

Bayblend® FR3021

Covestro - Polycarbonates - *Polycarbonate + ABS*

General Information

Product Description

(PC+ABS)-Blend; 15 % mineral filled; flame retardant; Vicat/B 120 temperature = 98°C; high stiffness; tensile modulus = 4800 MPa;; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960°C at 2.0 mm

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Filler / Reinforcement	• Mineral, 15% Filler by Weight
Additive	• Flame Retardant
Features	• Flame Retardant • High Stiffness
RoHS Compliance	• RoHS Compliant
ISO Designation	• PC+ABS-TD15 FR(40)

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.28	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	13	cm³/10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 464°F, 0.118 in	0.30 to 0.50	%	
Flow : 464°F, 0.118 in	0.30 to 0.50	%	
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)	696000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9430	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	5800	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	3.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	10	%	ISO 527-2/50
Flexural Modulus ³ (73°F)	682000	psi	ISO 178
Flexural Stress ³ (73°F)	15200	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in²	ISO 180/A
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)	185	°F	ISO 75-2/A
Vicat Softening Temperature			
--	208	°F	ISO 306/B120
--	205	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	2.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.5E-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
0.05 in, GY, BK	V-0	
0.06 in	V-0	
Fill Analysis	Nominal Value Unit	Test Method
Melt Viscosity ⁴ (500°F)	165 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

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

