Apec® 1895

Covestro - Polycarbonates - *Polycarbonate*

General Information

Product Description			
Copolycarbonate; MVR (330 °C/2.16 kg) 18 cm³/10 min; easy release; 'softening temperature (VST/B 120) = 183°C			
General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• High Heat Resistance		
Uses	• Appliances • Automotive Applications • Automotive Exterior Parts • Automotive Lighting	• Electrical/Electronic Applications • Housings • Insulation • LEDs	• Lighting Applications • Telecommunications
Resin ID (ISO 1043)	• PC-HT		

Properties [1]

Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.15	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (330°C/2.16 kg)	19	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (330°C/2.16 kg)	18	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 294-4
Across Flow : 0.0787 in	0.85	%	
Flow : 0.0787 in	0.85	%	
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	341000	psi	ISO 527-1/1
Tensile Stress (Yield)	10400	psi	ISO 527-2/50
Tensile Strain (Yield)	6.7	%	ISO 527-2/50
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/50
Flexural Modulus [3]	348000	psi	ISO 178
Flexural Stress [3]	15700	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness	18400	psi	ISO 2039-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	345	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	315	°F	ISO 75-2/A
Vicat Softening Temperature	361	°F	ISO 306/B120
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
RTI Elec	302	°F	UL 746B
RTI Imp	266	°F	UL 746B
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	IEC 60093

Surface Resistivity	1.0E+16	ohms	IEC 62631-3-2
Volume Resistivity	1.0E+17	ohms·cm	IEC 60093
Volume Resistivity	1.0E+15	ohms·m	IEC 62631-3-1
Electric Strength (0.0394 in)	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	2.90		
1 MHz	2.80		
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		
1 MHz	8.0E-3		
Comparative Tracking Index			IEC 60112
Solution A	300	V	
Solution B [4]	100	V	
Electrolytic Corrosion	A1		IEC 60426
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.06 in)	HB		UL 94
Glow Wire Flammability Index	1560	°F	IEC 60695-2-12
Oxygen Index [5]	25	%	ISO 4589-2
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index [6]	1.573		ISO 489
Light Transmittance (39.37 mil)	89.0	%	ISO 13468-2
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Test Specimen Production			ISO 294
Inj. Molding - Injection Velocity	472	in/min	
Inj. Molding - Melt Temperature	626	°F	
Inj. Molding - Mold Temperature	212	°F	

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature - Dry Air Dryer	266	°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	563 to 581	°F
Middle Temperature	581 to 599	°F
Front Temperature	599 to 617	°F
Nozzle Temperature	617 to 635	°F
Melt Temperature (Optimum)	635	°F
Mold Temperature	248 to 284	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in
Holding Pressure - % of Inj. Pressure	50 to 75	%
Peripheral Screw Speed	2 to 8	in/sec

Notes

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

[2] 60×60×2 mm

[3] 0.079 in/min

[4] CTI M

[5] Procedure A

[6] Method A