Makrolon® GF9002

Polycarbonate

Covestro - Polycarbonates

Message:

MVR (300 °C/1.2 kg) 15 cm³/10 min; 10 % glass fiber reinforced; flame retardant; UL 94V-0/1.2 mm; low viscosity; easy release; injection molding - melt temperature 310 - 330 °C; available in opaque colors only; electrical/electronic; housing parts with low wall thickness

General Information			
UL YellowCard	E41613-100057642		
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Additive	Flame Retardant		
Features	Flame Retardant Good Mold Release Low Viscosity		
Uses	Electrical/Electronic Applications Housings Thin-walled Parts		
RoHS Compliance	RoHS Compliant		
Appearance	Colors Available Opaque		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density (23°C)	1.27	g/cm³	ISO 1183
Apparent Density [1]	0.64	g/cm³	ISO 60
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	17	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	15.0	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 294-4
Across Flow : 2.00 mm	0.45	%	
Flow : 2.00 mm	0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.10	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (23°C)	3900	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/5
Yield, 23°C	60.0	MPa	
Break, 23°C	45.0	MPa	

Tensile Strain			ISO 527-2/5
Yield, 23°C	4.5	%	
Break, 23°C	10	%	
Flexural Modulus [3] (23°C)	3700	MPa	ISO 178
Flexural Stress [4]			ISO 178
3.5% Strain,23°C	90.0	MPa	
23°C	105	MPa	
Flexural Strain at Flexural Strength [5] (23°C)	5.8	%	ISO 178
Burning Rate - US-FMVSS (> 1.00 mm)	passed		ISO 3795
ISO Shortname	ISO 7391-PC,MFR,(,,)-18-9,GF10		
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength [6] (23°C, Complete Break)	8.0	kJ/m^2	ISO 7391
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	> 40	kJ/m^2	
23°C, Complete Break	> 100	kJ/m^2	
Multi-Axial Instrumented Impact Energy (23°C)	16.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force (23°C)	3200	N	ISO 6603-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Unannealed)	132	°C	ISO 75-2/A
Vicat Softening Temperature			
--	141	°C	ISO 306/B50
--	142	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 55°C	4.0E-5	cm/cm/°C	
Transverse : 23 to 55°C	6.0E-5	cm/cm/°C	
RTI Elec (0.750 mm)	80.0	°C	UL 746
RTI Imp (0.750 mm)	80.0	°C	UL 746
RTI Str (0.750 mm)	80.0	°C	UL 746
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	36	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	3.20		
23°C, 1 MHz	3.20		
Dissipation Factor			IEC 60250
23°C, 100 Hz	1.0E-3		
23°C, 1 MHz	9.0E-3		
Comparative Tracking Index			IEC 60112

Solution A	175	V	
Solution B	125	V	
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.750 mm	V-1		
1.20 mm	V-0		
Glow Wire Flammability Index			IEC 60695-2-12
0.750 mm	960	°C	
1.50 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature			IEC 60695-2-13
1.50 mm	800	°C	
3.00 mm	875	°C	
Oxygen Index [7]	37	%	ISO 4589-2

NOTE	
1.	Pellets
2.	60x60x2 mm, 500 bar
3.	2.0 mm/min
4.	2.0 mm/min
5.	2 mm/min
6.	Based on ISO 179-1eA, 3 mm
7.	Procedure A

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

WECHAT