Covestro Makrolon® 1899* Polycarbonate, Impact Grade

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Impact Modified

Material Notes:

Formerly Makrolon DP1-1899MVR (300 °C/1.2 kg) 15.5 cm³/10 minspecial flame retardant systemUL 94V-0/0.75 mmImpact modifiedMedium viscosityEasy releaseVicat softening temperature 50 N; 50 °C/h = 110 °CInjection molding - Melt temperature 240 - 280 °CAvailable in opaque colors onlybattery housing PreprocessingMax. Water content

Order this product through the following link:
http://www.lookpolymers.com/polymer_Covestro-Makrolon-1899-Polycarbonate-Impact-Grade.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in³	ISO 1183
	1.02 g/cc @Temperature 290 °C	0.0368 lb/in³ @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	0.0060 cm/cm	0.0060 in/in	ISO 294-4,2577
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	ISO 294-4,2577
Melt Flow	16 g/10 min @Load 1.20 kg, Temperature 300 °C	16 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	68.0 MPa	9860 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	4.8 %	4.8 %	ISO 527-1/-2
Tensile Modulus	2.60 GPa	377 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	4500	4500	Puncture - maximum force (N); ISO 6603-2
	5400 @Temperature -30.0 °C	5400 @Temperature -22.0 °F	Puncture - maximum force (N); ISO 6603-2

Mechanical Properties	Metric	English	Comments
	55.0 J @Temperature -30.0 °C	40.6 ft-lb @Temperature -22.0 °F	ISO 6603-2

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 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-ft²-°F	Melt
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	96.0 °C	205 °F	ISO 75-1/-2
Vicat Softening Point	110 °C	230 °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 0.800 mm	V-0 @Thickness 0.0315 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
Comparative Tracking Index	250 V	250 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	240 - 280 °C	464 - 536 °F	
	290 °C	554 °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	
	North America	
Eff. thermal diffusivity (m²/s)	1E-07	
Feature	Release agent	
Process	Injection Molding	

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