Polybutene-1 PB 8220M

LyondellBasell Industries - Polybutylene

Monday, November 4, 2019

General Information

Product Description

Polybutene-1 (PB-1) grade Toppyl PB 8220M is a random copolymer of butene-1 with medium ethylene content.

This grade is highly compatible with polypropylene due to its similar molecular structure, and it is used to modify the sealing behavior of PP based films: a typical example is its use to reduce the seal initiation temperature of BOPP sealing layers.

The relatively slow kinetics of crystallization allow an excellent wetting behavior.Toppyl PB 8220M highly shear-sensitive flow behavior means that it remains easily dispersible also in even more incompatible polymers like thermoplastic elastomers.

Toppyl PB 8220M can also be used in seal-peel application. Compared with Toppyl PB 8640M or Toppyl PB 8340M, in blown film seal-peel Toppyl PB 8220M provides better optical properties (haze and clarity) but with narrow sealing window.

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	
Uses	• Bags • Film	• Flexible Packaging • Pouches - Flexible Packaging	• Release Film • Rigid Packaging
Processing Method	• Bi-axially Oriented Film	• Blown Film	• Cast Film

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	0.901	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/10.0 kg	46	g/10 min	
190°C/2.16 kg	2.5	g/10 min	
230°C/2.16 kg	7.5	g/10 min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress [2] (Break)	4640	psi	ISO 8986-2
Tensile Strain [2] (Break)	300	%	ISO 8986-2
Flexural Modulus [2]	20300	psi	ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Peak Crystallization Temperature			ISO 11357-3
-- [3]	185	°F	
-- [4]	207	°F	

Processing Information

Extrusion	Nominal Value	Unit
Melt Temperature	302 to 428	°F

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Notes

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

[2] Mechanical properties are measured on specimens conditioned for 10 days at 23°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

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