

# CELSTRAN® PA66-GF50-0112P7.5/10

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PA66

Nylon 66/6 Copolymer reinforced by 50 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 7.5 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-LGF50	ISO 1043
Part Marking Code	>PA666-LGF50<	ISO 11469

### Typical mechanical properties

	dry/cond.		
Tensile modulus	16400 / 11800	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	220 / 160	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.6 / 2	%	ISO 527-1/-2
Flexural modulus	14000 / -	MPa	ISO 178
Flexural strength	300 / 280	MPa	ISO 178
Flexural strain at failure	2.2 / 3.4	%	ISO 178
Charpy impact strength, 23°C	61 / 40	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	59 / -	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	35 / 30	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	36 / -	kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	29 / 29	kJ/m <sup>2</sup>	ISO 180/1A
Izod impact strength, 23°C	57 / -	kJ/m <sup>2</sup>	ISO 180/1U
Izod impact strength, -30°C	48 / -	kJ/m <sup>2</sup>	ISO 180/1U
Poisson's ratio	0.33 / 0.33 <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

### Flammability

	dry/cond.		
Burning Behav. at 1.5mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.5 / *	mm	IEC 60695-11-10
UL recognition	yes / *		UL 94

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### Physical/Other properties

	dry/cond.		
Density	1560/-	kg/m <sup>3</sup>	ISO 1183

### Injection

Back pressure	3 MPa
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### Characteristics

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