

Makrolon® 2608

 Covestro - Polycarbonates - *Polycarbonate*
General Information
Product Description

MVR (300°C/1.2 kg) 12 cm³/10 min; medical devices; suitable for ETO and steam sterilization at 121°C; biocompatible according to many ISO 10993-1 test requirements; medium viscosity; injection molding - melt temperature 280 - 320°C; available in color code 000000 only

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Features	• Biocompatible • Ethylene Oxide Sterilizable • Medium Viscosity • Steam Sterilizable
Uses	• Medical Devices • Medical/Healthcare Applications
Agency Ratings	• ISO 10993-1 • USP Class VI
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding
ISO Designation	• ISO 7391-PC,M,(,)-18-9

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.20	g/cm ³	ISO 1183
Apparent (Bulk) Density ²	0.66	g/cm ³	ISO 60
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	13	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	12	cm ³ /10min	ISO 1133
Molding Shrinkage			
Across Flow	0.60 to 0.80	%	ISO 2577
Flow	0.60 to 0.80	%	ISO 2577
Across Flow : 536°F, 0.0787 in ³	0.70	%	ISO 294-4
Flow : 0.0787 in ³	0.65	%	ISO 294-4
Water Absorption (Saturation, 73°F)	0.30	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.12	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	341000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9430	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	10200	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	6.3	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	120	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/50
Tensile Creep Modulus (1 hr)	319000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	276000	psi	ISO 899-1
Flexural Modulus ⁴ (73°F)	341000	psi	ISO 178
Flexural Stress ⁴			ISO 178
73°F	13900	psi	
3.5% Strain, 73°F	10400	psi	
Flexural Strain at Flexural Strength ⁵ (73°F)	7.0	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁶			ISO 179/1eA
-22°F, Complete Break	7.6	ft·lb/in ²	



73°F, Partial Break	33 ft·lb/in ²	
Charpy Unnotched Impact Strength		ISO 179/1eU
-76°F	No Break	
-22°F	No Break	
73°F	No Break	
Notched Izod Impact Strength ⁶		ISO 180/A
-22°F, Complete Break	7.1 ft·lb/in ²	
73°F, Partial Break	31 ft·lb/in ²	
Multi-Axial Instrumented Impact Energy		ISO 6603-2
-22°F	47.9 ft·lb	
73°F	44.3 ft·lb	
Multi-Axial Instrumented Impact Peak Force		ISO 6603-2
-22°F	1420 lbf	
73°F	1210 lbf	
Hardness	Nominal Value	Unit
Ball Indentation Hardness	16400	psi
Thermal	Nominal Value	Unit
Deflection Temperature Under Load (66 psi, Unannealed)	282	°F
Deflection Temperature Under Load (264 psi, Unannealed)	261	°F
Glass Transition Temperature ⁷	298	°F
Vicat Softening Temperature		
--	297	°F
--	295	°F
Ball Pressure Test (280°F)	Pass	IEC 60695-10-2
CLTE - Flow (73 to 131°F)	3.6E-5	in/in/°F
CLTE - Transverse (73 to 131°F)	3.6E-5	in/in/°F
Thermal Conductivity ⁸ (73°F)	1.4	Btu·in/hr/ft ² /°F
Flammability	Nominal Value	Unit
Flash Ignition Temperature	896	°F
Self Ignition Temperature	1022	°F
Optical	Nominal Value	Unit
Refractive Index ⁹	1.586	
Light Transmittance		ISO 13468-2
39.37 mil	89.0	%
78.74 mil	89.0	%
118.1 mil	88.0	%
157.5 mil	87.0	%
Haze (118.1 mil)	< 0.800	%

Processing Information

	Nominal Value	Unit
Injection		
Drying Temperature - Dry Air Dryer	248	°F
Drying Time - Dry Air Dryer	4.0	hr
Suggested Max Moisture	< 0.020	%
Suggested Shot Size	30 to 70	%
Rear Temperature	482 to 518	°F
Middle Temperature	518 to 554	°F
Front Temperature	545 to 581	°F
Nozzle Temperature	518 to 581	°F
Processing (Melt) Temp	536 to 608	°F
Mold Temperature	158 to 230	°F
Back Pressure	1450 to 2900	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Peripheral Screw Speed: 0.05 - 0.2 m/s
 Hold Pressure (% of Injection Pressure): 50 - 75%
 Standard Melt Temperature: 300°C

Notes

Properties: these are not to be construed as specifications.

n, 500 bar

⁴ 0.079 in/min

⁵ 2.0 mm/min

⁶ 3 mm

⁷ 10°C/min

⁸ Across Flow

⁹ Method A

