Bynel® 41E687

Tuesday, November 5, 2019

DuPont Packaging & Industrial Polymers - Linear Low Density Polyethylene

General Information

Product Description

BYNEL® Series 4100 series resins are anhydride-modified, linear low-density polyethylene (LLDPE) resins. All BYNEL Series 4100 series resins are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene resins.

BYNEL 4100 series resins adhere to a variety of materials. They are most often used to adhere to EVOH, polyamide, PE and ethylene copolymers. Series 4100 resins can be used in coextrusion processes including:

- blown film
- cast film/sheet
- blow molding
- melt and solid phase thermoforming
- sheet and tubing

LLDPE resins are known for their temperature resistance, clarity and toughness.
These physical properties make the 4100 series resins work well in applications such as:

- boil-in-bag structures
- blow molded containers in which drop strength is important
- bag-in-box films
- film where LLDPE is the heat seal layer.

General			
Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Adhesion		
Uses	• Adhesives • Blow Molding Applications • Cast Film	• Containers • Film • Sheet	• Tubing
Agency Ratings	• FDA 21 CFR 175.105		
Forms	• Pellets		
Processing Method	• Blow Molding • Coextrusion	• Extrusion • Solid Phase Press. Form. Thermoforming	• Thermoforming

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.912		ASTM D792
Density	0.910	g/cm³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	1.7	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	1.7	g/10 min	ISO 1133
Thermal	**Nominal Value**	**Unit**	**Test Method**
Vicat Softening Temperature	183	°F	ASTM D1525
Vicat Softening Temperature	183	°F	ISO 306
Peak Melting Temperature	246	°F	ASTM D3418
Melting Temperature (DSC)	246	°F	ISO 3146
Freezing Point			
--	217	°F	ASTM D3418
--	217	°F	ISO 3146

powered by PROSPECTOR®
www.ulprospector.com

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.

Bynel® 41E687

DuPont Packaging & Industrial Polymers - Linear Low Density Polyethylene

Processing Information

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	320	°F
Cylinder Zone 2 Temp.	365	°F
Cylinder Zone 3 Temp.	455	°F
Cylinder Zone 4 Temp.	455	°F
Cylinder Zone 5 Temp.	455	°F
Adapter Temperature	455	°F
Melt Temperature	< 500	°F
Die Temperature	455	°F

Extrusion Notes

Processing conditions shown are for coextrusion with EVOH.

Processing conditions for coextrusion with nylon:

Zone 1: 160°C

Zone 2: 185°C

Zone 3: 235°C

Zone 4: 260°C

Zone 5: 260°C

Adapter: 260°C

Die: 260°C

Notes

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

powered by PROSPECTOR®
www.ulprospector.com

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.