Makrolon® 2408

Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description

MVR (300°C/1.2 kg) 19 cm³/10 min; medical devices; suitable for ETO and steam sterilization at 121°C; biocompatible according to many ISO 10993-1 test requirements; low 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	• Low 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/cm³	ISO 1183
Apparent (Bulk) Density [2]	0.66	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	19	cm³/10min	ISO 1133
Molding Shrinkage			
Across Flow	0.50 to 0.70	%	ISO 2577
Flow	0.50 to 0.70	%	ISO 2577
Across Flow : 536°F, 0.0787 in [3]	0.65	%	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	6.7	ft·lb/in²	

73°F, Partial Break	31	ft·lb/in²	
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/in²	
73°F, Partial Break	31	ft·lb/in²	
Multi-Axial Instrumented Impact Energy			ISO 6603-2
-22°F	47.9	ft·lb	
73°F	40.6	ft·lb	
Multi-Axial Instrumented Impact Peak Force			ISO 6603-2
-22°F	1350	lbf	
73°F	1150	lbf	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness	16400	psi	ISO 2039-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	282	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	261	°F	ISO 75-2/A
Glass Transition Temperature [7]	297	°F	ISO 11357-2
Vicat Softening Temperature			
--	298	°F	ISO 306/B120
--	297	°F	ISO 306/B50
Ball Pressure Test (280°F)	Pass		IEC 60695-10-2
CLTE - Flow (73 to 131°F)	3.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.6E-5	in/in/°F	ISO 11359-2
Thermal Conductivity [8] (73°F)	1.4	Btu·in/hr/ft²/°F	ISO 8302
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flash Ignition Temperature	896	°F	ASTM D1929
Self Ignition Temperature	1022	°F	ASTM D1929
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index [9]	1.586		ISO 489
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	%	ISO 14782

Notes

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

[2] Pellets

[3] 60x60x2mm, 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