



Bynel® 21E833

DuPont Packaging & Industrial Polymers - Ethylene Acrylate Copolymer

Sunday, November 3, 2019

General Information

Product Description

BYNEL® Series 2100 resins are anhydride modified ethylene acrylate resins. They contain a temperature stable ester that allows them to be functional in high temperature coextrusions. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene (PE) resins

Characteristics/Benefits

Physical properties of BYNEL Series 2100 resins are typical of polyethylene/acrylate copolymer resins with similar density and melt index values.

Applications

BYNEL 2100 series resins adhere to a wide variety of materials. They are most often used to adhere to PET to EVOH or PA. They also adhere to PE, PP, and ethylene copolymers.

The BYNEL 2100 series resins can be used in a variety of coextrusion coating and laminating applications.

General

Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Adhesion		
Uses	• Adhesives	• Coating Applications	• Laminates
Agency Ratings	• FDA 21 CFR 175.105		
Forms	• Pellets		
Processing Method	• Coextrusion	• Extrusion	• Extrusion Coating

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.946		ASTM D792
Density	0.944	g/cm ³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	4.6	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.6	g/10 min	ISO 1133
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	120	°F	ASTM D1525
Vicat Softening Temperature	120	°F	ISO 306
Peak Melting Temperature	198	°F	ASTM D3418
Melting Temperature (DSC)	198	°F	ISO 3146
Freezing Point			
--	163	°F	ASTM D3418
--	163	°F	ISO 3146

Additional Information	Nominal Value	Unit
Maximum Processing Temperature	500	°F

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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	410 to 428	°F
Die Temperature	455	°F

Extrusion Notes

The above processing values are for coextrusion with EVOH.

Coextrusion with Nylon parameters:

- Feed Zone: 160°C
- Second Zone: 210°C
- Third Zone: 235°C
- Fourth Zone: 260°C
- Fifth Zone: 260°C
- Adapter Zone: 260°C
- Die Zone: 260°C

Notes

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