



CoolPoly® TKX1003E

Celanese Corporation - Polyamide 6

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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, netshape moldable and allows design freedom in applications previously restricted to metals.

General

Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Thermally Conductive		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.62	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.89E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	8850	psi	ISO 527-2/1A/50
Tensile Strain (Break)	0.80	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	2.03E+6	psi	ISO 178
Flexural Stress (73°F)	14500	psi	ISO 178
Flexural Strain at Break	1.2	%	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	1.9	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	4.3	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Specific Heat	0.304	Btu/lb/°F	ASTM E1461
Thermal Conductivity			ASTM E1461
-- ²	35	Btu·in/hr/ft ² /°F	
-- ³	150	Btu·in/hr/ft ² /°F	

Notes

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

² Thruplane

³ Flow