

Bayblend® FR3002

 Covestro - Polycarbonates - *Polycarbonate + ABS*

General Information

Product Description

(PC+ABS)-Blend; flame retardant; Vicat/B 120 temperature = 99°C; UL recognition 94 V-0 (1.0 mm); glow wire temperature (GWFI): 960°C at 2.0 mm; for notebooks and thinwall applications

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Additive	• Flame Retardant
Features	• Flame Retardant
Uses	• Thin-walled Parts
RoHS Compliance	• RoHS Compliant
ISO Designation	• PC+ABS-FR(40)

 Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.18	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	19	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 464°F, 0.118 in	0.50 to 0.70	%	
Flow : 464°F, 0.118 in	0.50 to 0.70	%	
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)	392000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	8700	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)	> 50	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	377000	psi	ISO 178
Flexural Stress ³ (73°F)	14200	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	14	ft-lb/in ²	ISO 180/A
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	198	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	183	°F	ISO 75-2/A
Vicat Softening Temperature			
--	210	°F	ISO 306/B120
--	207	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	4.2E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.4E-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	3.20		



73°F, 1 MHz	3.10	
Dissipation Factor		IEC 60250
73°F, 100 Hz	5.0E-3	
73°F, 1 MHz	6.0E-3	
Comparative Tracking Index (Solution A)	350 V	IEC 60112
Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
0.04 in	V-0	
0.07 in	5VB	
Fill Analysis	Nominal Value Unit	Test Method
Melt Viscosity ⁴ (500°F)	190 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 176 °F
Back Pressure	725 to 2180 psi
Vent Depth	9.8E-4 to 3.0E-3 in

Injection Notes

Peripheral Screw Speed: 0.05 - 0.2 m/s
Hold Pressure (% of Injection Pressure): 50 - 75%
Standard Melt Temperature: 260°C

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

