



Celstran® POM-GF25-04 AF3001

Celanese Corporation - Acetal (POM) Copolymer

Sunday, November 3, 2019

General Information

Product Description

Material code according to ISO 1043-1: POM Acetal copolymer reinforced with 25 weight percent long glass fibers. The fibers are chemically coupled to the POM 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	• Asia Pacific • Europe • North America
Filler / Reinforcement	• Long Glass Fiber, 25% Filler by Weight
Features	• Chemically Coupled • High Stiffness • Creep Resistant • High Strength • Good Isotropy • Low Temperature Impact Resistance • Low Warpage
Uses	• Automotive Applications
RoHS Compliance	• Contact Manufacturer
Forms	• Pellets
Processing Method	• Injection Molding
Resin ID (ISO 1043)	• POM

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.59	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.49E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	25700	psi	ISO 527-2/1A/50
Tensile Strain (Break)	2.4	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.33E+6	psi	ISO 178
Flexural Stress (73°F)	38400	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	17	ft-lb/in ²	ISO 179/1eA

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	176 to 194	°F
Drying Time	3.0	hr
Suggested Max Moisture	0.15	%
Rear Temperature	356 to 383	°F
Middle Temperature	374 to 392	°F
Front Temperature	383 to 401	°F
Nozzle Temperature	383 to 401	°F
Processing (Melt) Temp	383 to 401	°F
Mold Temperature	158 to 230	°F

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Injection	Nominal Value	Unit
Injection Rate	Moderate	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 20 to 50°C
Zone4 temperature: 195 to 205°C
Hot runner temperature: 195 to 205°C

Notes

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