

Bayblend® FR3010

(PC+ABS) FR(40)

Covestro Deutschland AG

- (PC+ABS)-Blend
- flame retardant
- Vicat/B 120 temperature = 110 °C
- increased heat resistance
- UL recognition 94 V-0 at 1.5 mm
- glow wire temperature (GWFI): 960 °C at 2.0 mm
- improved chemical resistance and stress cracking behavior
- successor to FR2010

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	15	cm ³ /10min	ISO 1133
Temperature	240	°C	-
Load	5	kg	-

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2700	MPa	ISO 527
Yield stress	60	MPa	ISO 527
Yield strain	4	%	ISO 527

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	90	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	100	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	108	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	76	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	80	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-0	class	UL 94
Thickness tested	1.5	mm	-
Burning Behav. 5V at Thickness h	5VB	class	IEC 60695-11-20
Thickness tested	2.0	mm	-
Oxygen index	32	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.2	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.1	-	IEC 62631-2-1
Dissipation Factor, 100Hz	50	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	70	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	35	kV/mm	IEC 60243-1
Comparative tracking index	350	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.5	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1180	kg/m ³	ISO 1183

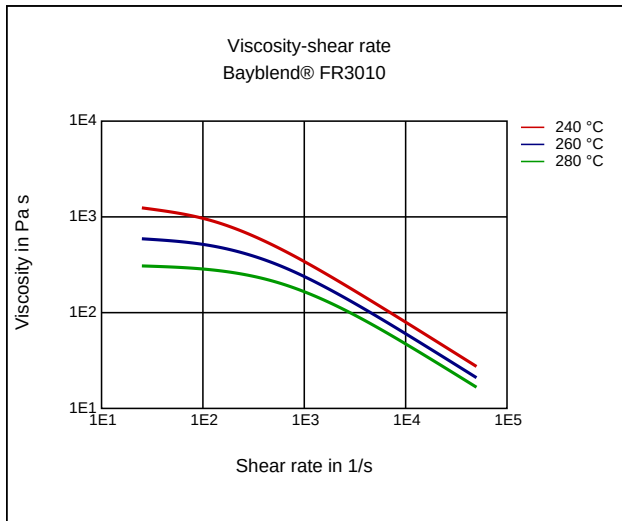
Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	240	°C	ISO 294
Injection Molding, mold temperature	80	°C	ISO 294
Injection Molding, injection velocity	240	mm/s	ISO 294

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	75 - 100	°C	-
Pre-drying - Time	2 - 4	h	-
Processing humidity	≤0.02	%	-

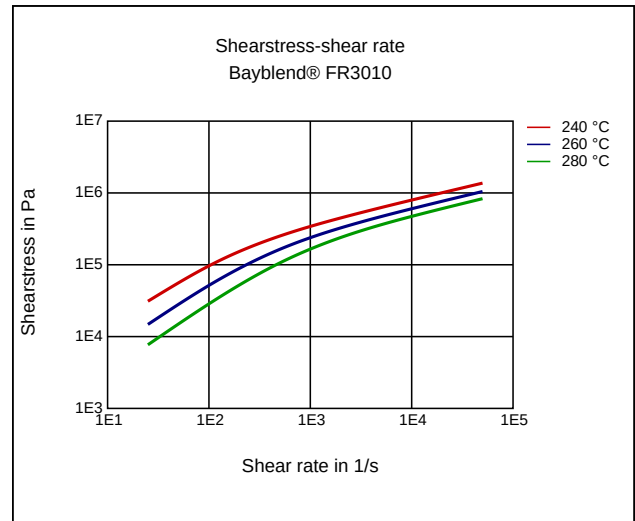
Melt temperature	240 - 280	°C	-
Mold temperature	70 - 100	°C	-

Diagrams

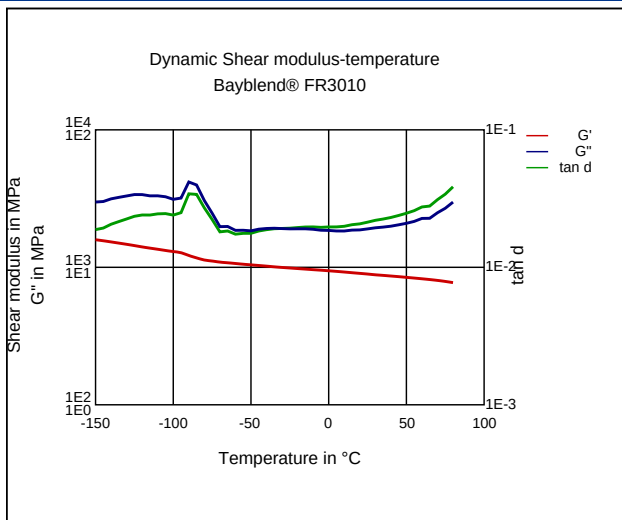
Viscosity-shear rate



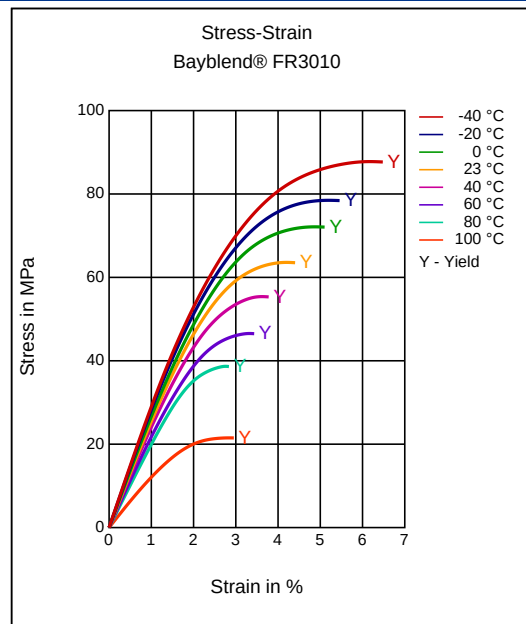
Shearstress-shear rate



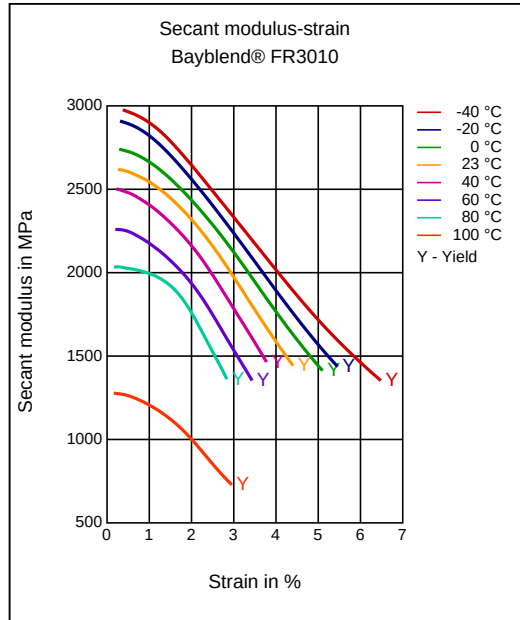
Dynamic Shear modulus-temperature



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Additives

Release agent

Delivery form

Pellets

Special Characteristics

Flame retardant

Injection Molding

PREPROCESSING

Max. Water content: 0.02 %

Drying temperature: 75 - 100 °C

(depending on the grade 10 °C below the Vicat VST/B120 temperature, but not higher as the recommended values).

Drying time:

Circulating air drying oven (50 % fresh air) 4-8 h

Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-4 h

PROCESSING

Melt temperature: 240-280 °C

Mold temperature: 70-100 °C

Use open nozzle.

Disclaimer

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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