

# Celanese Celcon<sup>®</sup> M90UV

Celcon<sup>®</sup> M90UV is an acetal copolymer developed as a natural UV light stabilized standard flow grade for overall performance in most molding applications. It has been formulated as a natural acetal that does not discolor, yet maintains protection from UV light exposure.

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ASTM D792
Density	1.41 g/cc	0.0509 lb/in <sup>3</sup>	ISO 1183
Moisture Absorption	0.200 %	0.200 %	23°C/50%RH; ISO 62
Water Absorption at Saturation	0.75 %	0.75 %	ISO 62
Linear Mold Shrinkage, Flow	0.022 cm/cm	0.022 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.018 cm/cm	0.018 in/in	ASTM D955
Melt Flow	8.0 g/10 min @Load 2.16 kg, Temperature 190 °C	8.0 g/10 min @Load 4.76 lb, Temperature 374 °F	[cm <sup>3</sup> /10min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	60.7 MPa	8800 psi	ASTM D638
	65.0 MPa	9430 psi	50mm/min; ISO 527-2/1A
Elongation at Yield	10 %	10 %	50mm/min; ISO 527-2/1A
Tensile Modulus	2.60 GPa	377 ksi	50mm/min; ISO 527-2/1A
Flexural Modulus	2.55 GPa	370 ksi	ISO 178
	2.59 GPa	375 ksi	ASTM D790
Izod Impact, Notched	0.694 J/cm	1.30 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	5.80 kJ/m <sup>2</sup>	2.76 ft-lb/in <sup>2</sup>	ISO 180/1A
Charpy Impact, Notched	0.610 J/cm <sup>2</sup>	2.90 ft-lb/in <sup>2</sup>	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	110 µm/m-°C	61.1 µin/in-°F	ISO 11359-2
CTE, linear, Transverse to Flow	120 µm/m-°C	66.7 µin/in-°F	ISO 11359-2
Melting Point	165 °C	329 °F	10°C/min; ISO 11357-1,-2,-3
	165 °C	329 °F	ASTM D3418

Deflection Temperature at 1.8 MPa (264 psi)	101 °C	214 °F	ISO 75-1, -2
	110 °C	230 °F	ASTM D648

Processing Properties	Metric	English	Comments
Processing Temperature	80.0 - 120 °C	176 - 248 °F	cavity
	180 - 200 °C	356 - 392 °F	hot runner
Zone 1	170 - 180 °C	338 - 356 °F	
Zone 2	180 - 190 °C	356 - 374 °F	
Zone 3	180 - 190 °C	356 - 374 °F	
Zone 4	190 - 200 °C	374 - 392 °F	
Die Temperature	190 - 200 °C	374 - 392 °F	
Melt Temperature	180 - 200 °C	356 - 392 °F	
Drying Temperature	80.0 - 100 °C	176 - 212 °F	
Dry Time	3.00 hour	3.00 hour	
Injection Pressure	60.0 - 120 MPa	8700 - 17400 psi	
Hold Pressure	60.0 - 120 MPa	8700 - 17400 psi	
Back Pressure	<= 4.00 MPa	<= 580 psi	

Descriptive Properties	
Injection molding	Yes
Injection speed	slow-medium
Pellets	Yes
Processing conditions acc. ISO	9988-2
Profile extrusion	No