

Covestro Apec® DP1-9354/1 Polycarbonate, Flame Retardant Grade

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

Material Notes:

Developmental product flame retardant: V-0/3,2mm (UL 94)V-2/1,5mm (UL 94), softening temperature (VST/B 120)=185 °C also available in transparent colors Preprocessing Max. Water content

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Apec-DP1-93541-Polycarbonate-Flame-Retardant-Grade.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	ISO 1183
	0.980 g/cc @Temperature 330 °C	0.0354 lb/in ³ @Temperature 626 °F	Melt
Water Absorption	0.30 %	0.30 %	Similar to ISO 62
Moisture Absorption at Equilibrium	0.12 %	0.12 %	Similar to ISO 62
Melt Flow	10 g/10 min	10 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 330 °C	@Load 4.76 lb, Temperature 626 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	72.0 MPa	10400 psi	ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	Nominal; ISO 527-1/-2
Elongation at Yield	7.0 %	7.0 %	ISO 527-1/-2
Tensile Modulus	2.40 GPa	348 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-1/-2
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	Melt
Thermal Conductivity	0.167 W/m-K	1.16 BTU-in/hr-ft ² -°F	Melt

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	174 °C	345 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	159 °C	318 °F	ISO 75-1/-2
Flammability, UL94	V-2 @Thickness 1.50 mm	V-2 @Thickness 0.0591 in	IEC 60695-11-10
Oxygen Index	35 %	35 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	IEC 60250
	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
Dissipation Factor	0.00070 @Frequency 100 Hz	0.00070 @Frequency 100 Hz	IEC 60250
	0.0080 @Frequency 1.00e+6 Hz	0.0080 @Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	275 V	275 V	IEC 60112

Processing Properties	Metric	English	Comments
Melt Temperature	320 - 340 °C	608 - 644 °F	
	330 °C	626 °F	Injection Molding; ISO 294
Mold Temperature	100 °C	212 °F	Injection Molding; ISO 10724
	120 - 140 °C	248 - 284 °F	
Ejection Temperature	165 °C	329 °F	
Injection Velocity	200 mm/sec	7.87 in/sec	ISO 294

Descriptive Properties	Value	Comments
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Availability Descriptive Properties	Europe Value	Comments
	Near East/Africa	
	South and Central America	
Eff. thermal diffusivity (m ² /s)	1E-07	
Form	Pellets	
Process	Injection Molding	

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