

Bayblend® FR3010

Polycarbonate + ABS

Bayer MaterialScience - Polycarbonates

PROSPECTOR®

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Technical Data

Product Description

(PC+ABS) blend; unreinforced; flame-retardant; injection molding grade; increased heat resistance; Vicat/B 120 temperature = 110 °C; UL recognition 94 V-0 (1.5 mm); glow wire test (GWFI): 960 °C (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)
UL Yellow Card ²	• E41613-268915
Search for UL Yellow Card	• Bayer MaterialScience - Polycarbonates • Bayblend®
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Additive	• Flame Retardant
Features	• Flame Retardant • Good Chemical Resistance • High ESCR (Stress Crack Resist.) • High Heat Resistance
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal 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)	0.915 in ³ /10min	15.0 cm ³ /10min	ISO 1133
Molding Shrinkage ⁴			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	Nominal Value (English)	Nominal 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	Nominal Value (English)	Nominal 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	Nominal Value (English)	Nominal 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
Vicat Softening Temperature			
--	226 °F	108 °C	ISO 306/B50
--	230 °F	110 °C	ISO 306/B120

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Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
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	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	1.0E+16 ohm	1.0E+16 ohm	IEC 60093
Volume Resistivity (73°F (23°C))	1.0E+16 ohm·cm	1.0E+16 ohm·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	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.0591 in (1.50 mm)	V-0	V-0	
0.0787 in (2.00 mm)	5VB	5VB	
0.118 in (3.00 mm)	5VA	5VA	
Fill Analysis	Nominal Value (English)	Nominal Value (SI)	Test Method
Melt Viscosity ⁵ (500°F (260°C))	245 Pa·s	245 Pa·s	ISO 11443-A

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 150x105x3 mm, 80°C MT

⁵ 1000 1/s

