

Makrolon® EM9417

Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description

MVR (300°C/1.2 kg) 6.0 cm³/10 min; 10 % glass fiber reinforced; flame retardant; high viscosity; UV stabilized; easy release; injection molding - melt temperature 310 - 330°C; available in opaque colors only

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight
Additive	• Flame Retardant • UV Stabilizer
Features	• Flame Retardant • High Viscosity • Good Mold Release • UV Stabilized
RoHS Compliance	• RoHS Compliant
Appearance	• Colors Available • Opaque
Processing Method	• Injection Molding

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.27	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	6.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Across Flow	0.40 to 0.60	%	ISO 2577
Flow	0.40 to 0.60	%	ISO 2577
Across Flow : 536°F, 0.0787 in ²	0.50	%	ISO 294-4
Flow : 0.0787 in ²	0.60	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	537000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	8700	psi	ISO 527-2/5
Tensile Stress (Break, 73°F)	6530	psi	ISO 527-2/5
Tensile Strain (Yield, 73°F)	5.0	%	ISO 527-2/5
Tensile Strain (Break, 73°F)	15	%	ISO 527-2/5
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (73°F, Complete Break)	36	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	286	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	275	°F	ISO 75-2/A
Vicat Softening Temperature			
--	291	°F	ISO 306/B120
--	289	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	2.2E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.3E-5	in/in/°F	ISO 11359-2
RTI Elec (0.06 in)	257	°F	UL 746B
RTI Imp (0.06 in)	239	°F	UL 746B
RTI Str (0.06 in)	257	°F	UL 746B
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	1.0E+16	ohms·cm	IEC 60093
Comparative Tracking Index (Solution A)	175	V	IEC 60112



Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	V-0		UL 94
Glow Wire Flammability Index (0.06 in)	1760	°F	IEC 60695-2-12
Oxygen Index ³	35	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature - Dry Air Dryer	248	°F
Drying Time - Dry Air Dryer	2.0 to 3.0	hr
Suggested Max Moisture	< 0.020	%
Suggested Shot Size	30 to 70	%
Rear Temperature	482 to 500	°F
Middle Temperature	518 to 536	°F
Front Temperature	536 to 554	°F
Nozzle Temperature	554 to 572	°F
Processing (Melt) Temp	536 to 608	°F
Mold Temperature	176 to 248	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

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

Notes

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

² 60x60x2mm, 500 bar

³ Procedure A

