

# MATERIAL DATA SHEET

## HICOMPELT® GC-B71(4)01/47

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	1.85	kg/dm <sup>3</sup>
Yield stress in 0° direction	DIN EN ISO 527-4	350 - 450	Mpa
Yield stress in 90° direction	DIN EN ISO 527-4	350 - 450	Mpa
Flexural strength in 0° direction	DIN EN ISO 14125	750 - 800	Mpa
Flexural strength in 90° direction	DIN EN ISO 14125	150 - 200	Mpa
Traction E-Modulus in 0° direction	DIN EN ISO 527-4	23000	Mpa
Traction E-Modulus in 90° direction	DIN EN ISO 527-4	23000	Mpa
Modulus of elasticity in flexure in 0° direction	DIN EN ISO 14125	32000	Mpa
Modulus of elasticity in flexure in 90° direction	DIN EN ISO 14125	9000	Mpa
ILSS in 0°/ 90°-direction	DIN EN ISO 14130	(N)	Mpa
Fiber volume content	DIN EN ISO 1183-1	47.5	%
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® GC** 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.

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