

## Covestro Bayblend® FR 110 Polycarbonate/ABS Blend

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

### Material Notes:

Flame retardant grade with antimony, chlorine and bromine free, flame retardant package, good light stability. Applications: Housings for business machines. Information provided by Bayer. As of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Covestro-Bayblend-FR-110-PolycarbonateABS-Blend.php](http://www.lookpolymers.com/polymer_Covestro-Bayblend-FR-110-PolycarbonateABS-Blend.php)

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in <sup>3</sup>	
Water Absorption	0.70 %	0.70 %	Saturation in water
Moisture Absorption at Equilibrium	0.20 %	0.20 %	Equilibrium at 50% RH
Water Absorption at Saturation	0.70 %	0.70 %	
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM D955
Melt Flow	20 g/10 min @Load 5.00 kg, Temperature 240 °C	20 g/10 min @Load 11.0 lb, Temperature 464 °F	
Spiral Flow	58.0 cm @Thickness 2.50 mm	22.8 in @Thickness 0.0984 in	at 254°C melt temp.

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	ASTM D785
Tensile Strength, Ultimate	56.0 MPa	8120 psi	ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	
Elongation at Break	90 %	90 %	ASTM D638
Elongation at Yield	4.0 %	4.0 %	
Tensile Modulus	2.60 GPa	377 ksi	
Flexural Yield Strength	95.0 MPa	13800 psi	at 5% strain; ASTM D790
Flexural Modulus	2.70 GPa	392 ksi	ASTM D790
Izod Impact, Notched	7.50 J/cm @Thickness 3.20 mm	14.1 ft-lb/in @Thickness 0.126 in	ASTM D256

Mechanical Properties Impact Test	Metric 52.0 J	English 38.4 ft-lb	Comments Instrumented Total Impact; 3.2 mm thick, 12.5 mm dart, 75 mm clamp, 6.7 m/s; ASTM D3763
	@Thickness 3.20 mm	@Thickness 0.126 in	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	42.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 20.0 $^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 68.0 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	100 $^\circ\text{C}$	212 $^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	90.0 $^\circ\text{C}$	194 $^\circ\text{F}$	
Vicat Softening Point	108 $^\circ\text{C}$	226 $^\circ\text{F}$	
UL RTI, Electrical	95.0 $^\circ\text{C}$	203 $^\circ\text{F}$	
UL RTI, Mechanical with Impact	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	
UL RTI, Mechanical without Impact	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	
Flammability, UL94	V-0 @Thickness 1.60 mm	V-0 @Thickness 0.0630 in	
Oxygen Index	30 %	30 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	
Dielectric Constant	2.9 @Frequency 1e+6 Hz	2.9 @Frequency 1e+6 Hz	
	3.0 @Frequency 100 Hz	3.0 @Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	
Dissipation Factor	0.0030 @Frequency 100 Hz	0.0030 @Frequency 100 Hz	
	0.0080 @Frequency 1e+6 Hz	0.0080 @Frequency 1e+6 Hz	

Electrical Properties	60 - 120 sec Metric	60 - 120 sec English	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	UL Rating PLC 6 (60-120 sec)
Comparative Tracking Index	300 V	300 V	
Hot Wire Ignition, HWI	60 - 120 sec @Thickness 3.00 mm	60 - 120 sec @Thickness 0.118 in	UL Rating PLC 1 (60-120 sec)
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 2.00 mm	>= 120 arcs @Thickness 0.0787 in	UL Rating PLC 0 (>120 arcs)
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min @Thickness 3.00 mm	>= 5.91 in/min @Thickness 0.118 in	UL Rating PLC 4 (>150 mm/min.)

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 270 °C	428 - 518 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

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