

Apec® 2097

Polycarbonate
Covestro - Polycarbonates

Message:

MVR (330°C/2.16kg) 8 cm³/10 min; high viscosity; easy release; UV stabilized; 'softening temperature (VST/B 120)=202 °C; injection molding - melt temperature 330 - 340°C; Lamp covers; Headlamp lenses

General Information			
UL YellowCard	E41613-486027		
Additive	UV Stabilizer		
Features	Good Flow		
	Good Mold Release		
	High Viscosity		
Uses	Automotive Applications		
	Lenses		
	Lighting Applications		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.13	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	8.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	8.00	cm³/10min	ISO 1133
Molding Shrinkage ¹			ISO 294-4
Across Flow : 2.00 mm	0.90	%	
Flow : 2.00 mm	0.90	%	
Water Absorption			ISO 62
Saturation, 23°C	0.30	%	
Equilibrium, 23°C, 50% RH	0.12	%	
Hardness	Nominal Value	Unit	Test Method
Ball Indentation Hardness	130	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2450	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	76.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	6.9	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ² (23°C)	2450	MPa	ISO 178
Flexural Stress ³ (23°C)	110	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	191	°C	ISO 75-2/B
1.8 MPa, Unannealed	172	°C	ISO 75-2/A
Vicat Softening Temperature	202	°C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 23 to 55°C	6.5E-5	cm/cm/°C	
Transverse : 23 to 55°C	6.5E-5	cm/cm/°C	
RTI Elec	150	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	150	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+17	ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	35	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
23°C, 100 Hz	2.90		
23°C, 1 MHz	2.80		
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	600	V	
Solution B	100	V	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Glow Wire Flammability Index	800	°C	IEC 60695-2-12
Oxygen Index ⁴	25	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index ⁵	1.566		ISO 489
Transmittance (1000 µm)	89.0	%	ISO 13468-2
Additional Information	Nominal Value		Test Method
Electrolytical Corrosion (23°C)	A1		IEC 60426
NOTE			
1.	60x60x2 mm		
2.	2.0 mm/min		
3.	2.0 mm/min		
4.	Procedure A		

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