

Celcon® MC270-HM

Acetal (POM) Copolymer

Celanese Corporation

Message:

Celcon® MC270-HM is a high modulus, mineral coupled acetal copolymer. It utilizes a higher additive level to provide significant improvement in product stiffness and mold shrinkage and better warpage resistance than unfilled Celcon® M270. Celcon® MC270-HM is formulated to produce very flat, dimensionally stable parts.

General Information			
UL YellowCard	E38860-239315		
Filler / Reinforcement	Mineral filler		
Features	Good dimensional stability		
	Low warpage		
	Rigidity, high		
	High liquidity		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.60	g/cm ³	ASTM D792
--	1.57	g/cm ³	ISO 1183
Molding Shrinkage			
Flow	1.5	%	ASTM D955
Transverse flow	1.2	%	ASTM D955
Vertical flow direction	1.3	%	ISO 294-4
Flow direction	1.5	%	ISO 294-4
Water Absorption			ISO 62
Saturated, 23°C	0.75	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3750	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	44.1	MPa	ASTM D638
Yield	45.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	5.0	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	3700	MPa	ISO 178
Flexural Stress (23°C)	77.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	3.5	kJ/m ²	ISO 179/1eA
23°C	4.8	kJ/m ²	ISO 179/1eA

Notched Izod Impact (23°C)	5.3	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, not annealed	97.2	°C	ASTM D648
1.8 MPa, not annealed	105	°C	ISO 75-2/A
Melting Temperature ¹	165	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	6.0E-5	cm/cm/°C	ISO 11359-2
Lateral	9.0E-5	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°C Zone 4 Temperature: 190 to 200°C			
NOTE			
1.	10°C/min		

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