



CoolPoly® E3615

Celanese Corporation - Polyamide 66

Monday, November 4, 2019

General Information

Product Description

CoolPoly E series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, net-shape moldable and allows design freedom in applications previously restricted to metals. The E series is electrically conductive and provides inherent EMI/RFI shielding characteristics.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Electrically Conductive • Electromagnetic Shielding (EMI)	• Radio Frequency Shielding (RFI) • Thermally Conductive	
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.49	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	995000	psi	ISO 527-2/1A
Tensile Stress (Break)	5080	psi	ISO 527-2/1A/5
Tensile Strain (Break)	0.70	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.07E+6	psi	ISO 178
Flexural Stress (73°F)	8990	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	0.81	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	2.5	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	460	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	338	°F	ISO 75-2/A
Thermal Conductivity			ASTM E1461
-- 2	14	Btu·in/hr/ft ² /°F	
-- 3	83	Btu·in/hr/ft ² /°F	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.7E+3	ohms	IEC 60093
Volume Resistivity	5.7	ohms·cm	IEC 60093

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	171 to 189	°F
Drying Time	2.0 to 4.0	hr
Rear Temperature	500	°F
Middle Temperature	525	°F
Front Temperature	534	°F
Nozzle Temperature	531	°F
Processing (Melt) Temp	534 to 545	°F

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Injection	Nominal Value	Unit
Mold Temperature	239 to 250	°F

Injection Notes

Feeding zone temperature: 40 to 47°C

Notes

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

² Thruplane

³ Flow