

Covestro Makrolon® 1095 Polycarbonate, 15% Glass Filled

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 20% Glass Filled

Material Notes:

ISO 7391-PC,MR,(,)-09-9,GF15Global gradeMVR (300 °C/1.2 kg) 6.0 cm3/10 min15 % Glass fiber reinforcedHigh viscosityEasy releaseinjection molding - Melt temperature 310 - 330 °CExtrusionAvailable in opaque colors onlyHousings for power toolsPreprocessingMax. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-1095-Polycarbonate-15-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.29 g/cc	0.0466 lb/in ³	ISO 1183
	1.10 g/cc @Temperature 300 °C	0.0397 lb/in ³ @Temperature 572 °F	Melt
Water Absorption	0.24 %	0.24 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.10 %	0.10 %	Similar to ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ISO 294-4,2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ISO 294-4,2577
Melt Flow	6.6 g/10 min	6.6 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 at Break	45.0 MPa	6530 psi	ISO 527-1/-2
Elongation at Break	12 %	12 %	ISO 527-1/-2
Tensile Modulus	4.60 GPa	667 ksi	ISO 527-1/-2
Impact	3600	3600	Puncture - maximum force (N); ISO 6603-2
	2700 @Temperature -30.0 °C	2700 @Temperature -22.0 °F	
Puncture Energy	20.0 J	14.8 ft-lb	ISO 6603-2
	10.0 J @Temperature -30.0 °C	7.38 ft-lb @Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	35.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	19.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	65.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	36.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
Specific Heat Capacity	1.55 $\text{J}/\text{g}\cdot^{\circ}\text{C}$	0.370 $\text{BTU}/\text{lb}\cdot^{\circ}\text{F}$	Melt
Thermal Conductivity	0.198 $\text{W}/\text{m}\cdot\text{K}$	1.37 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	Melt
Deflection Temperature at 0.46 MPa (66 psi)	142 $^{\circ}\text{C}$	288 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	136 $^{\circ}\text{C}$	277 $^{\circ}\text{F}$	ISO 75-1/-2
Vicat Softening Point	144 $^{\circ}\text{C}$	291 $^{\circ}\text{F}$	50 $^{\circ}\text{C}/\text{h}$ 50N; ISO 306
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	27 %	27 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+13$ ohm-cm	$\geq 1.00\text{e}+13$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	IEC 60093
Dielectric Constant	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	36.0 kV/mm	914 kV/in	IEC 60243-1
Dissipation Factor	0.0010	0.0010	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0090	0.0090	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Comparative Tracking Index	175 V	175 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	300 °C	572 °F	Injection Molding; ISO 294
	310 - 330 °C	590 - 626 °F	
Mold Temperature	80.0 - 130 °C	176 - 266 °F	
	110 °C	230 °F	Injection Molding; ISO 10724
Ejection Temperature	140 °C	284 °F	
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties	Value	Comments
Availability	Asia Pacific	
	Europe	
	India	
	Near East/Africa	
	North America	
	South and Central America	
Eff. thermal diffusivity (m ² /s)	1.17E-07	
Feature	Release agent	
Form	Pellets	
Process	Injection Molding	
	Other Extrusion	

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