

Covestro Makrolon® Rx1805 Polycarbonate

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

Material Notes:

ISO 7391-PC,M,(,)-09-9Global gradeMVR (300 °C/1.2 kg) 6.0 cm³/10 minMedical devicesLipid resistantuitable for sterilization with high-energy radiationComplies with the requirements of FDA-modified ISO 10993-1 and USP Class VIHigh viscosityInjection molding - Melt temperature 280 - 320 °CAvailable in color code 451118 onlyTransparent parts for medical devicesPreprocessingMax. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-Rx1805-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
	1.02 g/cc @Temperature 300 °C	0.0368 lb/in ³ @Temperature 572 °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	6.1 g/10 min	6.1 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	6.3 %	6.3 %	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	5700	5700	Puncture - maximum force (N); ISO 6603-2
	6600 @Temperature -30.0 °C	6600 @Temperature -22.0 °F	

Mechanical Properties	Metric	English	Comments
	70.0 J	51.6 ft-lb	ISO 6603-2
	@Temperature -30.0 °C	@Temperature -22.0 °F	

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)	138 °C	280 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	126 °C	259 °F	ISO 75-1/-2
Vicat Softening Point	144 °C	291 °F	50°C/h 50N; ISO 306
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Optical Properties	Metric	English	Comments
Transmission, Visible	80 %	80 %	transparent; thickness unknown

Processing Properties	Metric	English	Comments
Melt Temperature	280 - 320 °C	536 - 608 °F	
	300 °C	572 °F	Injection Molding; ISO 294
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	

Descriptive Properties	Value <small>America</small>	Comments
		South and Central America
Eff. thermal diffusivity (m ² /s)	1E-07	
Form	Pellets	
Process	Injection Molding	

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