

# MATERIAL DATA SHEET

## HICOMPELT® CC-C45(4)01/52

HICOMPELT® CC is a carbon fiber reinforced polyamide 6 (PA 6) made in a T-RTM process. The low viscosity melt is injected under pressure into a mould where it polymerizes. This so called in-situ process is new and offers a great possibility to achieve high fiber volume contents. The following data were measured in tests of test samples.

ATTRIBUTE	TEST METHOD	VALUE	UNIT
Density	DIN EN ISO 1183	1.48	kg/dm <sup>3</sup>
Yield stress in 0°-direction	DIN EN ISO 527-4	800 - 900	Mpa
Yield stress in 90°-direction	DIN EN ISO 527-4	800 - 900	Mpa
Flexural strength in 0°-direction	DIN EN ISO 14125	600 - 700	Mpa
Flexural strength in 90°-direction	DIN EN ISO 14125	300 - 400	Mpa
Traction E-Modulus in 0° direction	DIN EN ISO 527-4	60000	Mpa
Traction E-Modulus in 90° direction	DIN EN ISO 527-4	60000	Mpa
Modulus of elasticity in flexure in 0° direction	DIN EN ISO 14125	85000	Mpa
Modulus of elasticity in flexure in 90° direction	DIN EN ISO 14125	15000	Mpa
ILSS in 0°/ 90° direction	DIN EN ISO 14130	(N)	Mpa
Fiber volume content	DIN EN ISO 1183-1	52,5	%
Porosity (> 75 µm)	3D CT- inspection	< 0.25	%
Residual monomer content	AA-031-PA	< 1	%
ATTRIBUTES OF THE MATRIX			
Water absorption	DIN EN ISO 62	4 - 5	%
Vicat-B-50	DIN EN ISO 306	210 - 215	°C
Textile constitution of the testing plate: 0/90/90/0. The specimen were machined. (N)= the breakdown behaviour is not following the norm standards			

**HICOMPELT® CC** has a very good impact resistance. Compared to polyamide 12 (PA 12) the matrix has a higher thermal resistance and can be produced in very short cycle times.

**Albert Handtmann Elteka GmbH & Co. KG**  
Timo Rothenbacher M.Eng.  
Hubertus-Liebrecht-Str. 21  
88400 Biberach  
Germany  
Tel.: +49 7351 342 7124  
timo.rothenbacher@handtmann.de  
[www.handtmann.de/plastics](http://www.handtmann.de/plastics)