



Bynel® 42E703

DuPont Packaging & Industrial Polymers - Low Density Polyethylene

Tuesday, November 5, 2019

General Information

Product Description

BYNEL® Series 4200 resins are anhydride-modified, low-density polyethylene resins containing anhydride. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene (PE) resins.

BYNEL 4200 series resins are specifically designed to provide high interlayer adhesion between: EVOH, polyamide, PE, ethylene copolymers and ionomers.

Applications in which the use of these resins is advantageous include:

barrier bag-in-box filmslarge pouches for hospital, restaurant or institutional usesrigid containers in which PE is the structural component.

In addition, with their high adhesion to ionomers, these resins are advantageous in multi-layer ionomer/barrier constructions designed to package oily products.

General

Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Uses	• Containers	• Film	
Agency Ratings	• FDA 21 CFR 175.105		
Forms	• Pellets		
Processing Method	• Coextrusion	• Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.912		ASTM D792
Density	0.910	g/cm ³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	6.4	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	6.4	g/10 min	ISO 1133
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	176	°F	ASTM D1525
Vicat Softening Temperature	176	°F	ISO 306
Peak Melting Temperature	221	°F	ASTM D3418
Melting Temperature (DSC)	221	°F	ISO 3146
Freezing Point			
--	205	°F	ASTM D3418
--	205	°F	ISO 3146

Processing Information

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	275	°F
Cylinder Zone 2 Temp.	365	°F
Cylinder Zone 3 Temp.	410	°F
Cylinder Zone 4 Temp.	455	°F
Cylinder Zone 5 Temp.	455	°F
Adapter Temperature	455	°F
Melt Temperature	< 500	°F

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Extrusion	Nominal Value	Unit
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: 210°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.