

# CoolPoly® D3608

Polyamide 46

Cool Polymers, Inc.

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

General Information			
Features	Electrically Insulating		
	Good Moldability		
	Thermally Conductive		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.70	g/cm <sup>3</sup>	ISO 1183
Water Absorption (Saturation)	0.50	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	10000	MPa	ISO 527-2
Tensile Stress (Yield)	86.0	MPa	ISO 527-2
Nominal Tensile Strain at Break	1.0	%	ISO 527-2
Flexural Modulus	9500	MPa	ISO 178
Flexural Stress	120	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	2.8	kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength	13	kJ/m <sup>2</sup>	ISO 179
Thermal	Nominal Value	Unit	Test Method
Specific Heat	1030	J/kg/°C	ASTM E1461
Thermal Conductivity	1.6	W/m/K	ASTM E1461
Thermal Diffusivity	0.00900	cm <sup>2</sup> /s	ASTM E1461
Injection	Nominal Value	Unit	
Drying Temperature	104	°C	
Drying Time	24	hr	
Dew Point	-40.0	°C	
Suggested Max Moisture	> 0.050	%	
Rear Temperature	280 to 321	°C	
Middle Temperature	300 to 332	°C	
Front Temperature	310 to 338	°C	
Nozzle Temperature	290 to 327	°C	
Processing (Melt) Temp	310 to 343	°C	

Mold Temperature	105 to 165	°C
Injection Pressure	5.20 to 10.4	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	1.70 to 5.20	MPa
Back Pressure	0.00 to 0.350	MPa
Screw Speed	50 to 150	rpm
Cushion	0.00 to 6.35	mm
Screw Compression Ratio	2.5:1.0	

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#### Recommended distributors for this material

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