Makrolon® M820 GF

Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description			
polycarbonate; MVR (300 °C/1.2 kg) 3.5 cm³/10 min; high viscosity; 20 % 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 • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 20% 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-GF20		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density (73°F)	1.34	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	3.5	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 294-4
Across Flow : 0.0787 in	0.55	%	
Flow : 0.0787 in	0.30	%	
Water Absorption (Saturation, 73°F)	0.28	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.11	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	812000	psi	ISO 527-1/1
Tensile Stress (Break, 73°F)	14500	psi	ISO 527-2/5
Tensile Strain (Break, 73°F)	4.0	%	ISO 527-2/5
Flexural Modulus [3] (73°F)	841000	psi	ISO 178
Flexural Stress [3] (73°F)	24400	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength [4]			ISO 180/A
-22°F	6.7	ft·lb/in²	
73°F	7.6	ft·lb/in²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	295	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	284	°F	ISO 75-2/A
Vicat Softening Temperature	302	°F	ISO 306/B120
CLTE - Flow (73 to 131°F)	1.7E-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

塑料专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168

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

塑料专家 www.ponci.com.cn/wxb/ +13538586433 +18816996168