

Makrolon® M830 GF

 Covestro - Polycarbonates - *Polycarbonate*
General Information
Product Description

polycarbonate; MVR (300 °C/1.2 kg) 3.0 cm³/10 min; high viscosity; 30 % Glass fiber reinforced; biocompatible according to many ISO 10993-1 test requirements; injection molding; available in opaque colors only; suitable for medical devices

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight
Features	• Biocompatible • High Viscosity
Uses	• Medical Devices • Medical/Healthcare Applications
Agency Ratings	• ISO 10993-1 • USP Class VI
RoHS Compliance	• RoHS Compliant
Appearance	• Colors Available • Opaque
Processing Method	• Injection Molding
ISO Designation	• PC-GF30

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.42	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	3.0	cm³/10min	ISO 1133
Molding Shrinkage ²			ISO 294-4
Across Flow : 0.0787 in	0.55	%	
Flow : 0.0787 in	0.20	%	
Water Absorption (Saturation, 73°F)	0.26	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.10	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	1.13E+6	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	17500	psi	ISO 527-2/5
Tensile Strain (Yield, 73°F)	3.3	%	ISO 527-2/5
Flexural Modulus ³ (73°F)	1.13E+6	psi	ISO 178
Flexural Stress ³ (73°F)	28300	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ⁴			ISO 180/A
-22°F	7.6	ft·lb/in²	
73°F	8.6	ft·lb/in²	
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	297	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	288	°F	ISO 75-2/A
Vicat Softening Temperature	304	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	1.1E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	2.2E-5	in/in/°F	ISO 11359-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Viscosity (572°F, 1000 sec ⁻¹)	660	Pa·s	ISO 11443-A

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Dry Air Dryer	248	°F



Drying Time - Dry Air Dryer	4.0 hr
Processing (Melt) Temp	590 °F
Mold Temperature	212 °F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 60x60x2mm

³ 0.079 in/min

⁴ 3.0 mm

