

Covestro Makrolon® LQ2687 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

Material Notes:

ISO 7391-PC,MLR,(,,)-18-9MVR (300 °C/1.2 kg) 12.5 cm3/10 minOptical lensMedium viscosityUV stabilizedUV 400 cut offEasy releaseInjection molding - Melt temperature 280 - 320 °CAvailable in clear tints onlySafety glassesSun glassesPreprocessingMax. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-LQ2687-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
	1.02 g/cc @Temperature 290 °C	0.0368 lb/in ³ @Temperature 554 °F	Melt
Water Absorption	0.30 %	0.30 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.12 %	0.12 %	Similar to ISO 62
Linear Mold Shrinkage, Flow	0.0070 cm/cm	0.0070 in/in	ISO 294-4,2577
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4,2577
Melt Flow	13 g/10 min	13 g/10 min	ISO 1133
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	67.0 MPa	9720 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	6.1 %	6.1 %	ISO 527-1/-2
Tensile Modulus	2.40 GPa	348 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
Impact	5400	5400	Puncture - maximum force (N); ISO 6603-2
	6300 @Temperature -30.0 °C	6300 @Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
	65.0 J	47.9 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Tensile Creep Modulus, 1 hour	2200 MPa	319000 psi	ISO 899-1
Tensile Creep Modulus, 1000 hours	1900 MPa	276000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	65.0 µm/m-°C	36.1 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	Melt
Thermal Conductivity	0.173 W/m-K	1.20 BTU-in/hr-ft ² -°F	Melt
Deflection Temperature at 0.46 MPa (66 psi)	135 °C	275 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	123 °C	253 °F	ISO 75-1/-2
Vicat Softening Point	143 °C	289 °F	50°C/h 50N; ISO 306
Glass Transition Temp, Tg	144 °C	291 °F	ISO 11357-1/-2
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Optical Properties	Metric	English	Comments
Transmission, Visible	89 %	89 %	ISO 13468-1, -2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	3.0	3.0	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.1	3.1	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
Dissipation Factor	0.00050	0.00050	IEC 60250

Electrical Properties	@Frequency 100 Hz Metric	@Frequency 100 Hz English	Comments
	0.0090	0.0090	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	250 V	250 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	290 °C	554 °F	Injection Molding; ISO 294
	280 - 320 °C	536 - 608 °F	
Mold Temperature	80.0 °C	176 °F	Injection Molding; ISO 10724
	80.0 - 120 °C	176 - 248 °F	
Ejection Temperature	130 °C	266 °F	
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	India	
	Near East/Africa	
	South and Central America	
Eff. thermal diffusivity (m ² /s)	1E-07	
Feature	Light stabilised or stable to light	
	Release agent	
	U.V. stabilised or stable to weather	
Form	Pellets	
Process	Injection Molding	

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