



TECHNICAL DATA SHEET

DURAPRO PA6 CF

1. DESCRIPTION

DuraPro PA6 CF is a carbon fibre reinforced, highly functional polyamide designed for demanding industrial applications. It is characterised by excellent mechanical properties, enhanced heat resistance and reduced warping behavior, as well as very good chemical resistance. The carbon fiber reinforcement enables improved tensile strength and high stiffness, while its higher moisture absorption contributes to increased impact resistance.

2. FEATURES

- Excellent mechanical properties
- Low warping
- High impact resistance
- Very good chemical resistance

3. PROPERTIES

TEST	METHOD	UNIT	VALUE
Density	ISO 1183	g/cm ³	1.15
Melt Volume Rate (MVR) 275°C/5.0 kg	ISO 1133	cm ³ /10min	140
Water Absorption (Saturation 23°C)	ISO 62	%	9
Tensile Modulus	ISO 527-1	MPa	1100
Molding Shrinkage parallel	ISO 294-4	%	0.5
Molding Shrinkage normal	ISO 294-4	%	0.8
Nominal Elongation at Break	ISO 527-2	%	4.0
Charpy Notched Impact Strength (+23°C)	ISO 179/1eA	kJ/m ²	16
Charpy Unnotched Impact Strength (+23°C)	ISO 179/1eU		No Break (NB)
Izod Notched Impact Strength (+23°C)	ISO 180	kJ/m ²	5
Heat Deflection Temperature (DTUL) 0.45 MPa, unannealed	ISO 75-2/B	°C	170
Heat Deflection Temperature (DTUL) 1.8 MPa, unannealed	ISO 75-2/A	°C	105
Specific Surface Resistance	IEC 60093	Ohm	1E10
Specific Volume Resistivity	IEC 60093	Ohm*m	1E10
Yield Stress	ISO 527	MPa	60
Yield Strain	ISO 527	%	3.5

*Temperature resistance tested at a minimum wall thickness of 4 mm.

PRINT SETTINGS

Nozzle	270-300 °C
Heatbed	80-100 °C
Adhesive	Yes
Speed	20-150 mm/s
Cooling	10-40%
Enclosed Space	Yes
Hardened Nozzle	Yes
Max. Volumetric Speed	10-18 mm ³ /s

Note: Due to the abrasive nature of the carbon fibers, a hardened nozzle (e.g., hardened steel or ruby nozzle) is strongly recommended. Additionally, a nozzle diameter of at least 0.6 mm should be used to prevent clogging and ensure smooth extrusion.



4. CERTIFICATIONS & ADDITIONAL INFORMATION



Certifications depend on colors in final product. More info in the additional information sheet.

5. STORAGE AND SHELF LIFE

Store in a dry room at room temperature (18-27°C / 65-80°F). Keep out of direct heat and sunlight.
When stored correctly, this material has a shelf life of 2 years.
Additional info in our regulatory, additional information and chemical resistance data sheets.