



Celstran® PA66-GF50-02 P7/12

Celanese Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

Material code according to ISO 1043-1: PA66

Heat stabilized Nylon 66 reinforced by 50 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 7 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

Material Status	• Commercial: Active
Availability	• Europe • North America
Filler / Reinforcement	• Long Glass Fiber, 50% Filler by Weight
Additive	• Heat Stabilizer
Features	• Creep Resistant • High Stiffness • Good Impact Resistance • High Strength • Heat Stabilized • Low Temperature Impact Resistance • Low Warpage
Uses	• Metal Replacement
RoHS Compliance	• Contact Manufacturer
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• PA66

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.56	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2.39E+6	psi	ISO 527-2/1A/1
Tensile Stress (Break)	36300	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.12E+6	psi	ISO 178
Flexural Stress (73°F)	59500	psi	ISO 178

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	20	ft-lb/in ²	ISO 179/1eA
Thermal	Nominal Value	Unit	Test Method
Melting Temperature ²	500	°F	ISO 11357-3

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	158 to 176	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Hopper Temperature	158 to 176	°F
Rear Temperature	536 to 545	°F
Middle Temperature	536 to 554	°F
Front Temperature	554 to 572	°F
Nozzle Temperature	590 to 608	°F
Processing (Melt) Temp	590 to 608	°F
Mold Temperature	194 to 248	°F
Injection Pressure	17400 to 21800	psi
Injection Rate	Moderate	
Holding Pressure	7250 to 11600	psi
Back Pressure	0.00 to 435	psi

Injection Notes

Manifold Temperature: 300 to 315°C
 Zone 4 Temperature: 300 to 310°C
 Feed Temperature: 20 to 50°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min