CELCON® M90-45XAP®

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Celcon® acetal copolymer grade M90-45XAP® is a UV resistant, low emission, medium viscosity polymer providing optimum performance in injection molding, and primarily for the interior automotive market. This grade provides overall excellent performance in many applications. Celcon® M90-45XAP® is formulated in custom colors for Toyota interior UV stabilized applications

Product information

Resin Identification	POM		ISO 1043
Part Marking Code	>POM<		ISO 11469

Rheological properties

Melt volume-flow rate	8	cm^3/10min	ISO 1133
Temperature	374	°F	
Load	4.76	lb	
Molding shrinkage, parallel	2.5	%	ISO 294-4, 2577
Molding shrinkage, normal	2.4	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	384000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	9300	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	9	%	ISO 527-1/-2
Flexural modulus	355000	psi	ISO 178
Flexural strength	11200	psi	ISO 178
Charpy notched impact strength, 23°C	2.85	ftlb/in^2	ISO 179/1eA
Charpy notched impact strength, -30°C	1.9	ftlb/in^2	ISO 179/1eA
Izod notched impact strength, 23°C	2.85	ftlb/in^2	ISO 180/1A

Thermal properties

Melting temperature, 10°C/min	333	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	196	°F	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	304	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.61	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.667	E-4/°F	ISO 11359-1/-2

Flammability

FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	3.15	in/min	ISO 3795 (FMVSS 302)

Physical/Other properties

Density	0.0509	lb/in^3	ISO 1183

Injection

Drying Recommended	no	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%

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Melt Temperature Optimum	392	°F
Min. melt temperature	374	°F
Max. melt temperature	410	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Hold pressure range	8700 - 17400	psi
Hold Pressure Time (h is the max. wall thickness of the part in mm)	$2h^2$-3	s
Back pressure	580	psi

Characteristics

Processing	Injection Molding, Extrusion
Special characteristics	U.V. stabilized or stable to weather, Low emissions

Additional information

Processing Notes

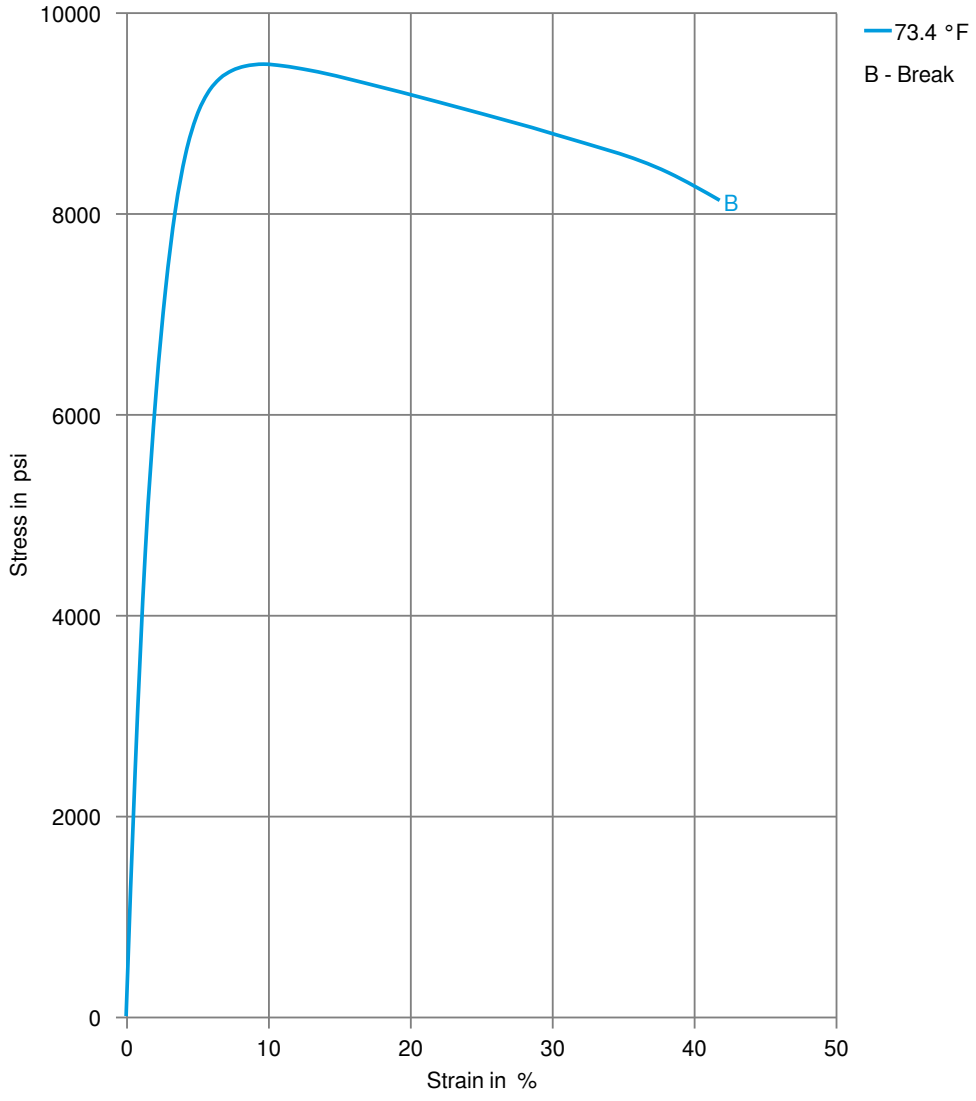
Pre-Drying

Drying is recommended to achieve lowest emission performance. If material contacts moisture through improper storage or handling, drying may be necessary to prevent splay and odor issues.

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Stress-strain

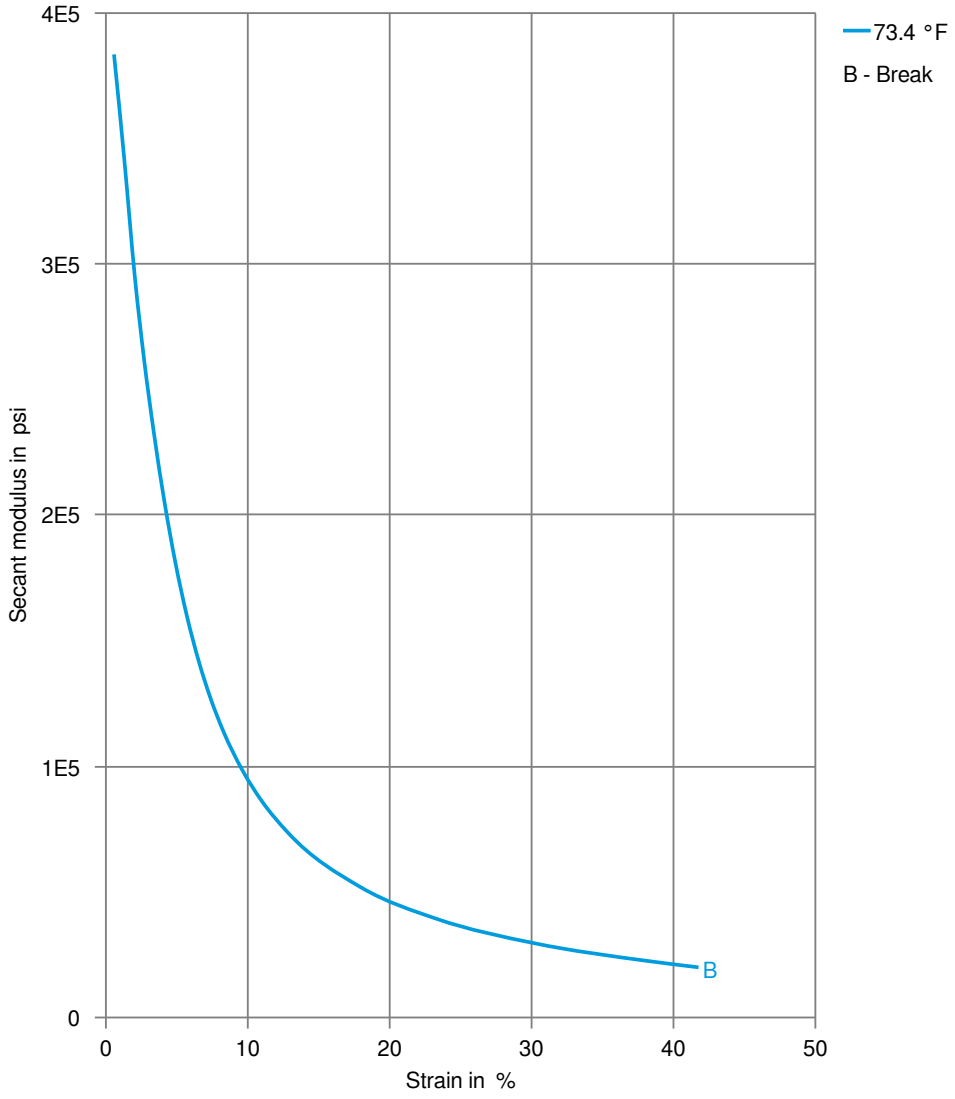


Revised: 2026-08-12 Source: Celanese Materials Database

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Secant modulus-strain



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