Bayblend® FR3110 TV

FR grades / Non reinforced	(PC+ABS)-Blend; flame retardant; easy flowing; Vicat/B 120 temperature = 110 °C; increased heat resistance; UL recognition 94 V-0 at 1.5 mm
ISO Shortname	PC+ABS-FR(40)

	Property	Test Condition	Unit	Standard	typical Value
Rheological properties					
C	Melt volume-flow rate	240 °C/ 5 kg	cm³/10 min	ISO 1133	29
	Melt viscosity	1000 s^{-1}/ 260 °C	Pa·s	b.o. ISO 11443-A	140
	Molding shrinkage, parallel	150x105x3 mm/ 240 °C / MT 80 °C	%	b.o. ISO 2577	0.5 - 0.7
	Molding shrinkage, normal	150x105x3 mm/ 240 °C / MT 80 °C	%	b.o. ISO 2577	0.5 - 0.7
Mechanical properties (23 °C/50 % r. h.)					
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2600
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	60
C	Yield strain	50 mm/min	%	ISO 527-1,-2	4.0
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	50
	Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	> 50
	Izod impact strength	23 °C	kJ/m²	ISO 180-U	N
	Izod notched impact strength	23 °C	kJ/m²	ISO 180-A	12
Thermal properties					
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	91
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	101
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	108
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	110
C	Coefficient of linear thermal expansion, parallel	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.68
C	Coefficient of linear thermal expansion, transverse	23 to 55 °C	10^{-4}/K	ISO 11359-1,-2	0.68
C	Burning behavior UL 94 (1.5 mm) [UL recognition]	1.5 mm	Class	UL 94	V-0
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	50
C	Dissipation factor	1 MHz	10^{-4}	IEC 60250	70
C	Volume resistivity		Ohm·m	IEC 60093	1E14
C	Surface resistivity		Ohm	IEC 60093	1E16
C	Electrical strength	1 mm	kV/mm	IEC 60243-1	30
C	Comparative tracking index CTI	Solution A	Rating	IEC 60112	350
Other properties (23 °C)					
C	Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.5
C	Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.2
C	Density		kg/m³	ISO 1183-1	1180
Processing conditions for test specimens					
C	Injection molding-Melt temperature		°C	ISO 294	240
C	Injection molding-Mold temperature		°C	ISO 294	80
C	Injection molding-Injection velocity		mm/s	ISO 294	240

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	Property	Test Condition	Unit	Standard	typical Value
Recommended Processing and Drying Conditions					
	Melt Temperatures		°C	-	240 - 280
	Standard Melt Temperature		°C	-	260
	Barrel Temperatures - Rear		°C	-	220 - 230
	Barrel Temperatures - Middle		°C	-	225 - 235
	Barrel Temperatures - Front		°C	-	230 - 240
	Barrel Temperatures - Nozzle		°C	-	255 - 265
	Mold Temperatures		°C	-	60 - 90
	Hold Pressure (% of injection pressure)		%	-	50 - 75
	Plastic Back Pressure (specific)		bar	-	50 - 150
	Peripheral Screw Speed		m/s	-	0.05 - 0.2
	Shot-to-Cylinder Size		%	-	30 - 70
	Dry Air Drying Temperature		°C	-	80
	Dry Air Drying Time		h	-	4
	Moisture Content max. (%)		%	-	<= 0,02
	Vent Depth		mm	-	0.025 - 0.075

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