

## Covestro Bayblend® FR 90 Polycarbonate/ABS Blend

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

### Material Notes:

Flame retardant grade with antimony, chlorine and bromine free, flame retardant package, good light stability. Applications: Housings for business machines. Information provided by Bayer. 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-FR-90-PolycarbonateABS-Blend.php](http://www.lookpolymers.com/polymer_Covestro-Bayblend-FR-90-PolycarbonateABS-Blend.php)

Physical Properties	Metric	English	Comments
Density	1.17 g/cc	0.0423 lb/in <sup>3</sup>	
Water Absorption	0.70 %	0.70 %	Saturation in water
Moisture Absorption at Equilibrium	0.20 %	0.20 %	Equilibrium at 50% RH
Water Absorption at Saturation	0.70 %	0.70 %	
Linear Mold Shrinkage	0.0040 - 0.0060 cm/cm	0.0040 - 0.0060 in/in	ASTM D955
Melt Flow	20 g/10 min @Load 5.00 kg, Temperature 240 °C	20 g/10 min @Load 11.0 lb, Temperature 464 °F	
Spiral Flow	71.0 cm @Thickness 2.50 mm	28.0 in @Thickness 0.0984 in	at 255°C melt temp.

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121	121	ASTM D785
Tensile Strength, Ultimate	45.0 MPa	6530 psi	ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	
Elongation at Break	70 %	70 %	ASTM D638
Elongation at Yield	4.0 %	4.0 %	
Tensile Modulus	2.70 GPa	392 ksi	
Flexural Yield Strength	100 MPa	14500 psi	at 5% strain; ASTM D790
Flexural Modulus	2.80 GPa	406 ksi	ASTM D790
Izod Impact, Notched	5.30 J/cm @Thickness 3.20 mm	9.93 ft-lb/in @Thickness 0.126 in	ASTM D256

Mechanical Properties	Metric	English	Comments
Impact Test	57.0 J	42.0 ft-lb	Instrumented Total Impact; 12.5 mm dia; 75 mm clamp; 6.7 m/s; ASTM D3763
	@Thickness 3.20 mm	@Thickness 0.126 in	
Tensile Creep Modulus, 1 hour	2500 MPa	363000 psi	
Tensile Creep Modulus, 1000 hours	1900 MPa	276000 psi	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	76.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	42.2 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	
	@Temperature 20.0 $^\circ\text{C}$	@Temperature 68.0 $^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	90.0 $^\circ\text{C}$	194 $^\circ\text{F}$	
Deflection Temperature at 1.8 MPa (264 psi)	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	
Vicat Softening Point	88.0 $^\circ\text{C}$	190 $^\circ\text{F}$	
UL RTI, Electrical	85.0 $^\circ\text{C}$	185 $^\circ\text{F}$	
	@Thickness 1.00 mm	@Thickness 0.0394 in	
UL RTI, Mechanical with Impact	75.0 $^\circ\text{C}$	167 $^\circ\text{F}$	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	80.0 $^\circ\text{C}$	176 $^\circ\text{F}$	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
Oxygen Index	30 %	30 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	
Dielectric Constant	2.9	2.9	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.0	3.0	
	@Frequency 100 Hz	@Frequency 100 Hz	

Dielectric Strength Electrical Properties	30.0 kV/mm Metric	752 kV/in English	Comments
Dissipation Factor	0.0050	0.0050	
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.0070	0.0070	
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	60 - 120 sec	60 - 120 sec	UL Rating PLC 6 (60-120 sec)
	@Thickness 3.00 mm	@Thickness 0.118 in	
Comparative Tracking Index	300 V	300 V	
Hot Wire Ignition, HWI	60 - 120 sec	60 - 120 sec	UL Rating PLC 1 (60-120 sec)
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL Rating PLC 0 (>120 arcs)
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 in/min	UL Rating PLC 4 (>150 mm/min.)
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Melt Temperature	220 - 270 °C	428 - 518 °F	

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China