

Apec® 1695

Polycarbonate
Covestro - Polycarbonates

Message:

MVR (330°C/2.16kg) 45 cm³/10 min; easy release; softening temperature (VST/B 120)=158 °C; injection molding - melt temperature 320 - 340°C; Covers for brake lights and indicator lights; Headlamp reflectors/bezels

General Information			
UL YellowCard	E41613-508367		
Features	Good Flow		
	Good Mold Release		
Uses	Automotive Applications		
	Automotive Backlights		
	Lighting Applications		
	Reflectors		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.18	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	46	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	45.0	cm³/10min	ISO 1133
Molding Shrinkage ¹			ISO 294-4
Across Flow : 2.00 mm	0.75	%	
Flow : 2.00 mm	0.75	%	
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	120	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2400	MPa	ISO 527-2/1
Tensile Stress (Yield, 23°C)	68.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	6.2	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ² (23°C)	2400	MPa	ISO 178
Flexural Stress ³ (23°C)	100	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	150	°C	ISO 75-2/B
1.8 MPa, Unannealed	138	°C	ISO 75-2/A
Vicat Softening Temperature	158	°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	140	°C	UL 746
RTI Imp	130	°C	UL 746
RTI Str	140	°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	3.00		
23°C, 1 MHz	2.90		
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	250	V	
Solution B	125	V	
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	HB		
3.00 mm	HB		
Glow Wire Flammability Index (2.00 mm)	900	°C	IEC 60695-2-12
Oxygen Index ⁴	26	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index ⁵	1.578		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
5.	Method A

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