



Bynel® 50E803

DuPont Packaging & Industrial Polymers - Polypropylene

Tuesday, November 5, 2019

General Information

Product Description

BYNEL® Series 5000 resins are anhydride-modified polypropylene resins. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polypropylene (PP) resins.

BYNEL 50E803 is a grade with a higher level of anhydride modification, and is mainly intended for use as a component in a blend with other polyolefin resins. It is not intended for extrusion in its pure form in typical extrusions or coextrusions.

BYNEL 5000 series resins adhere to a variety of materials. They are most often used to adhere to PP, EVOH and polyamide. These resins are designed for applications in which EVOH or polyamide is melt coextruded with PP or PP copolymers. BYNEL 50E803 is intended mainly for blending into PP to provide PP the ability to bond to barrier resins such as polyamide or EVOH.

General

Material Status	• Experimental: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Adhesion		
Uses	• Adhesives	• Blending	
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	0.902		ASTM D792
Density	0.900	g/cm ³	ISO 1183
Melt Mass-Flow Rate			ASTM D1238
160°C/0.325 kg	22	g/10 min	
190°C/2.16 kg	470	g/10 min	
Melt Mass-Flow Rate (MFR)			ISO 1133
160°C/0.325 kg	22	g/10 min	
190°C/2.16 kg	470	g/10 min	
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	234	°F	ASTM D1525
Vicat Softening Temperature	234	°F	ISO 306
Peak Melting Temperature	275	°F	ASTM D3418
Melting Temperature (DSC)	275	°F	ISO 3146

Processing Information

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	320	°F
Cylinder Zone 2 Temp.	410	°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

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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: 235°C

Zone 3: 260°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.