

**Bayblend® FR3016 W**

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

(PC-I)-Blend; flame retardant; Vicat/B 120 temperature = 101 °C; UL-recognition 94 V-0 at 0.75mm; rated f1 per UL746 C "Outdoor Suitability"; improved colorability compared to other PC+ASA grades

**General**

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Europe • North America • Asia Pacific • Latin America
Additive	• Flame Retardant
Features	• Flame Retardant
Uses	• Outdoor Applications
RoHS Compliance	• RoHS Compliant
Processing Method	• Extrusion
ISO Designation	• PC-I FR(40)

**Properties <sup>1</sup>**

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.21	g/cm <sup>3</sup>	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	32	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage <sup>2</sup>			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 (73°F)	392000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9280	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	4.1	%	ISO 527-2/50
Nominal Tensile Strain at Break (73°F)	> 50	%	ISO 527-2/50
Flexural Modulus <sup>3</sup> (73°F)	392000	psi	ISO 178
Flexural Stress <sup>3</sup> (73°F)	14800	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
-22°F	2.4	ft·lb/in <sup>2</sup>	
73°F	5.7	ft·lb/in <sup>2</sup>	
Unnotched Izod Impact Strength			ISO 180
-22°F	No Break		
73°F	No Break		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	181	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	199	°F	ISO 75-2/A
Vicat Softening Temperature			
--	214	°F	ISO 306/B120
--	208	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	3.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.6E-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	
<b>Flammability</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Flame Rating (0.030 in, Internal Test)	V-0	UL 94
<b>Fill Analysis</b>	<b>Nominal Value Unit</b>	<b>Test Method</b>
Melt Viscosity (500°F, 1000 sec <sup>-1</sup> )	180000 mPa·s	ISO 11443-A

### Processing Information

<b>Injection</b>	<b>Nominal Value Unit</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> 150x105x3mm

<sup>3</sup> 0.079 in/min

