Bayblend® FR3021 RE

Covestro - Polycarbonates - *Polycarbonate + ABS*

General Information

Product Description

(PC+ABS)-Blend; 15 % mineral filled; flame retardant; Vicat/B 120 temperature = 98°C; high stiffness; tensile modulus = 4800 MPa;; UL recognition 94 V-0 at 1.5 mm; glow wire temperature (GWFI): 960°C at 2.0 mm

Partially bio-circular grade / Attributed via mass balance (according to ISCC PLUS Standard).

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Mineral, 15% Filler by Weight		
Additive	• Flame Retardant		
Features	• Flame Retardant	• High Stiffness	
Agency Ratings	• ISCC PLUS		
RoHS Compliance	• RoHS Compliant		
ISO Designation	• PC+ABS-TD15 FR(40)		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.28	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	13	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 2577
Across Flow : 464°F, 0.118 in	0.30 to 0.50	%	
Flow : 464°F, 0.118 in	0.30 to 0.50	%	
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	696000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9430	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	5800	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	3.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	10	%	ISO 527-2/50
Flexural Modulus [3] (73°F)	682000	psi	ISO 178
Flexural Stress [3] (73°F)	15200	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in²	ISO 180/A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	198	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	185	°F	ISO 75-2/A
Vicat Softening Temperature			
--	208	°F	ISO 306/B120
--	205	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	2.6E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.5E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	890	V/mil	IEC 60243-1

Relative Permittivity			IEC 60250
73°F, 100 Hz	3.10		
73°F, 1 MHz	3.00		
Dissipation Factor			IEC 60250
73°F, 100 Hz	5.0E-3		
73°F, 1 MHz	7.0E-3		
Comparative Tracking Index (Solution A)	275	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.05 in, GY, BK	V-0		
0.06 in	V-0		
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity [4] (500°F)	165	Pa·s	ISO 11443-A

Processing Information

Injection	**Nominal Value**	**Unit**
Drying Temperature - Dry Air Dryer	176	°F
Drying Time - Dry Air Dryer	4.0	hr
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 176	°F
Back Pressure	725 to 2180	psi
Vent Depth	9.8E-4 to 3.0E-3	in

Injection Notes

Standard Melt Temperature: 260°C
Peripheral Screw Speed: 0.05 - 0.2 m/s
Hold Pressure (% of Injection Pressure): 50 - 75%

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 150x105x3 mm, 80°C MT

[3] 0.079 in/min

[4] 1000s-1