Celcon® M25

Acetal (POM) Copolymer

Celanese Corporation

Message:

Celcon® acetal copolymer grade M25 is a high molecular weight, higher toughness and impact resistance grade primarily used for extrusion and selected injection molding applications.
Chemical abbreviation according to ISO 1043-1: POM
Please also see Hostaform® C 2521.

General Information			
UL YellowCard	E38860-239310		
Features	High molecular weight Good toughness		
RoHS Compliance	Contact manufacturer		
Processing Method	Extrusion Injection molding		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Resin ID (ISO 1043)	POM		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.41	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	2.5	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	2.20	cm³/10min	ISO 1133
Molding Shrinkage			
Flow	2.2	%	ASTM D955
Transverse flow	1.8	%	ASTM D955
Vertical flow direction	1.8	%	ISO 294-4
Flow direction	2.2	%	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	2460	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, -40°C	94.5	MPa	ASTM D638
Yield, 23°C	60.7	MPa	ASTM D638
Yield, 71°C	34.5	MPa	ASTM D638
Yield	63.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	12	%	ISO 527-2/1A/50

Tensile Creep Modulus			ISO 899-1
1 hr	2100	MPa	ISO 899-1
1000 hr	1100	MPa	ISO 899-1
Flexural Modulus (23°C)	2430	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	9.1	kJ/m^2	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	190	kJ/m^2	ISO 179/1eU
23°C, local fracture	250	kJ/m^2	ISO 179/1eU
Notched Izod Impact (23°C)	8.3	kJ/m^2	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
1.8 MPa, not annealed	110	°C	ASTM D648
1.8 MPa, not annealed	94.0	°C	ISO 75-2/A
Melting Temperature			
-- [1]	166	°C	ISO 11357-3
--	165	°C	ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.2E-4	cm/cm/°C	ISO 11359-2
Lateral	1.2E-4	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+14	ohms·cm	ASTM D257
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Density of Melt	1.200	g/cm^3	Internal method
Ejection Temperature	165	°C	Internal method
Specific Heat Capacity of Melt	2210	J/kg/°C	Internal method
Thermal Conductivity of Melt	0.16	W/m/K	Internal method
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: 180 to 200°CZone 4 Temperature: 190 to 200°C			

NOTE	
1.	10°C/min

Recommended distributors for this material

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