

Covestro Bayblend® FR3040

(PC+ABS) blend; unreinforced; flame-retardant; for thin-wall applications; injection molding grade; Vicat/B 120 = 108 °C; HDT/A = 85 °C; very good burning behavior in small wallthicknesses (UL recognition 94 V-0 at 0.75 mm and above and V-1 at 0.6 mm).

Physical Properties	Metric	English	Comments
Density	1.19 g/cc	0.0430 lb/in³	ISO 1183-1
Moisture Absorption at Equilibrium	0.20 %	0.20 %	ISO 62, 50% RH
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	240000 cP @Shear Rate 1000 1/s, Temperature 260 °C	240000 cP @Shear Rate 1000 1/s, Temperature 500 °F	melt viscosity; b.o. ISO 11443-A
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm @Thickness 3.00 mm	0.0050 - 0.0070 in/in @Thickness 0.118 in	150x105x3mm; b.o. ISO 2577
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm @Thickness 3.00 mm	0.0050 - 0.0070 in/in @Thickness 0.118 in	150x105x3mm; b.o. ISO 2577
Melt Flow	17 g/10 min @Load 5.00 kg, Temperature 240 °C	17 g/10 min @Load 11.0 lb, Temperature 464 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	65.0 MPa	9430 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	>= 50 %	>= 50 %	50 mm/min; b.o. ISO 527-1,-2
Elongation at Yield	4.0 %	4.0 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	2.70 GPa	392 ksi	1 mm/min; ISO 527-1,-2
Izod Impact, Notched (ISO)	30.0 kJ/m² @Temperature 23.0 °C	14.3 ft-lb/in² @Temperature 73.4 °F	ISO 180-A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180-U

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	IEC 60093
Surface Resistance	1.00e+17 ohm	1.00e+17 ohm	IEC 60093
Dielectric Constant	3.1 @Frequency 1e+6 Hz	3.1 @Frequency 1e+6 Hz	IEC 60250
	3.2 @Frequency 100 Hz	3.2 @Frequency 100 Hz	IEC 60250

Dielectric Strength	35.0 kV/mm @Thickness 1.00 mm	889 kV/in @Thickness 0.0394 in	IEC 60243-1
Dissipation Factor	0.0050 @Frequency 100 Hz	0.0050 @Frequency 100 Hz	IEC 60250
	0.0075 @Frequency 1e+6 Hz	0.0075 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	325 V	325 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$ @Temperature 23.0 - 55.0 $^{\circ}\text{C}$	42.2 $\mu\text{in}/\text{in}^{\circ}\text{F}$ @Temperature 73.4 - 131 $^{\circ}\text{F}$	ISO 11359-1,-2
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}^{\circ}\text{C}$ @Temperature 23.0 - 55.0 $^{\circ}\text{C}$	44.4 $\mu\text{in}/\text{in}^{\circ}\text{F}$ @Temperature 73.4 - 131 $^{\circ}\text{F}$	ISO 11359-1,-2
Deflection Temperature at 0.46 MPa (66 psi)	100 $^{\circ}\text{C}$	212 $^{\circ}\text{F}$	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	91.0 $^{\circ}\text{C}$	196 $^{\circ}\text{F}$	ISO 75-1,-2
Vicat Softening Point	106 $^{\circ}\text{C}$ @Load 5.10 kg	223 $^{\circ}\text{F}$ @Load 11.2 lb	50 $^{\circ}\text{C}/\text{h}$; ISO 306
	108 $^{\circ}\text{C}$ @Load 5.10 kg	226 $^{\circ}\text{F}$ @Load 11.2 lb	120 $^{\circ}\text{C}/\text{h}$; ISO 306
Flammability, UL94	V-1 @Thickness 0.600 mm	V-1 @Thickness 0.0236 in	
	V-0 @Thickness 0.750 mm	V-0 @Thickness 0.0295 in	
	5VB @Thickness 1.50 mm	5VB @Thickness 0.0591 in	UL 94-5V
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94-5V

Processing Properties	Metric	English	Comments
Melt Temperature	240 $^{\circ}\text{C}$	464 $^{\circ}\text{F}$	Injection molding; ISO 294
Mold Temperature	80.0 $^{\circ}\text{C}$	176 $^{\circ}\text{F}$	Injection molding; ISO 294
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294