

Covestro Bayblend® R-FR610 Polycarbonate Recyclate Blend

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

Material Notes:

Main characteristics:• High toughness even at low temperatures• High dimensional accuracy and stability• Good paintability• Good flowability
Grade characteristics:• Flame retardant
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-R-FR610-Polycarbonate-Recyclate-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
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	150x105x3mm; b.o. ISO 2577
	@Thickness 3.00 mm	@Thickness 0.118 in	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	150x105x3mm; b.o. ISO 2577
	@Thickness 3.00 mm	@Thickness 0.118 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	45.0 MPa	6530 psi	50 mm/min; ISO 527-1,-2
Tensile Strength, Yield	55.0 MPa	7980 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	2.60 GPa	377 ksi	1 mm/min; ISO 527-1,-2
Izod Impact, Notched (ISO)	10.0 kJ/m ²	4.76 ft-lb/in ²	ISO 180-A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	40.0 kJ/m ²	19.0 ft-lb/in ²	ISO 180-A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Izod Impact, Unnotched (ISO)	NB	NB	ISO 180-U
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
	76.0 µm/m-°C	42.2 µin/in-°F	

Thermal Properties	Metric	English	Comments
	@Temperature 23.0 - 55.0 °C	@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)	95.0 °C	203 °F	ISO 75-1,-2
Deflection Temperature at 1.8 MPa (264 psi)	85.0 °C	185 °F	ISO 75-1,-2
Vicat Softening Point	108 °C @Load 5.10 kg	226 °F @Load 11.2 lb	50°C/h; ISO 306
	110 °C @Load 5.10 kg	230 °F @Load 11.2 lb	120°C/h; ISO 306
Flammability, UL94	V-0 @Thickness 1.50 mm	V-0 @Thickness 0.0591 in	
	5VA @Thickness 3.00 mm	5VA @Thickness 0.118 in	UL 94-5V

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 @Frequency 1.00e+6 Hz	3.1 @Frequency 1.00e+6 Hz	IEC 60250
	3.2 @Frequency 100 Hz	3.2 @Frequency 100 Hz	IEC 60250
Dielectric Strength	30.0 kV/mm @Thickness 1.00 mm	762 kV/in @Thickness 0.0394 in	IEC 60243-1
Dissipation Factor	0.0030 @Frequency 100 Hz	0.0030 @Frequency 100 Hz	IEC 60250
	0.0085 @Frequency 1.00e+6 Hz	0.0085 @Frequency 1.00e+6 Hz	IEC 60250
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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