

Covestro Apec® 1705 Polycarbonate (discontinued **)

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

Material Notes:

Key Features:Release agentUnfilledSuitable processing methods:Injection moldingFilm extrusionProfile extrusionSheet extrusionCoatingBlow moldingCalenderingTransfer moldingThermoformingInformation provided by Bayer Polymers.As 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-1705-Polycarbonate-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in ³	
Water Absorption	0.40 %	0.40 %	
Moisture Absorption at Equilibrium	0.20 %	0.20 %	23°C/50% R.H.
Melt Flow	17 g/10 min @Load 2.16 kg, Temperature 330 °C	17 g/10 min @Load 4.76 lb, Temperature 626 °F	cm ³ /10 min.

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	65.0 MPa	9430 psi	
Elongation at Break	>= 50 %	>= 50 %	Nominal
Elongation at Yield	7.0 %	7.0 %	
Tensile Modulus	2.30 GPa	334 ksi	
Charpy Impact Unnotched	NB	NB	
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	
Charpy Impact, Notched	0.900 J/cm ²	4.28 ft-lb/in ²	
	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C @Temperature 20.0 °C	38.9 µin/in-°F @Temperature 68.0 °F	

Thermal Properties	70.0 µm/m-°C Metric	38.9 µm/in-°F English	Comments
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	160 °C	320 °F	
Deflection Temperature at 1.8 MPa (264 psi)	148 °C	298 °F	
Vicat Softening Point	168 °C	334 °F	50°C/h 50N
Flammability, UL94	HB	HB	UL Recognized
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	HB	HB	UL Recognized
	@Thickness 3.00 mm	@Thickness 0.118 in	
Oxygen Index	24 %	24 %	

Optical Properties	Metric	English	Comments
Transmission, Visible	80 %	80 %	Manufacturer states transparent but does not quantify

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	
Dielectric Constant	2.9	2.9	
	@Frequency 100 Hz	@Frequency 100 Hz	
	2.9	2.9	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	35.0 kV/mm	889 kV/in	
Dissipation Factor	0.0013	0.0013	
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0081	0.0081	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	600 V	600 V	

Processing Properties	Metric	English	Comments
Melt Temperature	330 °C	626 °F	Injection Molding

Mold Temperature Processing Properties	100 °C Metric	212 °F English	Injection Molding Comments
Injection Velocity	200 mm/sec	7.87 in/sec	

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