Celstran® +PP-GF20-05CN05 Black

Celanese Corporation - Polypropylene Copolymer

Tuesday, November 5, 2019

General Information

Product Description

Material code according to ISO 1043-1: PP Polypropylene with 20 weight percent ash content, long glass fibers reinforced. Impact modified, copolymer. 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			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Long Glass Fiber, 20% Filler by Weight		
Additive	• Impact Modifier		
Features	• Chemically Coupled • Copolymer • Creep Resistant	• Good Isotropy • High Stiffness • High Strength	• Impact Modified • Low Temperature Impact Resistance • Low Warpage
Uses	• Automotive Applications		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		
Resin ID (ISO 1043)	• PP		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.03	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	624000	psi	ISO 527-2/1A
Tensile Stress (Break)	11000	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.5	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	638000	psi	ISO 178
Flexural Stress (73°F)	18000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	9.5	ft·lb/in²	ISO 179/1eA

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	194 to 212	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.20	%
Rear Temperature	410 to 446	°F
Middle Temperature	446 to 464	°F
Front Temperature	464 to 482	°F
Nozzle Temperature	464 to 482	°F

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Injection	Nominal Value	Unit
Processing (Melt) Temp	410 to 518	°F
Mold Temperature	86 to 158	°F
Injection Rate	Slow	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 20 to 50°C
Zone4 temperature: 250°C
Hot runner temperature: 210 to 270°C

Notes

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