

CoolPoly® D8104

Thermoplastic Elastomer

Celanese Corporation

Message:

CoolPoly D 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 ceramics. The D series is electrically non-conductive and can be used for its dielectric properties.

General Information			
Features	Good Moldability		
	Thermally Conductive		
RoHS Compliance	RoHS Compliant		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.48	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	31.9	MPa	ISO 37
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (Yield)	2.52	MPa	ISO 37
Tensile Elongation (Break)	150	%	ISO 37
Thermal	Nominal Value	Unit	Test Method
Specific Heat	1390	J/kg/°C	ASTM E1461
Thermal Conductivity	1.3	W/m/K	ASTM E1461
Thermal Diffusivity	0.00632	cm ² /s	
Flammability	Nominal Value		Test Method
Flame Rating (0.500 mm)	V-0		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	65.0	°C	
Drying Time	1.0 to 2.0	hr	
Rear Temperature	180 to 205	°C	
Middle Temperature	190 to 215	°C	
Front Temperature	195 to 225	°C	
Nozzle Temperature	195 to 225	°C	
Processing (Melt) Temp	190 to 225	°C	
Mold Temperature	20.0 to 50.0	°C	
Injection Pressure	2.10 to 6.90	MPa	
Injection Rate	Moderate-Fast		
Holding Pressure	0.700 to 3.50	MPa	
Back Pressure	0.00 to 0.700	MPa	

Screw Speed	50 to 150	rpm
Cushion	0.00 to 5.00	mm

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