CELSTRAN® PA66-GF50-0111P10/11

PA666-GLF50 Celanese

Product Texts

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 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.

Flammability at thickness h (1.5 mm)	HB	UL recognition (h)	

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**16500 / 11600**	MPa	ISO 527
[C] Stress at break	**275 / 180**	MPa	ISO 527
[C] Strain at break	**2.2 / 2.5**	%	ISO 527
[C] Charpy impact strength, +23°C	**100 / 50**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**80 / -**	kJ/m²	ISO 179/1eU
[C] Charpy notched impact strength, +23°C	**40 / 36**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**42 / -**	kJ/m²	ISO 179/1eA

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
[C] Melting temperature, 10°C/min	**240 / ***	°C	ISO 11357-1/-3
[C] Temp. of deflection under load, 1.80 MPa	**235 / ***	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 8.00 MPa	**220 / ***	°C	ISO 75-1/-2
[C] Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.5 / ***	mm	-
Yellow Card available	**yes / ***	-	-

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
[C] Humidity absorption	**1 / ***	%	Sim. to ISO 62
[C] Density	**- / 1560**	kg/m³	ISO 1183

[C]: CAMPUS

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	**80**	°C	-
Pre-drying - Time	**4**	h	-
Melt temperature	**310 - 325**	°C	-
Mold temperature	**90 - 120**	°C	-

Characteristics

Processing

Injection Molding

Delivery form

Pellets

Features

Creep Resistance, Long fiber reinforced, Low Warpage, Copolymer

Regional Availability

North America, Europe, Asia Pacific

Other text information

Injection molding

It is recommended to dry in a dehumidifying dryer: 4 hours at 80 °C

During the processing of CELSTRAN it is important to watch and control melt shear, for excessive shear reduces fiber length and mechanical performance as well.

Processing recommendation:

- Conventional 3 zone screw, screw diameter minimum 40 mm
- Design flow channels for low melt shear
- Back pressure and screw rotation to realize a continous plastification performance and thus a homogeneous melt.
- Apply higher temperature settings than for short fiber compounds

Melt temperature (in the srew anteroom) 310-325 °C
Mold surface temperature 90-120 °C