

# CoolPoly® E8103

Thermoplastic Elastomer

Celanese Corporation

## Message:

CoolPoly E series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape 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 Information			
Features	Electrically Conductive		
	Electromagnetic Shielding (EMI)		
	Good Moldability		
	Radio Frequency Shielding (RFI)		
	Thermally Conductive		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm³	ISO 1183
Molding Shrinkage			ASTM D551
Flow	1.5	%	
Across Flow	2.1	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore A)	38		ISO 48
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	1.28	MPa	ISO 37
Tensile Elongation (Break)	57	%	ISO 37
Tear Strength <sup>1</sup>	14	kN/m	ISO 34-1
Thermal	Nominal Value	Unit	Test Method
Specific Heat	1940	J/kg/°C	ASTM E1461
Thermal Conductivity	5.0	W/m/K	ASTM E1461
Thermal Diffusivity	0.0249	cm²/s	ASTM E1461
Injection	Nominal Value	Unit	
Drying Temperature	65.0	°C	
Drying Time	1.0 to 2.0	hr	
Rear Temperature	175 to 190	°C	
Middle Temperature	190 to 205	°C	
Front Temperature	195 to 215	°C	
Nozzle Temperature	195 to 215	°C	
Processing (Melt) Temp	190 to 215	°C	

Mold Temperature	20.0 to 45.0	°C
Injection Pressure	4.10 to 8.30	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	1.40 to 4.10	MPa
Back Pressure	0.00 to 0.700	MPa
Screw Speed	50 to 150	rpm

NOTE

1. Method Bb, Angle (Nicked)

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Recommended distributors for this material


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