

Covestro Bayblend® T50 XF

PC+ABS)-Blend; Vicat/B 120 temperature = 112 °C; excellent flow; good low temperature impact strength
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	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	0.20 %	0.20 %	ISO 62
Water Absorption at Saturation	0.70 %	0.70 %	ISO 62
Viscosity	190000 cP @Shear Rate 1000 1/s, Temperature 260 °C	190000 cP @Shear Rate 1000 1/s, Temperature 500 °F	melt; b.o. ISO 11443-A
Linear Mold Shrinkage, Flow	0.0055 - 0.0075 cm/cm @Thickness 3.00 mm	0.0055 - 0.0075 in/in @Thickness 0.118 in	b.o. ISO 2577
Linear Mold Shrinkage, Transverse	0.0055 - 0.0075 cm/cm @Thickness 3.00 mm	0.0055 - 0.0075 in/in @Thickness 0.118 in	b.o. ISO 2577
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	46.0 MPa	6670 psi	50 mm/min; ISO 527-1/-2
Tensile Strength, Yield	50.0 MPa	7250 psi	50 mm/min; ISO 527-1/-2
Elongation at Break	>= 50 %	>= 50 %	50 mm/min; ISO 527-1/-2
Elongation at Yield	4.5 %	4.5 %	50 mm/min; ISO 527-1/-2
Tensile Modulus	2.10 GPa	305 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
	45.0 kJ/m ² @Temperature 23.0 °C	21.4 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
	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+17 ohm	1.00e+17 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	40.0 kV/mm @Thickness 1.00 mm	1020 kV/in @Thickness 0.0394 in	IEC 60243-1
Dissipation Factor	0.0025 @Frequency 100 Hz	0.0025 @Frequency 100 Hz	IEC 60250
	0.0090 @Frequency 1e+6 Hz	0.0090 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	250 V	250 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	85.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	47.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1,-2
CTE, linear, Transverse to Flow	85.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 - 55.0 $^\circ\text{C}$	47.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 - 131 $^\circ\text{F}$	ISO 11359-1,-2
Deflection Temperature at 0.46 MPa (66 psi)	120 $^\circ\text{C}$	248 $^\circ\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	99.0 $^\circ\text{C}$	210 $^\circ\text{F}$	ISO 75-1/-2
Vicat Softening Point	113 $^\circ\text{C}$ @Load 5.10 kg	235 $^\circ\text{F}$ @Load 11.2 lb	50 $^\circ\text{C}/\text{h}$; ISO 306
	115 $^\circ\text{C}$ @Load 5.10 kg	239 $^\circ\text{F}$ @Load 11.2 lb	120 $^\circ\text{C}/\text{h}$; ISO 306
Flammability, UL94	HB @Thickness 0.900 mm	HB @Thickness 0.0354 in	

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