Covestro Makrolon® 9415 Polycarbonate, 10% Glass Filled

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 10% Glass Filled

Material Notes:

ISO 7391-PC,MFR,(„)-09-9,GF10Global gradeMVR (300 °C/1.2 kg) 6.0 cm3/10 min10 % Glass fiber reinforcedChlorine- and bromine-free flame retardantUL 94V-0/1.5 mm and 5VA/3.0 mmHigh viscosityEasy releaseInjection molding - Melt temperature 310 - 330 °CAvailable in opaque colors onlyPreprocessingMax. Water content

Order this product through the following link:
http://www.lookpolymers.com/polymer_Covestro-Makrolon-9415-Polycarbonate-10-Glass-Filled.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in³	ISO 1183
	1.08 g/cc @Temperature 300 °C	0.0390 lb/in³ @Temperature 572 °F	Melt
Water Absorption	0.26 %	0.26 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.10 %	0.10 %	Similar to ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	ISO 294-4,2577
Linear Mold Shrinkage, Transverse	0.0050 cm/cm	0.0050 in/in	ISO 294-4,2577
Melt Flow	6.5 g/10 min @Load 1.20 kg, Temperature 300 °C	6.5 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	ISO 527-1/-2
Elongation at Break	15 %	15 %	ISO 527-1/-2
Tensile Modulus	3.80 GPa	551 ksi	ISO 527-1/-2
Impact	4000	4000	Puncture - maximum force (N); ISO 6603-2
	3700 @Temperature -30.0 °C	3700 @Temperature -22.0 °F	Puncture - maximum force (N); ISO 6603-2
Puncture Energy	25.0 J	18.4 ft-lb	ISO 6603-2
	15.0 J @Temperature -30.0 °C	11.1 ft-lb @Temperature -22.0 °F	ISO 6603-2
Tensile Creep Modulus, 1 hour	3600 MPa	522000 psi	ISO 899-1

Mechanical Properties	Metric	English	Comments
Tensile Creep Modulus, 1000 hours	2000 MPa	421000 psi	ISO 899-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 µm/m-°C	22.2 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	1.60 J/g-°C	0.382 BTU/lb-°F	Melt
Thermal Conductivity	0.191 W/m-K	1.33 BTU-in/hr-ft²-°F	Melt
Deflection Temperature at 0.46 MPa (66 psi)	142 °C	288 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	136 °C	277 °F	ISO 75-1/-2
Vicat Softening Point	145 °C	293 °F	50°C/h 50N; ISO 306
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	IEC 60695-11-10
	V-0 @Thickness 3.00 mm	V-0 @Thickness 0.118 in	IEC 60695-11-10
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	IEC 60695-11-20
Oxygen Index	35 %	35 %	ISO 4589-1/-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	3.2 @Frequency 100 Hz	3.2 @Frequency 100 Hz	IEC 60250
	3.2 @Frequency 1.00e+6 Hz	3.2 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	36.0 kV/mm	914 kV/in	IEC 60243-1
Dissipation Factor	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	IEC 60250
	0.0090	0.0090	

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
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 (m²/s)	1.11E-07	
Feature	Release agent	
Form	Pellets	
Process	Injection Molding	
	Other Extrusion	

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