Bayblend® FR411 MT

Covestro - Polycarbonates - *Polycarbonate + ABS*

General Information

Product Description

Rubber modified PC blend; flame retardant; mineral filled ; Vicat/B 120 temperature = 99°C; extrusion grade for European railway interiors requiring EN45545; the classifications according to the respective rail standards are communicated with email inquiry under plastics@covestro.com

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Mineral		
Additive	• Flame Retardant		
Features	• Flame Retardant		
Agency Ratings	• EN 45545		
RoHS Compliance	• RoHS Compliant		
Processing Method	• Extrusion		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.36	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/5.0 kg)	15	cm³/10min	ISO 1133
Molding Shrinkage [2]			ISO 2577
Across Flow : 0.118 in	0.20 to 0.40	%	
Flow : 0.118 in	0.30 to 0.50	%	
Water Absorption (Saturation, 73°F)	0.40	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.10	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	761000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	9720	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	8560	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	3.0	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	5.0	%	ISO 527-2/50
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact Strength (73°F)	2.9	ft·lb/in²	ISO 180/A
Unnotched Izod Impact Strength (73°F)	20	ft·lb/in²	ISO 180
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	199	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	189	°F	ISO 75-2/A
Vicat Softening Temperature			
--	210	°F	ISO 306/B120
--	207	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	2.2E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	3.3E-5	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	5.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	4.0E+17	ohms·cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	990	V/mil	IEC 60243-1
Relative Permittivity			IEC 60250
73°F, 100 Hz	3.20		

73°F, 1 MHz	3.10		
Dissipation Factor			IEC 60250
73°F, 100 Hz	6.1E-3		
73°F, 1 MHz	7.6E-3		
Comparative Tracking Index (Solution A)	225	V	IEC 60112

Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.030 in, Internal Test	V-0		
0.06 in, Internal Test	V-0		
0.12 in, Internal Test	5VB		

Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity (1000 sec^-1)	240000	mPa·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	446 to 464	°F
Middle Temperature	455 to 473	°F
Front Temperature	464 to 518	°F
Nozzle Temperature	509 to 527	°F
Processing (Melt) Temp	500 to 536	°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: 270°C
Hold Pressure (% of Injection Pressure): 50 - 75%
Peripheral Screw Speed: 0.05 - 0.2 m/s

Notes

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

[2] 150x105x3mm