

PA6 Carbon Fibre Thermoplastic Tape

For selective reinforcement of components, winding processes and pressure vessels

PA6 CF Tape

Development Datasheet: PA6 Carbon Fibre Thermoplastic Tape

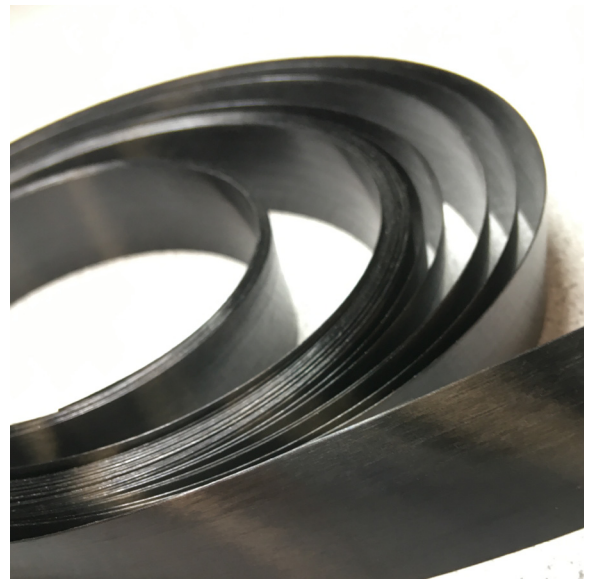
This thermoplastic tape is polyamide-6 (nylon-6) reinforced with continuous (uni-directional) carbon fibre.

The tape can be produced at a range of fibre contents (40 - 50% fibre by volume), thicknesses (0.15 - 0.20 mm) and finished tape widths (6.25 - 235 mm).

The material exhibits a high strength-to-weight ratio and is well suited to automotive and sporting goods applications where strength and toughness are required.

Lengths up to 1 km can be supplied.

Applications: Selective reinforcement of components, winding processes, pressure vessels, automated fibre placement (AFP) and automated tape laying (ATL).



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Matrix Properties (PA6)

Polymer tensile strength	85 MPa
Polymer modulus	3 GPa
Melting temperature	220°C

Carbon Properties (12k)

Fibre tensile strength	4.9 GPa
Fibre modulus	230 GPa

Tape Properties

Density	1150 - 1260 g/cm ³
Thickness	0.16 - 0.02 mm
Width	6.25 - 235 mm
Fibre volume fraction	40 - 50%
Areal weight	210 - 240 g/m ³

Tape Mechanical Properties

Tensile strength 0°	1600 - 1910 MPa
Tensile modulus 0°	100 - 105 GPa
Width	6.25 - 235 mm

Tape Processing Parameters

Processing temperature	240 - 300°C
Drying temperature	80°C
Drying time (minimum at 80°C)	8 hours

Note: This is a development product technical datasheet and all values listed are indicative only

The information provided here is believed to be accurate but should be considered indicative only. It is the responsibility of the customer to ensure suitability for their application prior to use.