

# Polybutene-1 PB 0110M

Polybutylene  
LyondellBasell Industries

Message:

Polybutene-1 grade PB 0110M is a semi-crystalline homopolymer, which is used where creep, environmental stress crack resistance and elevated temperature performance are key requirements.

This polymer is highly compatible with polypropylene due to its similar molecular structure. It can be used to improve mechanical properties at elevated temperatures. It is less compatible in blends with polyethylene but it is still easily dispersible. It forms a 2-phase structure which is the basis of seal peel technology for easy-opening packaging applications.

Its relatively slow kinetics of crystallization allow for an excellent wetting behavior. Its highly shear-sensitive flow behavior means that it remains easily dispersible also in even more incompatible polymers like thermoplastic elastomers.

Foodlaw compliance information about this product can be found in separate product documentation.

General Information			
Features	Semicrystallization		
	High ESCR (Stress Cracking Resistance)		
	Homopolymer		
	Rapid wetting		
	Good creep resistance		
	Heat resistance, high		
Uses	Packaging		
	Films		
	Mixing		
	Seals		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Density	0.914	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/10.0 kg	12	g/10 min	ISO 1133
190°C/2.16 kg	0.40	g/10 min	ISO 1133
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			ISO 8986-2
Yield	19.5	MPa	ISO 8986-2
Fracture	35.0	MPa	ISO 8986-2
Tensile Strain <sup>1</sup> (Break)	300	%	ISO 8986-2
Flexural Modulus	450	MPa	ISO 178
Thermal	Nominal Value	Unit	Test Method
Melting Temperature (DSC)			DSC
-- <sup>2</sup>	117	°C	DSC
-- <sup>3</sup>	128	°C	DSC

#### Additional Information

Tm2 corresponds with the melting point of crystalline form 2 which is measured immediately after solidification. Tm2 corresponds with the melting point available for each batch on the Certificate of Analysis (COA).

Extrusion	Nominal Value	Unit
Melt Temperature	190 - 230	°C

#### Extrusion instructions

Recommended processing temperatures: 190°C to 230°C In cases where higher temperatures are required please contact your appropriate technical contact for support.

#### NOTE

1.	Measured on specimens conditioned for 10 days at 20°C
2.	Tm2
3.	Tm1

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