



Celcon® M90AW

Celanese Corporation - Acetal (POM) Copolymer

Saturday, November 2, 2019

General Information

Product Description

Celcon® M90AW is a low wear grade designed for gears and other low wear applications, especially where reducing noise and wear in low load-high velocity applications. Celcon® M90AW is an option where silicone or PTFE based wear resistant products are not acceptable.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
Features	• Wear Resistant		
Uses	• Gears		
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.36	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	1.4	%	
Flow	1.9	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	352000	psi	ISO 527-2/1A
Tensile Stress (Yield)	7980	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	9.0	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	348000	psi	ISO 178
Flexural Stress (3.5% Strain)	11500	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.2	ft·lb/in ²	
73°F	2.4	ft·lb/in ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	43	ft·lb/in ²	
73°F	43	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	2.5	ft·lb/in ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	187	°F	ISO 75-2/A
Vicat Softening Temperature	322	°F	ISO 306/B50
Melting Temperature ²	333	°F	ISO 11357-3
Melting Temperature	331	°F	
CLTE - Flow	6.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	6.1E-5	in/in/°F	ISO 11359-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F

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Injection	Nominal Value	Unit
Drying Time	3.0 to 4.0	hr
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	356 to 374	°F
Nozzle Temperature	374 to 392	°F
Processing (Melt) Temp	356 to 392	°F
Mold Temperature	176 to 248	°F
Injection Rate	Slow-Moderate	
Back Pressure	< 580	psi

Injection Notes

Zone4 temperature: 190 to 200°C

Hot runner temperature: 180 to 200°C

Notes

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

² 10°C/min