

Covestro Bayblend® FR3000

PC+ABS)-Blend; flame retardant; easy flowing; Vicat/B 120 temperature = 97 °C; UL recognition 94 V-0 at 1.5 mm; Glow wire test: 960 °C at 2.0 mm; no juicing; good light stability

As of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	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	160000 cP @Shear Rate 1000 1/s, Temperature 260 °C	160000 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	28.32 g/10 min @Load 0.510 kg, Temperature 240 °C	28.32 g/10 min @Load 1.12 lb, Temperature 464 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527-1,-2
Elongation at Break	>= 40 %	>= 40 %	50 mm/min; b.o. ISO 527-1,-2
Elongation at Yield	3.5 %	3.5 %	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)	10.0 kJ/m ² @Temperature -30.0 °C	4.76 ft-lb/in ² @Temperature -22.0 °F	ISO 180-A
	35.0 kJ/m ² @Temperature 23.0 °C	16.7 ft-lb/in ² @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+16 ohm-cm	1.00e+16 ohm-cm	IEC 60093
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	IEC 60093

Dielectric Constant	3.1	3.1	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dissipation Factor	35.0 kV/mm	889 kV/in	IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Comparative Tracking Index	0.0050	0.0050	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0060	0.0060	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	350 V	350 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)	92.0 $^{\circ}\text{C}$	198 $^{\circ}\text{F}$	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	82.0 $^{\circ}\text{C}$	180 $^{\circ}\text{F}$	ISO 75-1,-2
Vicat Softening Point	95.0 $^{\circ}\text{C}$ @Load 5.10 kg	203 $^{\circ}\text{F}$ @Load 11.2 lb	50 $^{\circ}\text{C}/\text{h}$; ISO 306
	97.0 $^{\circ}\text{C}$ @Load 5.10 kg	207 $^{\circ}\text{F}$ @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	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