CoolPoly® E5111

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

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

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.70	g/cm³	ISO 1183
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.51E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	23200	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.3	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.32E+6	psi	ISO 178
Flexural Stress (73°F)	36300	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	2.5	ft·lb/in²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	13	ft·lb/in²	ISO 179/1eU
Thermal	**Nominal Value**	**Unit**	**Test Method**
Specific Heat	0.239	Btu/lb/°F	ASTM E1461
Thermal Conductivity			ASTM E1461
-- [2]	5.6	Btu·in/hr/ft²/°F	
-- [3]	7.6	Btu·in/hr/ft²/°F	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.3E+12	ohms	IEC 60093
Volume Resistivity	6.5E+14	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	630	°F
Middle Temperature	640	°F
Front Temperature	649	°F
Nozzle Temperature	621	°F
Processing (Melt) Temp	626 to 635	°F
Mold Temperature	270 to 280	°F

Injection Notes

Feeding zone temperature: 40 to 47°C

Notes

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

[2] Thruplane

[3] Flow