

**Material Data Sheet: CARBON FILLED NYLON**

Properties: Outstanding mechanical properties characterized by extreme stiffness and strength. Typical applications of the material are fully functional prototypes with high end finish for wind tunnel tests and other aerodynamic applications.

Material Properties:

Average particle size	Laser diffraction	60	µm
Bulk density	DIN 53466	0,50	g/cm ³
Density of laser-sintered part	EOS-Method	1,03	g/cm ³

Mechanical Properties:*

Tensile Modulus x	DIN EN ISO 527	6500	MPa
Tensile Modulus y	DIN EN ISO 527	3500	MPa
Tensile Modulus z	DIN EN ISO 527	2200	MPa
Tensile strength x	DIN EN ISO 527	72	MPa
Tensile strength y	DIN EN ISO 527	56	MPa
Tensile strength z	DIN EN ISO 527	25	MPa
Elongation at break x	DIN EN ISO 527	3,5	%
Elongation at break y	DIN EN ISO 527	4,8	%
Elongation at break z	DIN EN ISO 527	1,0	%



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Charpy - Impact strength x	DIN EN ISO 179	20,5	kJ/m ²
Charpy - Impact strength y	DIN EN ISO 179	27,5	kJ/m ²
Charpy - Impact strength z	DIN EN ISO 179	5,5	kJ/m ²
Charpy - Notched impact strength x	DIN EN ISO 179	5,3	kJ/m ²
Charpy - Notched impact strength y	DIN EN ISO 179	4,4	kJ/m ²
Charpy - Notched impact strength z	DIN EN ISO 179	2,1	kJ/m ²

Thermal Properties:

Melting point	DIN 53736	172 - 180	°C
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Electrical Properties:

Specific resistance [-5...+5V] x		46,3·10 ⁻³	Ω·m
Specific resistance [-5...+5V] y		107·10 ⁻³	Ω·m
Specific resistance [-5...+5V] z		3080·10 ⁻³	Ω·m

* The mechanical properties depend on the exposure parameters used.

The data are based on our latest knowledge and are subject to changes without notice. They do not guarantee properties for a particular part and in a particular application.