Polybutene-1 PB 8640M

LyondellBasell Industries - Polybutylene

Monday, November 4, 2019

General Information

Product Description

Polybutene-1 (PB-1) grade Toppyl PB 8640M is a random copolymer of butene-1 with low ethylene content.

In blends with PE polymers it forms a separate but well-dispersed phase. Its primary use is as a minority blend component in the seal layer of easy-opening packaging films, produced by blown film extrusion. A typical PE blend partner forToppyl PB 8640M could be any ethylene homo-or copolymer in the melt index range of 0.7 to 2.0 g/10min.

Toppyl PB 8640M is also highly compatible with polypropylene due to its similar molecular structure, and it can be used to modify PP sealing behavior or mechanical properties such as impact strength. PB-1 crystallizes slowly and is very shear sensitive in its flow behavior.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Heat Seal • Good Optical Properties	• Good Organoleptic Properties • Good Processability	• Random Copolymer
Uses	• Bags • Blending • Film	• Flexible Packaging • Plastics Modification • Pouches - Flexible Packaging	• Release Film • Rigid Packaging • Seals
Forms	• Pellets		
Processing Method	• Blown Film	• Cast Film	• Extrusion

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.906	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/10.0 kg	28	g/10 min	
190°C/2.16 kg	1.0	g/10 min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress (Break)	4350	psi	ISO 527-2
Tensile Strain (Break)	300	%	ISO 527-2
Flexural Modulus	36300	psi	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Peak Crystallization Temperature			ISO 11357-3
-- [2]	207	°F	
-- [3]	235	°F	

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	356 to 392	°F

Extrusion Notes

Recommended processing temperatures: 180°C to 200°C. In cases were higher temperatures are required please contact your appropriate technical contact for support.

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Notes

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

[2] 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).

[3] Tm1