

Covestro Apec® DP9-9371 High-Heat Polycarbonate, General Purpose (discontinued **)

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, High Heat

Material Notes:

Information provided by Bayer Corporation, Plastics DivisionAs of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and has officially adopted its new name – Covestro. This product was discontinued prior to the separation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Apec-DP9-9371-High-Heat-Polycarbonate-General-Purpose-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.14 g/cc	0.0412 lb/in³	ASTM D792
Water Absorption	0.20 %	0.20 %	24 hr immersion; ASTM D570
Linear Mold Shrinkage	0.0080 - 0.0090 cm/cm	0.0080 - 0.0090 in/in	ASTM D955
Melt Flow	4.0 g/10 min @Load 2.16 kg, Temperature 330 °C	4.0 g/10 min @Load 4.76 lb, Temperature 626 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	91	91	ASTM D785
Hardness, Rockwell R	127	127	ASTM D785
Tensile Strength, Ultimate	57.0 MPa	8270 psi	ASTM D638
Tensile Strength, Yield	69.0 MPa	10000 psi	ASTM D638
Elongation at Break	70 %	70 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	2.20 GPa	319 ksi	ASTM D638
Flexural Yield Strength	86.0 MPa	12500 psi	ASTM D790
Flexural Modulus	2.28 GPa	331 ksi	ASTM D790
Izod Impact, Notched	0.800 J/cm @Thickness 3.17 mm	1.50 ft-lb/in @Thickness 0.125 in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256
	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ASTM D256

Mechanical Properties	Metric	English	Comments
Impact Test	62.0 J	45.70 lb	Instrumented Impact, Total Energy; 15 mph, 3 in. clamp, 0.5 in. dart;
	@Thickness 3.20 mm	@Thickness 0.126 in	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	195 $^\circ\text{C}$	383 $^\circ\text{F}$	ASTM D648
	@Thickness 3.20 mm	@Thickness 0.126 in	
Deflection Temperature at 1.8 MPa (264 psi)	179 $^\circ\text{C}$	354 $^\circ\text{F}$	ASTM D648
	@Thickness 3.17 mm	@Thickness 0.125 in	
Vicat Softening Point	205 $^\circ\text{C}$	401 $^\circ\text{F}$	Rate B; ASTM D1525
UL RTI, Electrical	150 $^\circ\text{C}$	302 $^\circ\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical with Impact	150 $^\circ\text{C}$	302 $^\circ\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	150 $^\circ\text{C}$	302 $^\circ\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Oxygen Index	24 %	24 %	ASTM D2863

Optical Properties	Metric	English	Comments
Refractive Index	1.565	1.565	ASTM D542
Haze	1.0 %	1.0 %	ASTM D1003
	@Thickness 3.17 mm	@Thickness 0.125 in	
Transmission, Visible	88 %	88 %	ASTM D1003
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+16$ ohm-cm	$\geq 1.00\text{e}+16$ ohm-cm	ASTM D257

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.8	2.8	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
	2.8	2.8	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	>= 16.0 kV/mm	>= 406 kV/in	ASTM D149
	@Thickness 3.17 mm	@Thickness 0.125 in	
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
	0.010	0.010	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Processing Properties	Metric	English	Comments
Melt Temperature	325 - 350 °C	617 - 662 °F	

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