

## Bayblend® FR3010 RE

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 (GWFI): 960°C at 2.0 mm; improved chemical resistance and stress cracking behavior; successor to FR2010

Partially bio-circular grade / Attributed via mass balance (according to ISCC PLUS Standard).

#### General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Flame Retardant
Features	• Chemical Resistant • Flame Retardant • High ESCR (Stress Crack Resist.) • Medium Heat Resistance
Agency Ratings	• ISCC PLUS
RoHS Compliance	• RoHS Compliant
ISO Designation	• PC+ABS-FR(40)

### Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.18	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	15	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage <sup>2</sup>			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
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
-22°F	4.8	ft·lb/in <sup>2</sup>	
73°F	17	ft·lb/in <sup>2</sup>	
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 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	7.0E-3	
Comparative Tracking Index (Solution A)	350 V	IEC 60112
<b>Flammability</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Flame Rating		UL 94
0.06 in	V-0	
0.08 in	5VB	
0.12 in	5VA	
Oxygen Index <sup>3</sup>	32 %	ISO 4589-2
<b>Fill Analysis</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Melt Viscosity <sup>4</sup> (500°F)	245 Pa·s	ISO 11443-A

### Processing Information

	Nominal Value	Unit
<b>Injection</b>		
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  
Hold Pressure (% of Injection Pressure): 50 - 75%  
Peripheral Screw Speed: 0.05 - 0.2 m/s

### Notes

- <sup>1</sup> Typical properties: these are not to be construed as specifications.
- <sup>2</sup> 150x105x3 mm, 80°C MT
- <sup>3</sup> Procedure A
- <sup>4</sup> 1000s-1

