

Carbon+

Polyamide 12 loaded with 15% of carbon fibers.

Mechanical property*	Standard	Unit	Value
Young modulus	ISO 527-2	MPa	8500
Yield tensile strenght	ISO 527-2	MPa	105
Tensile strength at break	ISO 527-2	MPa	2.1
Elongation at yield	ISO 527-2	%	--
Elongation at break	ISO 527-2	%	--
Flexural modulus	ISO 178	MPa	29000
Flexural yield strength	ISO 178	MPa	118.9
Flexural strength at break	ISO 178	MPa	81.5
Flexural elongation at yield	ISO 178	%	8.0
Flexural elongation at break	ISO 178	%	0.7
Impact resistance (Charpy), unnotched	ISO 179-1	KJ/m ²	27.5
Compression modulus	ISO 604	MPa	2380
Compression strength at yield	ISO 604	MPa	43.8
Compression strain at yield	ISO 604	%	13.9

Thermal property	Standard	Unit	Value
Melting temperature	ISO 11357	°C	--
Glass transition temperature	ISO 11357	°C	104
HDT at 1,80 MPa (unannealed)	ISO 75-2	°C	100
HDT at 0.45 MPa (unannealed)	ISO 75-2	°C	160
Vicat temperature 1kg, 50°C/h	ISO 306	°C	173

Other	Standard	Unit	Value
Density (specific gravity)	ISO 1183-1	g/cm ³	1.07
Water absorption in 24h	ISO 62	%	1.1
Surface resistivity	IEC 600093	Ω	50
Volume resistivity	IEC 600093	Ω/m	100
Flame resistance	UL94		No
Railroad application compatibility	EN 45545		No
Biocompatibility			No
Blue card			No
Water contact			No
Food contact	FDA 21; EU 10/2011		No

*Above values are obtained from samples printed on A4v4 at 0.2mm layer thickness.

The information presented on this document should be used for comparison and self instruction purposes only and are not intended to substitute customer testing to certify the material suitability for customer use and application.

Actual values will vary according to production settings, test conditions and user part geometry – the above values are not meant to be used as design specification or production control testing reference values.

The user is responsible about the end-of-life disposal/recycling of the product.

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