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Covestro Bayblend® FR 3005 HF

(PC+ABS)-Blend; flame retardant; very easy-flowing; Vicat/B 120 temperature = 96 °C; UL recognition 94 V-0 at 1.5 mm
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/in³	ISO 1183
Melt Density	1.01 g/cc @Temperature 240 °C	0.0365 lb/in³ @Temperature 464 °F	
Moisture Absorption at Equilibrium	0.20 %	0.20 %	ISO 62
Water Absorption at Saturation	0.50 %	0.50 %	ISO 62
Viscosity	105000 cP @Temperature 260 °C	105000 cP @Temperature 500 °F	1000 s-1; b.o. ISO 11443-A
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	150x105x3 mm; 240 °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; 240 °C / MT 80 °C; b.o. ISO 2577
Melt Flow	47 g/10 min @Load 5.00 kg, Temperature 240 °C	47 g/10 min @Load 11.0 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]; 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)	13.0 kJ/m²	6.19 ft-lb/in²	ISO 180-A
	8.00 kJ/m² @Temperature -30.0 °C	3.81 ft-lb/in² @Temperature -22.0 °F	ISO 180-A
Izod Impact, Unnotched (ISO)	NB	NB	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	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	889 kV/in	1 mm; IEC 60243-1
Dissipation Factor	0.0050 @Frequency 100 Hz	0.0050 @Frequency 100 Hz	IEC 60250
	0.0065 @Frequency 1e+6 Hz	0.0065 @Frequency 1e+6 Hz	IEC 60250

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Comparative Tracking Index	350 V	350 V	Solution A; IEC 60112

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 µm/m-°C @Temperature 23.0 - 55.0 °C	42.2 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1,-2
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 23.0 - 55.0 °C	44.4 µin/in-°F @Temperature 73.4 - 131 °F	ISO 11359-1,-2
Deflection Temperature at 0.46 MPa (66 psi)	90.0 °C	194 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	81.0 °C	178 °F	ISO 75-1/-2
Vicat Softening Point	94.0 °C @Load 5.10 kg	201 °F @Load 11.2 lb	50°C/h; ISO 306
	96.0 °C @Load 5.10 kg	205 °F @Load 11.2 lb	120°C/h; ISO 306
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	IEC 60695-11-10
	5VB @Thickness 1.80 mm	5VB @Thickness 0.0709 in	IEC 60695-11-20
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Melt Temperature	240 °C	464 °F	Injection Molding; ISO 294
Mold Temperature	80.0 °C	176 °F	Injection Molding; ISO 10724
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294

Descriptive Properties	
Availability	Asia Pacific Europe India Near East/Africa North America South and Central America
Eff. thermal diffusivity (m²/s)	9.15E-08
Feature	Release agent
Form	Pellets
Process	Injection Molding
UL recognition	UL\l1.5\n UL\l5V\n