

# CELSTRAN® PA66-GF60-0101P10

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PA66 Nylon 66/6 copolymer reinforced by 60 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-LGF60	ISO 1043
Part Marking Code	>PA666-LGF60<	ISO 11469

### Rheological properties

	dry/cond.		
Viscosity number	120/*	cm <sup>3</sup> /g	ISO 307, 1628

### Typical mechanical properties

	dry/cond.		
Tensile modulus	20800 / 13300	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	300 / 185	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9 / 2.2	%	ISO 527-1/-2
Flexural modulus	18000 / 13000	MPa	ISO 178
Flexural strength	450 / 320	MPa	ISO 178
Flexural strain at failure	2.8 / 3.8	%	ISO 178
Charpy impact strength, 23°C	100 / 120	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	84 / 87	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	44 / 38	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	40 / 44	kJ/m <sup>2</sup>	ISO 179/1eA
Izod impact strength, 23°C	95 / 100	kJ/m <sup>2</sup>	ISO 180/1U
Izod impact strength, -30°C	76 / -	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

### Physical/Other properties

	dry/cond.		
Density	1690 / -	kg/m <sup>3</sup>	ISO 1183

### Injection

Back pressure	3 MPa
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### Characteristics

Processing	Injection Moulding
Delivery form	Pellets