Celstran® +PP-GF60-04CN15

Polypropylene

Celanese Corporation

Message:

Material code according to ISO 1043-1: PP
Polypropylene with 60 weight percent ash content, long glass fibers reinforced The fibers are chemically coupled to the polypropylene matrix. 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.
Application field: Functional/structural parts for automotive

General Information			
Filler / Reinforcement	Long glass fiber, 60% filler by weight		
Features	Low warpage Rigidity, high High strength Chemical coupling Impact resistance, good Good creep resistance Low temperature impact resistance		
Uses	Application in Automobile Field		
Forms	Particle		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.43	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	14200	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	138	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	1.6	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	15000	MPa	ISO 178
Flexural Stress (23°C)	235	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	48	kJ/m²	ISO 179/1eA
23°C	30	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	68	kJ/m²	ISO 179/1eU
23°C	74	kJ/m²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**

Heat Deflection Temperature			
1.8 MPa, not annealed	158	°C	ISO 75-2/A
8.0 MPa, not annealed	138	°C	ISO 75-2/C
Melting Temperature [1]	164	°C	ISO 11357-3

Injection	Nominal Value	Unit
Drying Temperature	90.0 - 100	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.20	%
Rear Temperature	220 - 230	°C
Middle Temperature	230 - 240	°C
Front Temperature	240 - 250	°C
Nozzle Temperature	240 - 250	°C
Processing (Melt) Temp	230 - 270	°C
Mold Temperature	30.0 - 70.0	°C
Injection Pressure	60.0 - 120	MPa
Injection Rate	Slow	
Holding Pressure	40.0 - 80.0	MPa
Back Pressure	0.00 - 3.00	MPa

Injection instructions
Manifold Temperature: 230 to 270°CZone 4 Temperature: 250°CFeed Temperature: 20 to 50°C

NOTE	
1.	10°C/min

Recommended distributors for this material

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