

Covestro Makrolon® 2803 Polycarbonate, Injection Grade

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

Material Notes:

Medium flowing injection molding grade with UV stabilizer. Information provided by Bayer. As of 1 September 2015, Bayer Material Science was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Makrolon-2803-Polycarbonate-Injection-Grade.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	
Water Absorption	0.35 %	0.35 %	Saturation in water
Moisture Absorption at Equilibrium	0.15 %	0.15 %	Equilibrium at 50% RH
Water Absorption at Saturation	0.35 %	0.35 %	
Melt Flow	9.5 g/10 min	9.5 g/10 min	
	@Load 1.20 kg, Temperature 300 °C	@Load 2.65 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	63.0 MPa	9140 psi	
Elongation at Break	>= 50 %	>= 50 %	Nominal
Elongation at Yield	6.0 %	6.0 %	
Tensile Modulus	2.40 GPa	348 ksi	
Charpy Impact Unnotched	NB	NB	
Tensile Creep Modulus, 1 hour	2200 MPa	319000 psi	
Tensile Creep Modulus, 1000 hours	1900 MPa	276000 psi	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 µm/m-°C	38.9 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	138 °C	280 °F	

Thermal Properties	Metric	English	Comments
Vicat Softening Point	147 °C	297 °F	
Glass Transition Temp, Tg	148 °C	298 °F	
Flammability, UL94	V-2	V-2	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-2	V-2	
	@Thickness 2.40 mm	@Thickness 0.0945 in	
Oxygen Index	26 %	26 %	

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	DIN 5026-1
Transmission, Visible	88 %	88 %	ISO 489-A
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	>= 1.00e+15 ohm-cm	>= 1.00e+15 ohm-cm	
Surface Resistance	1.00e+15 ohm	1.00e+15 ohm	
Dielectric Constant	2.9	2.9	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.0	3.0	
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	
Dissipation Factor	0.0010	0.0010	
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.010	0.010	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	275 V	275 V	

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