



Polybutene-1 PB 0110M

LyondellBasell Industries - Polybutylene

Monday, November 4, 2019

General Information

Product Description

Polybutene-1 (PB-1) grade Toppyl 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.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Creep Resistant • Dispersible • Good Heat Seal • Good Organoleptic Properties	• Good Processability • High ESCR (Stress Crack Resist.) • High Heat Resistance • Homopolymer	• Rapid Wetting • Semi Crystalline
Uses	• Blending • Blown Film • Film	• Flexible Packaging • Packaging • Release Film	• Rigid Packaging • Seals
Forms	• Pellets		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	0.914	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/10.0 kg	12	g/10 min	
190°C/2.16 kg	0.40	g/10 min	
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	5080	psi	ISO 8986-2
Tensile Strain ² (Break)	300	%	ISO 8986-2
Flexural Modulus	65300	psi	ISO 178
Thermal	Nominal Value	Unit	Test Method
Peak Crystallization Temperature			ISO 11357-3
-- ³	243	°F	
-- ⁴	262	°F	

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).

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	374 to 446	°F

UL and the UL logo are trademarks of UL LLC © 2019. All Rights Reserved.

The information presented here was acquired by UL from the producer of the product or material or original information provider. However, UL assumes no responsibility or liability for the accuracy of the information contained on this website and strongly encourages that upon final product or material selection information is validated with the manufacturer. This website provides links to other websites owned by third parties. The content of such third party sites is not within our control, and we cannot and will not take responsibility for the information or content.

Polybutene-1 PB 0110M

LyondellBasell Industries - Polybutylene

Extrusion Notes

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

Notes

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

² Measured on specimens conditioned for 10 days at 20°C

³ Tm2

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).

⁴ Tm1