

Bayblend® FR3010

 Covestro - Polycarbonates - *Polycarbonate + ABS*
General Information
Product Description

(PC+ABS) blend; flame retardant; Vicat/B 120 temperature = 110 °C; increased heat resistance; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWF1): 960 °C at 2.0 mm; improved chemical resistance and stress cracking behavior

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Additive	• Flame Retardant		
Resin ID (ISO 1043)	• PC+ABS FR(40)		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	15	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 0.118 in	0.50 to 0.70	%	
Flow : 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	392000	psi	ISO 527-1/1
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Stress (Break)	7250	psi	ISO 527-2/50
Tensile Strain (Yield)	4.0	%	ISO 527-2/50
Tensile Strain (Break)	> 50	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
-22°F	4.8	ft·lb/in ²	
73°F	17	ft·lb/in ²	
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	212	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	194	°F	ISO 75-2/A
Vicat Softening Temperature			
--	230	°F	ISO 306/B120
--	226	°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 62631-3-2
Volume Resistivity	1.0E+14	ohms·m	IEC 62631-3-1
Electric Strength (0.0394 in)	890	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.20		
1 MHz	3.10		
Dissipation Factor			IEC 60250
100 Hz	5.0E-3		



1 MHz	7.0E-3	
Comparative Tracking Index (Solution A)	350 V	IEC 60112
Flammability	Nominal Value	Unit
Flame Rating		UL 94
0.06 in	V-0	
0.08 in	5VB	
0.12 in	5VA	
Oxygen Index ³	32 %	ISO 4589-2
Fill Analysis	Nominal Value	Unit
Melt Viscosity (500°F, 1000 sec ⁻¹)	245 Pa·s	ISO 11443-A
Additional Information	Nominal Value	Unit
Test Specimen Production		ISO 294
Inj. Molding - Injection Velocity	567 in/min	
Inj. Molding - Melt Temperature	464 °F	
Inj. Molding - Mold Temperature	176 °F	

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
Melt Temperature (Optimum)	500	°F
Mold Temperature	140 to 194	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in
Holding Pressure - % of Inj. Pressure	50 to 75	%
Peripheral Screw Speed	2 to 8	in/sec

Notes

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

² 150×105×3 mm; 240°C; MT 80°C

³ Procedure A

