



# Bayblend® FR3010

(PC+ABS)-Blend; flame retardant; Vicat/B 120 temperature = 110°C; increased heat resistance; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960°C at 2.0 mm; improved chemical resistance and stress cracking behavior; successor to FR2010

## Physical Properties

MEASUREMENT	CONDITION	Value
Density (73°F)	ISO 1183	1.18 g/cm <sup>3</sup>
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	ISO 1133	15 cm <sup>3</sup> /10min
Molding Shrinkage <sup>3</sup> Across Flow : 500°F, 0.118 in Flow : 500°F, 0.118 in	ISO 2577	0.50 to 0.70% 0.50 to 0.70%
Water Absorption Saturation, 73°F Equilibrium, 73°F, 50% RH	ISO 62	0.50% 0.20%

## Mechanical Properties

MEASUREMENT	CONDITION	Value
Tensile Modulus (73°F)	ISO 527-1/1	392000 psi
Tensile Stress Yield, 73°F Break, 73°F	ISO 527-2/50	8700psi 7250psi
Tensile Strain Yield, 73°F Break, 73°F	ISO 527-2/50	4.0% > 50%

## Features

- Chemical Resistant
- Flame Retardant
- High ESCR  
(Stress Crack Resist.)
- Medium Heat Resistance

## Colors

- White
- Gray
- Green

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**North America**  
+1 931 766 7290

**United Kingdom**  
+44 (0) 1494 479 690

**Germany**  
+49 (0) 6073 689 6000

**France**  
+33 (0) 2 43 51 20 30

**Italy**  
+39 0121 390310

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## Impact Properties

MEASUREMENT	CONDITION	Value
Notched Izod Impact Strength -22°F 73°F	ISO 180/A	4.8ft-lb/in <sup>2</sup> 17ft-lb/in <sup>2</sup>
Unnotched Izod Impact Strength	ISO 180	No Break

## Thermal Properties

MEASUREMENT	CONDITION	Value
Deflection Temperature Under Load 66 psi, Unannealed 264 psi, Unannealed	ISO 75-2/B ISO 75-2/A	212°F 194°F
Vicat Softening Temperature	ISO 306/B120 ISO 306/B50	230°F 226°F
CLTE Flow : 73 to 131°F Transverse : 73 to 131°F	ISO 11359-2	4.2E-5in/in/°F 4.4E-5in/in/°F

## Electrical Properties

MEASUREMENT	CONDITION	Value
Surface Resistivity	IEC 60093	1.0E+16 ohms
Volume Resistivity (73°F)	IEC 60093	1.0E+16 ohms-cm
Electric Strength (73°F, 0.0394 in)	IEC 60243-1	890 V/mil
Relative Permittivity 73°F, 100 Hz 73°F, 1 MHz	IEC 60250	3.20 3.10
Dissipation Factor 73°F, 100 Hz 73°F, 1 MHz	IEC 60250	5.0E-3 7.0E-3
Comparative Tracking Index (Solution A)	IEC 60112	350 V

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## Flammability Properties

MEASUREMENT	CONDITION	Value
Flame Rating (0.03 in) 0.06 in 0.08 in 0.12 in	UL 94	V-0 5VB 5VA
Oxygen Index <sup>5</sup>	ISO 4589-2	32%

## Fill Analysis

MEASUREMENT	CONDITION	Value
Melt Viscosity <sup>6</sup> (500°F)	ISO 11443-A	245 Pa·s

## Injection Properties

MEASUREMENT	Value
Drying Temperature - Dry Air Dryer	176°F
Drying Time - Dry Air Dryer	4.0hr
Suggested Max Moisture	< 0.020%
Suggested Shot Size	30 to 70%
Rear Temperature	428 to 446°F
Middle Temperature	437 to 455°F
Front Temperature	446 to 464°F
Nozzle Temperature	491 to 509°F
Processing (Melt) Temp	464 to 518°F
Mold Temperature	140 to 194°F
Back Pressure	725 to 2180psi
Vent Depth	9.8E-4 to 3.0E-3in
Peripheral Screw Speed	0.05 - 0.2 m/s
Standard Melt Temperature	260°C
Hold Pressure (% of Injection Pressure)	50 - 75%

<sup>3</sup>150x105x3mm., MT 80°C

<sup>4</sup>Procedure A

<sup>5</sup>1000s-1

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