



Celcon® M90-45XAP®

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Celcon® acetal copolymer grade M90-45XAP® is a UV resistant, low emission version, medium viscosity polymer providing optimum performance in general purpose injection molding 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

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• UV Stabilizer		
Features	• General Purpose • Low Emissions	• Medium Viscosity • UV Resistant	• UV Stabilized
Uses	• Automotive Applications	• Automotive Interior Parts	• General Purpose
RoHS Compliance	• Contact Manufacturer		
Appearance	• Colors Available		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	8.00	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	2.4	%	
Flow	2.5	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	384000	psi	ISO 527-2/1A
Tensile Stress (Yield)	9280	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	9.0	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	355000	psi	ISO 178
Flexural Stress (73°F)	11200	psi	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	1.9	ft·lb/in ²	
73°F	2.9	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in ²	ISO 180/1A

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	304	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	196	°F	ISO 75-2/A
Melting Temperature ²	333	°F	ISO 11357-3
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.7E-5	in/in/°F	ISO 11359-2

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	3.0 to 4.0	hr
Rear Temperature	338 to 347	°F
Middle Temperature	338 to 356	°F
Front Temperature	338 to 356	°F
Nozzle Temperature	356 to 374	°F
Processing (Melt) Temp	356 to 374	°F
Mold Temperature	176 to 248	°F
Injection Rate	Slow-Moderate	
Back Pressure	< 580	psi

Injection Notes

Zone4 temperature: 175 to 185°C
Hot runner temperature: 180 to 200°C
Flow temperature: 174°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min