



CoolPoly® E5101

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• Latin America
RoHS Compliance	• RoHS Compliant		

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density	1.71	g/cm ³	ISO 1183
Water Absorption (Saturation, 73°F)	0.050	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.68E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	6380	psi	ISO 527-2/1A/5
Tensile Strain (Break)	0.43	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.89E+6	psi	ISO 178
Flexural Stress (73°F)	11000	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength (73°F)	1.7	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	534	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	478	°F	ISO 75-2/A
CLTE - Flow			ISO 11359-2
-40 to 194°F ²	6.1E-6	in/in/°F	
194 to 302°F ³	1.1E-5	in/in/°F	
CLTE - Transverse			ISO 11359-2
-40 to 194°F ²	1.2E-5	in/in/°F	
194 to 302°F ³	2.4E-5	in/in/°F	
Thermal Conductivity			ASTM E1461
-- ⁴	24	Btu·in/hr/ft ² /°F	
-- ⁵	100	Btu·in/hr/ft ² /°F	
-- ⁶	140	Btu·in/hr/ft ² /°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	0.17	ohms·cm	IEC 60093

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	241 to 259	°F
Drying Time	4.0 to 6.0	hr
Rear Temperature	585	°F
Middle Temperature	615	°F
Front Temperature	621	°F
Nozzle Temperature	610	°F
Processing (Melt) Temp	619 to 630	°F

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Injection	Nominal Value	Unit
Mold Temperature	235 to 246	°F

Injection Notes

Feeding zone temperature: 40 to 47°C

Notes

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

² below Tg

³ above Tg

⁴ Thruplane

⁵ Crossflow

⁶ Flow