

Celcon® MC90

Acetal (POM) Copolymer

Celanese Corporation

Message:

Celcon® acetal copolymer grade MC90 is a mineral reinforced grade offering low warp, improved dimensional stability, improved stiffness, improved practical impact and retention of other base resin properties with good moldability.
Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 9988- POM-K, M-GNR, 03-002, M

General Information			
UL YellowCard	E38860-239314		
Filler / Reinforcement	Mineral filler		
Features	Good dimensional stability		
	Low warpage		
	Rigid, good		
	Impact resistance, good		
	Good formability		
	General		
Uses	General		
RoHS Compliance	Contact manufacturer		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)	POM		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.48	g/cm³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow	1.9	%	ASTM D955
Transverse flow	1.6	%	ASTM D955
Vertical flow direction	1.6	%	ISO 294-4
Flow direction	1.9	%	ISO 294-4
Water Absorption			
Saturated, 23°C	0.75	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3000	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	53.1	MPa	ASTM D638
Yield	57.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	8.0	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	2850	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method

Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.5	kJ/m ²	ISO 179/1eA
23°C	6.8	kJ/m ²	ISO 179/1eA
Notched Izod Impact (23°C)	6.3	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	152	°C	ISO 75-2/B
1.8 MPa, not annealed	93.3	°C	ASTM D648
1.8 MPa, not annealed	97.0	°C	ISO 75-2/A
Melting Temperature ¹	165	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.0E-4	cm/cm/°C	ISO 11359-2
Lateral	1.2E-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	80.0 - 120	°C	
Injection Pressure	60.0 - 120	MPa	
Injection Rate	Slow		
Holding Pressure	60.0 - 120	MPa	
Back Pressure	0.00 - 0.500	MPa	
Injection instructions			
Manifold Temperature: 190 to 200°CZone 4 Temperature: 190 to 200°C			
NOTE			
1.	10°C/min		

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