

Covestro Bayblend® W85 XF

PC+ASA-Blend; Vicat/B 120 temperature = 134 °C; improved weather resistance; excellent low temperature ductility; 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	1.16 g/cc	0.0419 lb/in³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	225000 cP @Frequency 1000 Hz, Temperature 260 °C	225000 cP @Frequency 1000 Hz, Temperature 500 °F	ISO 1133
Linear Mold Shrinkage, Flow	0.0055 - 0.0075 cm/cm	0.0055 - 0.0075 in/in	150x105x3 mm; 260 °C / MT 80 °C; b.o. ISO 2577
Linear Mold Shrinkage, Transverse	0.0055 - 0.0075 cm/cm	0.0055 - 0.0075 in/in	150x105x3 mm; 260 °C / MT 80 °C; b.o. ISO 2577
Melt Flow	31 g/10 min @Load 5.00 kg, Temperature 260 °C	31 g/10 min @Load 11.0 lb, Temperature 500 °F	estimated from MVR using room temperature density; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	62.0 MPa	8990 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	2.45 GPa	355 ksi	1 mm/min; ISO 527-1/-2
Izod Impact, Notched (ISO)	15.0 kJ/m² @Temperature -20.0 °C	7.14 ft-lb/in² @Temperature -4.00 °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
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 180-U

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	2.8 @Frequency 1e+6 Hz	2.8 @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	225 V	225 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	70.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1/-2
CTE, linear, Transverse to Flow	70.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	38.9 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1/-2
Deflection Temperature at 0.46 MPa (66 psi)	127 $^\circ\text{C}$	261 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	109 $^\circ\text{C}$	228 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	130 $^\circ\text{C}$	266 $^\circ\text{F}$	50 $^\circ\text{C}/\text{h}$ 50N; ISO 306
	132 $^\circ\text{C}$	270 $^\circ\text{F}$	120 $^\circ\text{C}/\text{h}$ 50N; ISO 306
Flammability, UL94	HB @Thickness 0.850 mm	HB @Thickness 0.0335 in	

Processing Properties	Metric	English	Comments
Melt Temperature	240 - 280 $^\circ\text{C}$	464 - 536 $^\circ\text{F}$	
	260 $^\circ\text{C}$	500 $^\circ\text{F}$	Injection Molding; ISO 294
Mold Temperature	60.0 - 80.0 $^\circ\text{C}$	140 - 176 $^\circ\text{F}$	
	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	Injection Molding; ISO 10724
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294