

Bayblend® FR3005 HF

Covestro - Polycarbonates - *Polycarbonate + ABS*

General Information

Product Description

(PC+ABS)-Blend; flame retardant; very easy-flowing; Vicat/B 120 temperature = 96°C; UL recognition 94 V-0 at 1.5 mm

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Additive	• Flame Retardant		
Features	• Flame Retardant	• Good Flow	
RoHS Compliance	• RoHS Compliant		
ISO Designation	• PC+ABS-FR(40)		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density (73°F)	1.18	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (240°C/5.0 kg)	40	cm ³ /10min	ISO 1133
Molding Shrinkage ²			ISO 2577
Across Flow : 464°F, 0.118 in	0.50 to 0.70	%	
Flow : 464°F, 0.118 in	0.50 to 0.70	%	
Water Absorption (Saturation, 73°F)	0.50	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (73°F)	392000	psi	ISO 527-1/1
Tensile Stress (Yield, 73°F)	8700	psi	ISO 527-2/50
Tensile Stress (Break, 73°F)	6530	psi	ISO 527-2/50
Tensile Strain (Yield, 73°F)	3.5	%	ISO 527-2/50
Tensile Strain (Break, 73°F)	> 40	%	ISO 527-2/50
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
-22°F	3.8	ft·lb/in ²	
73°F	6.2	ft·lb/in ²	
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	194	°F	ISO 75-2/B
Deflection Temperature Under Load (264 psi, Unannealed)	178	°F	ISO 75-2/A
Vicat Softening Temperature			
--	205	°F	ISO 306/B120
--	201	°F	ISO 306/B50
CLTE - Flow (73 to 131°F)	4.2E-5	in/in/°F	ISO 11359-2
CLTE - Transverse (73 to 131°F)	4.4E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+16	ohms	IEC 60093
Volume Resistivity (73°F)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (73°F, 0.0394 in)	890	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	5.0E-3	
73°F, 1 MHz	6.5E-3	
Comparative Tracking Index (Solution A)	350 V	IEC 60112
Flammability	Nominal Value	Unit
Flame Rating		UL 94
0.06 in	V-0	
0.07 in	5VB	
0.12 in	5VA	
Oxygen Index ³	30 %	ISO 4589-2
Fill Analysis	Nominal Value	Unit
Melt Viscosity ⁴ (500°F)	105 Pa·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	428 to 446	°F
Middle Temperature	437 to 455	°F
Front Temperature	446 to 464	°F
Nozzle Temperature	491 to 509	°F
Processing (Melt) Temp	464 to 518	°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

Peripheral Screw Speed: 0.05 - 0.2 m/s
Standard Melt Temperature: 260°C
Hold Pressure (% of Injection Pressure): 50 - 75%

Notes

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

² 150x105x3mm., MT 80°C

³ Procedure A

⁴ 1000s-1

