Fortron® 6160B4

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

Product Description

Fortron 6160B4 has excellent heat and chemical resistance as well as good electrical properties. This product is inherently flame-retardant and offers high hardness and rigidity. 6160B4 has demonstrated excellent performance in hot runner systems and superior contact corrosion resistance. Applications include electronic components (i.e. molded in lead frames, contacts or pins).

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant • Corrosion Resistant • Flame Retardant	• Good Electrical Properties • Good Heat Resistance • High Hardness	• High Stiffness
Uses	• Electrical Parts		
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.90	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.60	%	
Flow	0.20	%	
Water Absorption (Saturation, 73°F)	0.020	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2.51E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	21000	psi	ISO 527-2/1A/5
Tensile Strain (Break)	1.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	2.42E+6	psi	ISO 178
Flexural Stress	31900	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	3.3	ft·lb/in²	
73°F	3.3	ft·lb/in²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	13	ft·lb/in²	
73°F	13	ft·lb/in²	
Notched Izod Impact Strength			ISO 180/1A
-22°F	3.3	ft·lb/in²	
73°F	3.3	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	100		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	518	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	428	°F	ISO 75-2/C
Glass Transition Temperature [2]	194	°F	ISO 11357-2
Melting Temperature [2]	536	°F	ISO 11357-3

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	660	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	4.90		IEC 60250
Dissipation Factor (1 MHz)	1.0E-3		IEC 60250
Comparative Tracking Index	175	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.03 in	V-0		
0.06 in	V-0		

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	266 to 284	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Hopper Temperature	68 to 86	°F
Rear Temperature	554 to 572	°F
Middle Temperature	590 to 608	°F
Front Temperature	626 to 644	°F
Nozzle Temperature	590 to 626	°F
Processing (Melt) Temp	626 to 644	°F
Mold Temperature	284 to 320	°F
Injection Rate	Fast	
Back Pressure	< 435	psi

Injection Notes

Feeding zone temperature: 60 to 80°C
Zone4 temperature: 330 to 340°C
Hot runner temperature: 330 to 340°C

Notes

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

[2] 10°C/min