

Covestro Bayblend® FR1514

(PC+ABS)-Blend; flame retardant; high heat resistance; Vicat/B 120 temperature = 136 °C; ball indentation temperature >= 125 °C; UL recognition 94 V-0 at 1.5 mm; suitable as supporting material for energized parts

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
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	450000 cP @Frequency 1000 Hz, Temperature 260 °C	450000 cP @Frequency 1000 Hz, Temperature 500 °F	Melt; b.o. ISO 11443-A
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	150x105x3 mm; 260 °C / MT 80 °C; b. o. ISO 2577
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	150x105x3 mm; 260 °C / MT 80 °C; b. o. ISO 2577
Melt Flow	22.61 g/10 min @Load 5.00 kg, Temperature 260 °C	22.61 g/10 min @Load 11.0 lb, Temperature 500 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	57.0 MPa	8270 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	63.0 MPa	9140 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	>= 50 %	>= 50 %	50 mm/min; ISO 527-1,-2
Elongation at Yield	5.0 %	5.0 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	2.40 GPa	348 ksi	1 mm/min; ISO 527-1,-2
Izod Impact, Notched (ISO)	15.0 kJ/m² @Temperature -30.0 °C	7.14 ft-lb/in² @Temperature -22.0 °F	ISO 180-A
	45.0 kJ/m² @Temperature 23.0 °C	21.4 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+15 ohm-cm	1.00e+15 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	0.0020 @Frequency 100 Hz	0.0020 @Frequency 100 Hz	IEC 60250
	0.0085 @Frequency 1e+6 Hz	0.0085 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	350 V	350 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	37.8 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1, -2
CTE, linear, Transverse to Flow	68.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	37.8 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1, -2
Deflection Temperature at 0.46 MPa (66 psi)	126 $^\circ\text{C}$	259 $^\circ\text{F}$	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	114 $^\circ\text{C}$	237 $^\circ\text{F}$	ISO 75-1,-2
Vicat Softening Point	134 $^\circ\text{C}$ @Load 5.10 kg	273 $^\circ\text{F}$ @Load 11.2 lb	50 $^\circ\text{C}/\text{h}$; ISO 306
	136 $^\circ\text{C}$ @Load 5.10 kg	277 $^\circ\text{F}$ @Load 11.2 lb	120 $^\circ\text{C}/\text{h}$; ISO 306
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
	5VB @Thickness 2.00 mm	5VB @Thickness 0.0787 in	
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Melt Temperature	260 $^\circ\text{C}$	500 $^\circ\text{F}$	Injection; ISO 294
Mold Temperature	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	Injection; ISO 294
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294