



Bayblend® FR3010

Covestro - Polycarbonates - Polycarbonate + ABS

Tuesday, April 9, 2019

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

General

Material Status	• Commercial: Active		
Regional 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	
RoHS Compliance	• RoHS Compliant		

ASTM & ISO Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density (73°F (23°C))	1.18 g/cm ³	1.18 g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	15 cm ³ /10min	15 cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 464°F (240°C), 0.118 in (3.00 mm)	0.50 to 0.70 %	0.50 to 0.70 %	
Flow : 464°F (240°C), 0.118 in (3.00 mm)	0.50 to 0.70 %	0.50 to 0.70 %	
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.50 %	0.50 %	
Equilibrium, 73°F (23°C), 50% RH	0.20 %	0.20 %	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus (73°F (23°C))	392000 psi	2700 MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield, 73°F (23°C)	8700 psi	60.0 MPa	
Break, 73°F (23°C)	7250 psi	50.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 73°F (23°C)	4.0 %	4.0 %	
Break, 73°F (23°C)	> 50 %	> 50 %	
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact Strength			ISO 180/A
-22°F (-30°C)	4.8 ft·lb/in ²	10 kJ/m ²	
73°F (23°C)	17 ft·lb/in ²	35 kJ/m ²	
Unnotched Izod Impact Strength (73°F (23°C))	No Break	No Break	ISO 180
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	212 °F	100 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	194 °F	90.0 °C	ISO 75-2/A

Copyright ©, 2019 PolyOne Distribution Company The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variation in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the application disclosed. Full-scale testing and end product performance are the responsibility of the user. PolyOne Distribution Company shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond PolyOne Distribution Company's direct control. PolyOne Distribution Company MAKES NO WARRANTIES, EXPRESS OR IMPLIED, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendations, nor as an inducement to practice any patented invention without permission of the patent owner.

Bayblend® FR3010

Covestro - Polycarbonates - Polycarbonate + ABS

Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Vicat Softening Temperature			
--	226 °F	108 °C	ISO 306/B50
--	230 °F	110 °C	ISO 306/B120
CLTE			ISO 11359-2
Flow : 73 to 131°F (23 to 55°C)	4.2E-5 in/in/°F	7.6E-5 cm/cm/°C	
Transverse : 73 to 131°F (23 to 55°C)	4.4E-5 in/in/°F	8.0E-5 cm/cm/°C	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	1.0E+16 ohms	1.0E+16 ohms	IEC 60093
Volume Resistivity (73°F (23°C))	1.0E+16 ohms·cm	1.0E+16 ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
73°F (23°C), 0.0394 in (1.00 mm)	890 V/mil	35 kV/mm	
Relative Permittivity			IEC 60250
73°F (23°C), 100 Hz	3.20	3.20	
73°F (23°C), 1 MHz	3.10	3.10	
Dissipation Factor			IEC 60250
73°F (23°C), 100 Hz	5.0E-3	5.0E-3	
73°F (23°C), 1 MHz	7.0E-3	7.0E-3	
Comparative Tracking Index (Solution A)	350 V	350 V	IEC 60112
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating			UL 94
0.06 in (1.5 mm)	V-0	V-0	
0.08 in (2.0 mm)	5VB	5VB	
0.12 in (3.0 mm)	5VA	5VA	
Oxygen Index ³	32 %	32 %	ISO 4589-2
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Melt Viscosity ⁴ (500°F (260°C))	245 Pa·s	245 Pa·s	ISO 11443-A
Additional Information	Typical Value (English)	Typical Value (SI)	
ISO Shortname	PC+ABS-FR(40)	PC+ABS-FR(40)	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature - Dry Air Dryer	176 °F	80 °C
Drying Time - Dry Air Dryer	4.0 hr	4.0 hr
Suggested Max Moisture	< 0.020 %	< 0.020 %
Suggested Shot Size	30 to 70 %	30 to 70 %
Rear Temperature	428 to 446 °F	220 to 230 °C
Middle Temperature	437 to 455 °F	225 to 235 °C
Front Temperature	446 to 464 °F	230 to 240 °C
Nozzle Temperature	491 to 509 °F	255 to 265 °C
Processing (Melt) Temp	464 to 518 °F	240 to 270 °C
Mold Temperature	140 to 194 °F	60 to 90 °C
Back Pressure	725 to 2180 psi	5.00 to 15.0 MPa
Vent Depth	9.8E-4 to 3.0E-3 in	0.025 to 0.075 mm

Injection Notes

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

Copyright ©, 2019 PolyOne Distribution Company The information contained herein is believed to be reliable, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications or the results to be obtained therefrom. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end product performance. Because of the variation in methods, conditions and equipment used commercially in processing these materials, no warranties or guarantees are made as to the suitability of the products for the application disclosed. Full-scale testing and end product performance are the responsibility of the user. PolyOne Distribution Company shall not be liable for and the customer assumes all risk and liability of any use or handling of any material beyond PolyOne Distribution Company's direct control. PolyOne Distribution Company MAKES NO WARRANTIES, EXPRESS OR IMPLIED, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendations, nor as an inducement to practice any patented invention without permission of the patent owner.

Bayblend® FR3010

Covestro - Polycarbonates - Polycarbonate + ABS

Notes

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

² 150x105x3mm,, MT 80°C

³ Procedure A

⁴ 1000s-1