Covestro Makrolon® SF810 Polycarbonate, Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 10% Glass Filled , Polycarbonate, Foam Grade, Glass Filled , Polycarbonate, Glass Fiber Filled, Flame Retardant

Material Notes:

Main characteristics:• High toughness• Good heat resistance• Glass-like transparency, optical quality• High dimensional accuracy and stabilityGrade characteristics:• Structural foam• 10% glass fiber• Flame retardant• Easy releaseAs of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Covestro-Makrolon-SF810-Polycarbonate-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in³	ISO 1183-1
Moisture Absorption at Equilibrium	0.10 %	0.10 %	ISO 62, 50% RH
Water Absorption at Saturation	0.26 %	0.26 %	ISO 62
Linear Mold Shrinkage, Flow	0.0065 cm/cm @Thickness 2.00 mm	0.0065 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4
Linear Mold Shrinkage, Transverse	0.0045 cm/cm @Thickness 2.00 mm	0.0045 in/in @Thickness 0.0787 in	60x60x2 mm; 500 bar; ISO 294-4

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	5 mm/min; ISO 527-1,-2
Tensile Strength, Yield	64.0 MPa	9280 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	15 %	15 %	5 mm/min; ISO 527-1,-2
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	3.80 GPa	551 ksi	1 mm/min; ISO 527-1,-2
Flexural Strength	105 MPa	15200 psi	2 mm/min; ISO 178
Flexural Modulus	3.60 GPa	522 ksi	2 mm/min; ISO 178
Izod Impact, Notched (ISO)	8.00 kJ/m² @Temperature 23.0 °C	3.81 ft-lb/in² @Temperature 73.4 °F	complete break; b.o. ISO 180-A
	8.00 kJ/m² @Temperature -30.0 °C	3.81 ft-lb/in² @Temperature -22.0 °F	complete break; b.o. ISO 180-A

Thermal Properties	Metric	English	Comments

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	ISO 11359-1,-2
CTE, linear, Transverse to Flow	65.0 µm/m-°C @Temperature 23.0 - 55.0 °C	36.1 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1,-2
Deflection Temperature at 0.46 MPa (66 psi)	140 °C	284 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	ISO 75-1,-2
Vicat Softening Point	145 °C @Load 5.10 kg	293 °F @Load 11.2 lb	50°C/h; ISO 306
Oxygen Index	35 %	35 %	Method A; ISO 4589-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Surface Resistance	1.00e+16 ohm	1.00e+16 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 @Thickness 1.00 mm	914 kV/in @Thickness 0.0394 in	IEC 60243-1
Comparative Tracking Index	175 V	175 V	Solution A; IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	310 °C	590 °F	Injection molding; ISO 294
Mold Temperature	110 °C	230 °F	Injection molding; ISO 294
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

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