

Bayblend® FR3010

Polycarbonate + ABS

Covestro - Polycarbonates

PROSPECTOR®

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Technical Data

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

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet (Chinese (Traditional)) • Technical Datasheet (Chinese) • Technical Datasheet (English) • Technical Datasheet (German) • Technical Datasheet (Japanese)		
UL Yellow Card ²	• E41613-268915		
Search for UL Yellow Card	• Covestro - Polycarbonates • Bayblend®		
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		

Physical	Nominal Value Unit	Test Method
Density (23°C)	1.18 g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	15 cm³/10min	ISO 1133
Molding Shrinkage ⁴		ISO 2577
Across Flow : 240°C, 3.00 mm	0.50 to 0.70 %	
Flow : 240°C, 3.00 mm	0.50 to 0.70 %	
Water Absorption		ISO 62
Saturation, 23°C	0.50 %	
Equilibrium, 23°C, 50% RH	0.20 %	

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23°C)	2700 MPa	ISO 527-2/1
Tensile Stress		ISO 527-2/50
Yield, 23°C	60.0 MPa	
Break, 23°C	50.0 MPa	
Tensile Strain		ISO 527-2/50
Yield, 23°C	4.0 %	
Break, 23°C	> 50 %	

Impact	Nominal Value Unit	Test Method
Notched Izod Impact Strength		ISO 180/A
-30°C	10 kJ/m²	
23°C	35 kJ/m²	
Unnotched Izod Impact Strength (23°C)	No Break	ISO 180



Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	100 °C	ISO 75-2/B
1.8 MPa, Unannealed	90.0 °C	ISO 75-2/A
Vicat Softening Temperature		
--	110 °C	ISO 306/B120
--	108 °C	ISO 306/B50
CLTE		ISO 11359-2
Flow : 23 to 55°C	7.6E-5 cm/cm/°C	
Transverse : 23 to 55°C	8.0E-5 cm/cm/°C	

Electrical	Nominal Value Unit	Test Method
Surface Resistivity	1.0E+16 ohms	IEC 60093
Volume Resistivity (23°C)	1.0E+16 ohms·cm	IEC 60093
Electric Strength (23°C, 1.00 mm)	35 kV/mm	IEC 60243-1
Relative Permittivity		IEC 60250
23°C, 100 Hz	3.20	
23°C, 1 MHz	3.10	
Dissipation Factor		IEC 60250
23°C, 100 Hz	5.0E-3	
23°C, 1 MHz	7.0E-3	
Comparative Tracking Index (Solution A)	350 V	IEC 60112

Flammability	Nominal Value Unit	Test Method
Flame Rating		UL 94
1.5 mm	V-0	
2.0 mm	5VB	
3.0 mm	5VA	
Oxygen Index ⁵	32 %	ISO 4589-2

Fill Analysis	Nominal Value Unit	Test Method
Melt Viscosity ⁶ (260°C)	245 Pa·s	ISO 11443-A

Additional Information	Nominal Value Unit
ISO Shortname	PC+ABS-FR(40)

Injection	Nominal Value Unit
Drying Temperature - Dry Air Dryer	80 °C
Drying Time - Dry Air Dryer	4.0 hr
Suggested Max Moisture	< 0.020 %
Suggested Shot Size	30 to 70 %
Rear Temperature	220 to 230 °C
Middle Temperature	225 to 235 °C
Front Temperature	230 to 240 °C
Nozzle Temperature	255 to 265 °C
Processing (Melt) Temp	240 to 270 °C
Mold Temperature	60 to 90 °C
Back Pressure	5.00 to 15.0 MPa
Vent Depth	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

Notes

- ¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.
- ² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.
- ³ Typical properties: these are not to be construed as specifications.
- ⁴ 150x105x3mm,, MT 80°C
- ⁵ Procedure A
- ⁶ 1000s-1



Where to Buy

Supplier

Covestro - Polycarbonates

Leverkusen, Germany

Telephone: +49-214-6009-2000

Web: <http://www.plastics.covestro.com/>

Distributor

ALBIS Plastic

ALBIS Plastic is a global distribution and compounding company. Contact ALBIS Plastic for availability of individual products per country.

Telephone: +49-40-78105-0

Web: <http://www.albis.com/>

Availability: Algeria, Austria, Belgium, Bulgaria, China, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hong Kong, Hungary, Ireland, Latvia, Lithuania, Luxembourg, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Russian Federation, Slovakia, Spain, Sweden, Switzerland, Tunisia, Turkey, United Kingdom

Amco Polymers

Telephone: 800-262-6685

Web: <http://www.amcopolymers.com/>

Availability: North America

M. Holland Company

Telephone: 855-497-1403

Web: <http://www.mholland.com/>

Availability: Mexico, United States

PolyOne Distribution

PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.

Telephone: 440-930-3004

Web: <http://polyonedistribution.com/>

Availability: Global