Celstran® PA66-GF40-01

Polyamide 66

Celanese Corporation

Message:

Material code according to ISO 1043-1: PA66
Nylon 66 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.

General Information	
Filler / Reinforcement	Long glass fiber, 40% filler by weight
Features	Low warpage Rigidity, high High strength Impact resistance, good Good creep resistance Low temperature impact resistance Heat resistance, high
Uses	Metal substitution
RoHS Compliance	Contact manufacturer
Forms	Particle
Processing Method	Injection molding
Resin ID (ISO 1043)	PA66

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (80°C)	7800	MPa	ISO 527-2/1A
Tensile Stress (80°C)	135	MPa	ISO 527-2/1A
Tensile Strain (Fracture, 80°C)	2.5	%	ISO 527-2/1A
Flexural Modulus			ISO 178
23°C	11100	MPa	ISO 178
80°C	7200	MPa	ISO 178
Flexural Stress			ISO 178
23°C	300	MPa	ISO 178
80°C	215	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	36	kJ/m²	ISO 179/1eA
23°C	36	kJ/m²	ISO 179/1eA
Notched Izod Impact			ISO 180/1A
-30°C	64	kJ/m²	ISO 180/1A
23°C	66	kJ/m²	ISO 180/1A

Injection	Nominal Value	Unit
Drying Temperature	70.0 - 80.0	°C
Drying Time	2.0 - 4.0	hr
Suggested Max Moisture	0.15	%
Hopper Temperature	70.0 - 80.0	°C
Rear Temperature	265 - 275	°C
Middle Temperature	275 - 285	°C
Front Temperature	285 - 295	°C
Nozzle Temperature	305 - 315	°C
Processing (Melt) Temp	305 - 315	°C
Mold Temperature	90.0 - 120	°C
Injection Pressure	120 - 150	MPa
Injection Rate	Moderate	
Holding Pressure	50.0 - 80.0	MPa
Back Pressure	0.00 - 3.00	MPa

Injection instructions

Manifold Temperature: 300 to 315°CZone 4 Temperature: 295 to 305°CFeed Temperature: 20 to 50°C

Recommended distributors for this material

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