Celstran® PP-GF20-02 Black

Celanese Corporation - Polypropylene Homopolymer

Tuesday, November 5, 2019

General Information

Product Description

Material Code according to ISO 104-1: PP Polypropylene homopolymer reinforced with 20 weight percent long glass fibers. The fibers are chemically coupled to the polypropylene matrix. Then pellets are cylindrical and normally as well as the embedded fibers 10mm long. This material imparts excellent impact and modulus properties that exceed that short fiber polypropylene.

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Filler / Reinforcement	• Long Glass Fiber, 20% Filler by Weight		
Features	• Chemically Coupled • Good Impact Resistance	• High Stiffness • Homopolymer	
Appearance	• Black		
Forms	• Pellets		
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	725000	psi	ISO 527-2/1A
Tensile Stress (Break)	12500	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.4	%	ISO 527-2/1A/5
Flexural Modulus			ISO 178
73°F	711000	psi	
176°F	479000	psi	
Flexural Stress			ISO 178
73°F	19600	psi	
176°F	12300	psi	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	7.1	ft·lb/in²	
73°F	6.7	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	10	ft·lb/in²	
73°F	21	ft·lb/in²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	316	°F	ISO 75-2/A

Processing Information

Injection	Nominal Value	Unit
Rear Temperature	428 to 446	°F
Middle Temperature	446 to 464	°F
Front Temperature	464 to 482	°F
Nozzle Temperature	464 to 482	°F
Processing (Melt) Temp	446 to 518	°F

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Injection	Nominal Value	Unit
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: 230 to 270°C

Notes

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