

# Celstran® POM-GF35-04 AF3001

Acetal (POM) Copolymer

Celanese Corporation

## Message:

Material code according to ISO 1043-1: POM

Acetal copolymer reinforced with 35 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 Information			
Filler / Reinforcement	Long glass fiber, 35% filler by weight		
Features	Rigidity, high		
	High strength		
	Copolymer		
	Chemical coupling		
	Impact resistance, good		
	Good creep resistance		
	Low temperature impact resistance		
Uses	Application in Automobile Field		
RoHS Compliance	Contact manufacturer		
Forms	Particle		
Processing Method	Injection molding		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.65	g/cm <sup>3</sup>	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	12000	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	182	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.1	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	10900	MPa	ISO 178
Flexural Stress (23°C)	285	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	41	kJ/m <sup>2</sup>	ISO 179/1eA
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 90.0	°C	
Drying Time	3.0	hr	
Suggested Max Moisture	0.15	%	

Rear Temperature	180 - 195	°C
Middle Temperature	190 - 200	°C
Front Temperature	195 - 205	°C
Nozzle Temperature	195 - 205	°C
Processing (Melt) Temp	195 - 205	°C
Mold Temperature	70.0 - 110	°C
Injection Pressure	60.0 - 120	MPa
Injection Rate	Moderate	
Holding Pressure	60.0 - 120	MPa
Back Pressure	0.00 - 3.00	MPa

#### Injection instructions

Feed Temperature: 20 to 50°C Zone 4 Temperature: 195 to 205°C Manifold Temperature: 195 to 205°C

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