

Bayblend® FR3020

Covestro - Polycarbonates - Polycarbonate + ABS

General Information

Product Description

(PC+ABS)-Blend; 5 % mineral filled; flame retardant; Vicat/B 120 temperature = 103°C; HDT/A >= 85°C; for thin-wall applications; very good UL recognition in small wall thicknesses (V-0 at 0.75 mm); low smoke density

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Mineral, 5.0% Filler by Weight
Additive	• Flame Retardant
Features	• Flame Retardant • Low Smoke Emission
Uses	• Thin-walled Parts
RoHS Compliance	• RoHS Compliant
ISO Designation	• PC+ABS-TD5 FR(40)

 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.20	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	20	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 464°F, 0.118 in	0.40 to 0.60	%	
Flow : 464°F, 0.118 in	0.40 to 0.60	%	
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	464000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9430	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	7250	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	4.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	> 30	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	450000	psi	ISO 178
Flexural Stress ³ (73°F)	14200	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	5.2	ft-lb/in ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	203	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	185	°F	ISO 75-2/A
Vicat Softening Temperature			
--	217	°F	ISO 306/B120
--	214	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	3.9E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.9E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	1.0E+16	ohms-cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
73°F, 100 Hz	3.10		



73°F, 1 MHz	3.00	
Dissipation Factor		IEC 60250
73°F, 100 Hz	5.0E-3	
73°F, 1 MHz	7.0E-3	
Comparative Tracking Index (Solution A)	275 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.030 in	V-0	
0.08 in	5VB	
0.12 in	5VA	
Fill Analysis	Nominal Value Unit	Test Method
Melt Viscosity ⁴ (500°F)	200 Pa·s	ISO 11443-A

Processing Information

Injection	Nominal Value Unit
Drying Temperature - Dry Air Dryer	176 °F
Drying Time - Dry Air Dryer	4.0 hr
Suggested Max Moisture	< 0.020 %
Suggested Shot Size	30 to 70 %
Rear Temperature	428 to 446 °F
Middle Temperature	437 to 455 °F
Front Temperature	446 to 464 °F
Nozzle Temperature	491 to 509 °F
Processing (Melt) Temp	464 to 518 °F
Mold Temperature	140 to 194 °F
Back Pressure	725 to 2180 psi
Vent Depth	9.8E-4 to 3.0E-3 in
Injection Notes	
Standard Melt Temperature: 260°C	
Peripheral Screw Speed: 0.05 - 0.2 m/s	
Hold Pressure (% of Injection Pressure): 50 - 75%	

Notes

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

² 150x105x3mm., MT 80°C

³ 0.079 in/min

⁴ 1000s-1

