Celstran® PP-GF30-0455 P10/10

Polypropylene

Celanese Corporation

Message:

Material code according to ISO 1043-1: PP
Polypropylene reinforced with 30 weight percent long glass fibers. UV-stabilized, low emission. 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	Glass fiber reinforced material, 30% filler by weight		
Additive	UV stabilizer		
Features	Low volatilization Low warpage Rigidity, high High strength Chemical coupling Good UV resistance		
Uses	Application in Automobile Field		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.13	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
--	7000	MPa	ISO 527-2/1A/1
80°C	4600	MPa	ISO 527-2/1A
Tensile Stress			
Fracture	110	MPa	ISO 527-2/1A/5
80°C	60.0	MPa	ISO 527-2/1A
Tensile Strain			
Fracture	2.2	%	ISO 527-2/1A/5
Fracture, 80°C	3.0	%	ISO 527-2/1A
Flexural Modulus			ISO 178
23°C	7000	MPa	ISO 178
80°C	4800	MPa	ISO 178
Flexural Stress			ISO 178
23°C	160	MPa	ISO 178

80°C	90.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	22	kJ/m²	ISO 179/1eA
23°C	20	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m²	ISO 179/1eU
23°C	55	kJ/m²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
1.8 MPa, not annealed	155	°C	ISO 75-2/A
8.0 MPa, not annealed	122	°C	ISO 75-2/C
Melting Temperature [1]	166	°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	
Holding Pressure	40.0 - 80.0	MPa	
Back Pressure	0.00 - 3.00	MPa	
Injection instructions			
Feed Temperature: 20 to 50°CZone 4 Temperature: 250°CManifold Temperature: 230 to 270°C			
NOTE			
1.	10°C/min		

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China


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