO 178	49 ± 3 MPa
Impact Strength (X-Y)	ISO 179	23.2 ± 3.7 kJ/m ²
Impact Strength (notched)	ISO 179	7.6 ± 2.6 kJ/m ²
Impact Strength (Z)	ISO 179	7.8 ± 0.7 kJ/m ²

OTHER PHYSICAL AND CHEMICAL PROPERTIES	VALUE
Odor	Odorless
Composition	PLA and carbon fiber
Skin Hazards	None
Chemical Stability	Stable under normal conditions
Solubility	Insoluble in water
Acid Resistance	Not resistant
Alkali Resistance	Not resistant
Organic Solvent Resistance	Limited resistance to some solvents
Oil and Grease Resistance	Resistant to most oils and greases
Flammability	Flammable
Combustion Products	Water and carbon oxides
Odor of Combustion Products	Odorless