Fortron® 0320

Celanese Corporation - Polyphenylene Sulfide

Tuesday, November 5, 2019

General Information

Product Description

0320 exhibits a high melt strength for extrusion processes. The material demonstrates excellent heat and chemical resistance. The intended use of this product is for extruding monofilament/fibers, rod and slab. Available standard in powder (0320B0), pellet (0320P0) and crystallized pellet (0320C0) form.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Chemical Resistant	• Good Heat Resistance	• High Melt Strength
Uses	• Fibers	• Monofilaments	• Rods
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets	• Powder	
Processing Method	• Extrusion	• Filament Extrusion	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.35	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	1.5	%	
Flow	1.2	%	
Water Absorption (Saturation, 73°F)	0.020	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	508000	psi	ISO 527-2/1A
Tensile Stress (Break)	13100	psi	ISO 527-2/1A/5
Tensile Strain (Break)	8.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	609000	psi	ISO 178
Flexural Stress (73°F)	21000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength			ISO 180/1A
-22°F	1.2	ft·lb/in²	
73°F	1.2	ft·lb/in²	
Unnotched Izod Impact Strength			ISO 180/1U
-22°F	25	ft·lb/in²	
73°F	39	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	239	°F	ISO 75-2/A
Heat Deflection Temperature (1160 psi, Unannealed)	203	°F	ISO 75-2/C
Glass Transition Temperature [2]	194	°F	ISO 11357-2
Melting Temperature [2]	536	°F	ISO 11357-3
CLTE - Flow	2.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	2.9E-5	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+11	ohms·cm	IEC 60093
Electric Strength	460	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
1 kHz	2.80		
1 MHz	4.60		
Dissipation Factor (1 MHz)	1.1E-3		IEC 60250
Comparative Tracking Index	125	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.12 in)	V-0		UL 94

Fill Analysis	Nominal Value	Unit
Specific Heat Capacity of Melt	0.437	Btu/lb/°F

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	230 to 248	°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	572 to 590	°F
Front Temperature	590 to 608	°F
Nozzle Temperature	572 to 590	°F
Processing (Melt) Temp	590 to 608	°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: 310 to 320°C
Hot runner temperature: 310 to 320°C

Notes

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

[2] 10°C/min