Bayblend® FR411 MT

FR grades / Extrusion

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

ISO Shortname

	Property	Test Condition	Unit	Standard	typical Value
	Rheological properties				
C	Melt volume-flow rate	260 °C; 5 kg	cm³/10 min	ISO 1133	15
	Melt viscosity	1000 s^{-1}	Pa·s	b.o. ISO 11443-A	240
	Molding shrinkage, parallel	150x105x3 mm	%	b.o. ISO 2577	0.3-0.5
	Molding shrinkage, normal	150x105x3 mm	%	b.o. ISO 2577	0.2-0.4
	Mechanical properties (23 °C/50 % r. h.)				
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5250
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	67
C	Yield strain	50 mm/min	%	ISO 527-1,-2	3
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	59
	Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	5
	Izod impact strength	23 °C	kJ/m²	ISO 180-U	43
	Izod notched impact strength	23 °C	kJ/m²	ISO 180-A	6
	Thermal properties				
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	87
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	93
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	97
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	99
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.4
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.6
C	Burning behavior UL 94 (1.5 mm)		Class	UL 94	V-0 (Covestro Test)
C	Burning behavior UL 94	0.75 mm	Class	UL 94	V-0 (Covestro Test)
	Burning behavior UL 94-5V	3.0 mm	Class	UL 94	5VB (Covestro Test)
	Electrical properties (23 °C/50 % r. h.)				
C	Relative permittivity	100 Hz	-	IEC 60250	3.2
C	Relative permittivity	1 MHz	-	IEC 60250	3.1
C	Dissipation factor	100 Hz	10^{-4}	IEC 60250	61
C	Dissipation factor	1 MHz	10^{-4}	IEC 60250	76
C	Volume resistivity		Ohm·m	IEC 60093	4E+15
C	Surface resistivity		Ohm	IEC 60093	5E+16
C	Electrical strength	1 mm	kV/mm	IEC 60243-1	39
C	Comparative tracking index CTI	Solution A	Rating	IEC 60112	225
	Other properties (23 °C)				
C	Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.4
C	Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.1
C	Density		kg/m³	ISO 1183-1	1360
	Processing conditions for test specimens				
C	Injection molding-Melt temperature		°C	ISO 294	260
C	Injection molding-Mold temperature		°C	ISO 294	80
C	Injection molding-Injection velocity		mm/s	ISO 294	240

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break