

Celcon® GC20

Acetal (POM) Copolymer

Celanese Corporation

Message:

Celcon® GC20 is a glass coupled formulation containing 20% fiber glass reinforcement to improve strength and stiffness.

Chemical abbreviation according to ISO 1043-1: POM

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 20% filler by weight		
Features	Rigid, good		
	Chemical coupling		
	Good strength		
RoHS Compliance	Contact manufacturer		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm ³	ISO 1183
Water Absorption			ISO 62
Saturated, 23°C	0.80	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	7300	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	99.0	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	7000	MPa	ISO 178
Flexural Stress (23°C)	130	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.0	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	40	kJ/m ²	ISO 179/1eU
23°C	30	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	5.2	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	160	°C	ISO 75-2/A
Melting Temperature ¹	165	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	4.3E-5	cm/cm/°C	ISO 11359-2
Lateral	1.1E-4	cm/cm/°C	ISO 11359-2
Injection	Nominal Value	Unit	
Drying Temperature	80.0 - 100	°C	

Drying Time	3.0	hr
Rear Temperature	170 - 180	°C
Middle Temperature	180 - 190	°C
Front Temperature	180 - 190	°C
Nozzle Temperature	190 - 200	°C
Processing (Melt) Temp	180 - 200	°C
Mold Temperature	90.0 - 120	°C
Injection Pressure	90.0 - 140	MPa
Injection Rate	Slow	
Holding Pressure	90.0 - 140	MPa
Back Pressure	0.00 - 0.500	MPa

Injection instructions

Manifold Temperature: 190 to 210°C Zone 4 Temperature: 190 to 200°C

NOTE

- 10°C/min

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