

Covestro Bayblend® W85 HI

PC+ASA-Blend; Vicat/B 120 temperature = 132 °C; easy flowing; improved weather resistance; excellent low temperature ductility; good heat resistance

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	1.165 g/cc	0.04209 lb/in ³	ISO 1183-1
Moisture Absorption at Equilibrium	0.20 %	0.20 %	ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	251000 cP @Shear Rate 1000 1/s, Temperature 260 °C	251000 cP @Shear Rate 1000 1/s, Temperature 500 °F	melt viscosity; b.o. ISO 11443-A
Melt Flow	21 g/10 min @Load 5.00 kg, Temperature 260 °C	21 g/10 min @Load 11.0 lb, Temperature 500 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	58.0 MPa	8410 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	56.0 MPa	8120 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	5.0 %	5.0 %	50 mm/min; ISO 527-1,-2
Tensile Modulus	2.25 GPa	326 ksi	1 mm/min; ISO 527-1,-2
Izod Impact, Notched (ISO)	38.0 kJ/m ² @Temperature -30.0 °C	18.1 ft-lb/in ² @Temperature -22.0 °F	ISO 180-A
	48.0 kJ/m ² @Temperature 23.0 °C	22.8 ft-lb/in ² @Temperature 73.4 °F	ISO 180-A
Puncture Energy	45.0 J @Temperature 23.0 °C	33.2 ft-lb @Temperature 73.4 °F	ISO 6603-2
	45.0 J @Temperature -30.0 °C	33.2 ft-lb @Temperature -22.0 °F	ISO 6603-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	IEC 60093
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	IEC 60093
Dielectric Constant	3.0 @Frequency 1e+6 Hz	3.0 @Frequency 1e+6 Hz	IEC 60250

	3.1 @Frequency 100 Hz	3.1 @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	0.0025 @Frequency 100 Hz	0.0025 @Frequency 100 Hz	IEC 60250
	0.0105 @Frequency 1e+6 Hz	0.0105 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	175 V	175 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot\text{C}$ @Temperature 23.0 - 55.0 $^{\circ}\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{F}$ @Temperature 73.4 - 131 $^{\circ}\text{F}$	ISO 11359-1,-2
	70.0 $\mu\text{m}/\text{m}\cdot\text{C}$ @Temperature 23.0 - 55.0 $^{\circ}\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot\text{F}$ @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)	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	ISO 75-1,-2
Vicat Softening Point	132 $^{\circ}\text{C}$ @Load 5.10 kg	270 $^{\circ}\text{F}$ @Load 11.2 lb	120 $^{\circ}\text{C}/\text{h}$; ISO 306
Flammability, UL94	HB	HB	

Processing Properties	Metric	English	Comments
Melt Temperature	260 $^{\circ}\text{C}$	500 $^{\circ}\text{F}$	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