

Celcon® LW90

Acetal (POM) Copolymer

Celanese Corporation

Message:

Celcon® LW90 is a nominal 9 melt flow rate based material specifically formulated for high speed, low wear applications against metals. LW90 conforms to applicable FDA regulations governing food contact.

Chemical abbreviation according to ISO 1043-1: POM

General Information			
UL YellowCard	E38860-239302		
Features	Good wear resistance		
	Compliance of Food Exposure		
Agency Ratings	FDA Food Exposure, Not Rated		
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			
--	1.43	g/cm³	ASTM D792
--	1.41	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)	9.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	8.00	cm³/10min	ISO 1133
Molding Shrinkage			
Flow	2.2	%	ASTM D955
Transverse flow	1.8	%	ASTM D955
Vertical flow direction	1.5	%	ISO 294-4
Flow direction	1.8	%	ISO 294-4
Water Absorption			
Saturated, 23°C	0.65	%	ISO 62
Equilibrium, 23°C, 50% RH	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2500	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	58.6	MPa	ASTM D638
Yield	64.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	9.0	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	2600	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	5.7	kJ/m²	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	98.0	°C	ISO 75-2/A
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.1E-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-Moderate	
Holding Pressure	60.0 - 120	MPa
Back Pressure	0.00 - 0.500	MPa

Injection instructions

Manifold Temperature: 180 to 200°C Zone 4 Temperature: 190 to 200°C

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