

Covestro Bayblend® FR3001 PC/ABS Blend

Category : Polymer , Thermoplastic , ABS Polymer , Polycarbonate/ABS Alloy, Unreinforced , Polycarbonate (PC)

Material Notes:

Main characteristics:• High toughness even at low temperatures• High dimensional accuracy and stability• Good paintability• Good flowability
Grade characteristics:• Flame-retardant• Injection molding
As of 1 September 2015, Bayer MaterialScience was separated from Bayer AG and officially adopted its new name – Covestro.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Covestro-Bayblend-FR3001-PCABS-Blend.php

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	150000 cP @Shear Rate 1000 1/s, Temperature 260 °C	150000 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

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	50.0 MPa	7250 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	>= 30 %	>= 30 %	50 mm/min; b.o. ISO 527-1,-2
Elongation at Yield	4.0 %	4.0 %	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)	8.00 kJ/m ² @Temperature -30.0 °C	3.81 ft-lb/in ² @Temperature -22.0 °F	ISO 180-A
	15.0 kJ/m ² @Temperature 23.0 °C	7.14 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

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	42.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 $^\circ\text{C}$	@Temperature 73.4 - 131 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ISO 11359-1,-2
	@Temperature 23.0 - 55.0 $^\circ\text{C}$	@Temperature 73.4 - 131 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	95.0 $^\circ\text{C}$	203 $^\circ\text{F}$	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	ISO 75-1,-2
Vicat Softening Point	103 $^\circ\text{C}$	217 $^\circ\text{F}$	120 $^\circ\text{C}/\text{h}$; ISO 306
	@Load 5.10 kg	@Load 11.2 lb	
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	5VB	5VB	
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	5VA	5VA	
	@Thickness 3.00 mm	@Thickness 0.118 in	

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 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
	3.2	3.2	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	30.0 kV/mm	762 kV/in	IEC 60243-1
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Dissipation Factor	0.0050	0.0050	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0070	0.0070	

Electrical Properties	Metric @Frequency 1.00e+6	English @Frequency 1.00e+6	IEC 60250 Comments
	Hz	Hz	
Comparative Tracking Index	300 V	300 V	Solution A; IEC 60112

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 294
Injection Velocity	240 mm/sec	9.45 in/sec	ISO 294

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