Celstran® PA66-GF50-02 P7

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	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Long Glass Fiber, 50% Filler by Weight		
Additive	• Heat Stabilizer		
Features	• Corrosion Resistant • Creep Resistant • Good Isotropy	• Heat Stabilized • High Stiffness • High Strength	• 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	1.57	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.41E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	38400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.1	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.18E+6	psi	ISO 178
Flexural Stress (73°F)	60900	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	24	ft·lb/in²	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

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Injection	Nominal Value	Unit
Nozzle Temperature	590 to 608	°F
Processing (Melt) Temp	590 to 608	°F
Mold Temperature	194 to 248	°F
Injection Rate	Moderate	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 20 to 50°C
Zone4 temperature: 300 to 310°C
Hot runner temperature: 300 to 315°C

Notes

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

[2] 10°C/min