

# CELSTRAN® PA66-GF40-0101P10/11

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PA66

Nylon 66/6 Copolymer reinforced by 40 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 10 mm long.

Parts molded of CELSTRAN have outstanding mechanical properties such as high strength and stiffness combined with high heat deflection. The notched impact strength is increased at elevated and low temperatures due to the fiber skeleton built in the parts. The long fiber reinforcement reduces creep significantly.

The very isotropic shrinkage in the molded parts minimizes the warpage.

Complex parts can be manufactured with high reproducibility by injection molding.

Can be used for substituting die cast metal with the advantage of Weight reduction, no corrosion problems, no post treatment.

### Product information

Resin Identification	PA666-LGF40	ISO 1043
Part Marking Code	>PA666-LGF40<	ISO 11469

### Typical mechanical properties

	dry/cond.		
Tensile modulus	12800 / 9000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	240 / 165	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.3 / 2.7	%	ISO 527-1/-2
Flexural modulus	11500 / 8300	MPa	ISO 178
Flexural strength	350 / 270	MPa	ISO 178
Flexural strain at failure	3 / 4.2	%	ISO 178
Charpy impact strength, 23°C	80 / 105	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	75 / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	40 / 35	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	42 / -	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, 23°C	72 / -	kJ/m <sup>2</sup>	ISO 180/1U
Izod impact strength, -30°C	65 / -	kJ/m <sup>2</sup>	ISO 180/1U
Poisson's ratio	0.33 / 0.34 <sup>[C]</sup>		

[C]: Calculated

### Thermal properties

	dry/cond.		
Melting temperature, 10°C/min	240 / *	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	235 / *	°C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	220 / *	°C	ISO 75-1/-2

### Physical/Other properties

	dry/cond.		
Water absorption, 2mm	1.2 / *	%	Sim. to ISO 62
Density	1460 / -	kg/m <sup>3</sup>	ISO 1183

### Injection

Back pressure	3 MPa
Ejection temperature	187 °C

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### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Heat stabilised or stable to heat