Bayblend® FR3040 HR

PC-I FR(40)

Covestro Deutschland AG

- Rubber modified PC blend
- flame retardant
- Vicat/B120 temperature = 104 °C
- improved hydrolysis resistance compared to a general purpose PC+ABS-FR, e.g. Bayblend FR 3010
- UL recognition 94 V-0 (1.0 mm)
- for thin-wall applications

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	20	cm³/10min	ISO 1133
Temperature	240	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2650	MPa	ISO 527
Yield stress	65	MPa	ISO 527
Yield strain	4	%	ISO 527
Notched Impact Strength (Izod), 23°C	13	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	7	kJ/m²	ISO 180/1A
Temperature	-30	°C	-
Impact Strength (Izod), 23°C	no break	kJ/m²	ISO 180/1U

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	89	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	99	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	104	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	70	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	71	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	1.0	mm	-
Burning Behav. 5V at Thickness h	5VB	class	IEC 60695-11-20
Thickness tested	3.0	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	2.9	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.1	-	IEC 62631-2-1
Dissipation Factor, 100Hz	61	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	113	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	34	kV/mm	IEC 60243-1
Comparative tracking index	300	-	IEC 60112
Relative permittivity, 100Hz	2.9	-	IEC 60250
Relative permittivity, 1MHz	3.1	-	IEC 60250
Dissipation Factor, 100Hz	61	E-4	IEC 60250
Dissipation Factor, 1MHz	113	E-4	IEC 60250
Volume Resistivity	1E16	Ohm*m	IEC 60093
Surface Resistivity	1E16	Ohm	IEC 60093

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.4	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1240	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	240	°C	ISO 294

Injection Molding, mold temperature	80	°C	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	80	°C	-
Pre-drying - Time	4	h	-
Processing humidity	≤0.02	%	-
Melt temperature	240 - 270	°C	-
Mold temperature	60 - 90	°C	-
Zone 1	220 - 230	°C	-
Zone 2	225 - 235	°C	-
Zone 3	230 - 240	°C	-
Nozzle temperature	255 - 265	°C	-
Back pressure	5 - 15	MPa	-

Characteristics

Processing
Injection Molding

Chemical Resistance
Hydrolysis

Special Characteristics
Flame retardant, Impact modified

Applications
General Purpose

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