CoolPoly® E5103

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1.41E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	8990	psi	ISO 527-2/1A/5
Tensile Strain (Break)	0.90	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.46E+6	psi	ISO 178
Flexural Stress (73°F)	14200	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	1.3	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	3.6	ft·lb/in²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	536	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	491	°F	ISO 75-2/A
Thermal Conductivity			ASTM E1461
-- [2]	10	Btu·in/hr/ft²/°F	
-- [3]	44	Btu·in/hr/ft²/°F	
-- [4]	56	Btu·in/hr/ft²/°F	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	4.9	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	624	°F
Middle Temperature	649	°F
Front Temperature	660	°F
Nozzle Temperature	621	°F
Processing (Melt) Temp	644 to 655	°F
Mold Temperature	275 to 286	°F

Injection Notes

Feeding zone temperature: 40 to 47°C

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Notes

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

[2] Thruplane

[3] Crossflow

[4] Flow