

# Bayblend FR 3005 HF

FR grades / Non reinforced

Injection molding grade; very easy-flow grade; Vicat/B 120 temperature = 96 °C; UL-listing 94 V-0 (1.5 mm); antimony-, chlorine- and bromine-free flame retardant.

ISO Shortname

Property	Test Condition	Unit	Standard	Value
<b>Rheological properties</b>				
C Melt volume-flow rate	240 °C; 5 kg	cm <sup>3</sup> /(10 min)	ISO 1133	40
Molding shrinkage, parallel	150x105x3; 240 °C / MT 80 °C; 500 bar	%	b.o. ISO 2577	0.5 - 0.7
Molding shrinkage, normal	150x105x3; 240 °C / MT 80 °C; 500 bar	%	b.o. ISO 2577	0.5 - 0.7
Melt viscosity	1000 s <sup>-1</sup> ; 260 °C	Pa·s	b.o. ISO 11443-A	105
<b>Mechanical properties (23 °C/50 % r. h.)</b>				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2700
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	60
C Yield strain	50 mm/min	%	ISO 527-1,-2	3.5
Stress at break	50 mm/min	MPa	ISO 527-1,-2	45
Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	> 40
Izod impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180/U	N
Izod notched impact strength	23 °C	kJ/m <sup>2</sup>	ISO 180/A	13
Izod notched impact strength	-30 °C	kJ/m <sup>2</sup>	ISO 180/A	8.0
<b>Thermal properties</b>				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	81
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	90
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	94
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	96
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.76
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 <sup>-4</sup> /K	ISO 11359-1,-2	0.8
C Burning behavior UL 94 (1.5 mm) [UL recognition]	1.5 mm	Class	UL 94	V-0
C Burning behavior UL 94-5V [UL recognition]	2.0 mm	Class	UL 94	5VB
Burning behavior UL 94-5V [UL recognition]	3.0 mm	Class	UL 94	5VA
<b>Electrical properties (23 °C/50 % r. h.)</b>				
C Relative permittivity	100 Hz	-	IEC 60250	3.2
C Relative permittivity	1 MHz	-	IEC 60250	3.1
C Dissipation factor	100 Hz	10 <sup>-4</sup>	IEC 60250	50
C Dissipation factor	1 MHz	10 <sup>-4</sup>	IEC 60250	65
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	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	350
<b>Other properties (23 °C)</b>				
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/m <sup>3</sup>	ISO 1183	1180

# Bayblend FR 3005 HF

Property	Test Condition	Unit	Standard	Value
<b>Processing conditions for test specimens</b>				
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

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.



# Bayblend FR 3005 HF

## Disclaimer

Disclaimer for Sales products

This information and our technical advice - whether verbal, in writing or by way of trials - are given in good faith but without warranty, and this also applies where proprietary rights of third parties are involved. Our advice does not release you from the obligation to check its validity and to test our products as to their suitability for the intended processes and uses. The application, use and processing of our products and the products manufactured by you on the basis of our technical advice are beyond our control and, therefore, entirely your own responsibility. Our products are sold in accordance with the current version of our General Conditions of Sale and Delivery.

Test values

Unless specified to the contrary, the values given have been established on standardized test specimens at room temperature. The figures should be regarded as guide values only and not as binding minimum values. Please note that, under certain conditions, the properties can be affected to a considerable extent by the design of the mold/die, the processing conditions and coloring.

Processing note

Under the recommended processing conditions small quantities of decomposition product may be given off during processing. To preclude any risk to the health and well-being of the machine operatives, tolerance limits for the work environment must be ensured by the provision of efficient exhaust ventilation and fresh air at the workplace in accordance with the Safety Data Sheet. In order to prevent the partial decomposition of the polymer and the generation of volatile decomposition products, the prescribed processing temperatures should not be substantially exceeded.

---

Publisher: Business Development Plastics

Bayer MaterialScience AG,

D-51368 Leverkusen