Bynel® 4033

High Density Polyethylene

DuPont Packaging & Industrial Polymers

Message:

General Information

Features

Uses

BYNEL® Series 4000 resins are anhydride-modified, high-density polyethylene resins. They are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene (PE) resins.

BYNEL 4033 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 Series 4000 resins are excellent moisture barriers and have a good hydrocarbon resistance. This unique combination of properties makes them useful in a variety of coextrusion applications. HDPE/EVOH tubing and HDPE/polyamide bottles for agricultural chemicals are two examples. BYNEL 4000 series resins are most often used in coextrusion with EVA, EVOH, polyamide and PE.

Hydrocarbon resistance

Pipe fittings

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	Mixing		
	Agricultural application		
	Bottle		
Agency Ratings	FDA 21 CFR 175.105		
Forms	Particle		
Processing Method	Co-extrusion molding		
	Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.950	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.10		40.	
kg)	2.0	g/10 min	ASTM D1238, ISO 1133
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	128	°C	ASTM D1525, ISO 306
Peak Melting Temperature	135	°C	ASTM D3418, ISO 3146
Freezing Point	114	°C	ASTM D3418
Extrusion	Nominal Value	Unit	
Cylinder Zone 1 Temp.	160	°C	
Cylinder Zone 2 Temp.	185	°C	
Cylinder Zone 3 Temp.	235	°C	
Cylinder Zone 4 Temp.	235	°C	
Cylinder Zone 5 Temp.	235	°C	
Adapter Temperature	235	°C	
Melt Temperature	< 260	°C	
Die Temperature	235	°C	

Processing conditions shown are for coextrusion with EVOH.Processing conditions for coextrusion with nylon:Zone 1: 160°CZone 2: 185°CZone 3: 235°CZone 4: 260°CZone 5: 260°CAdapter: 260°CDie: 260°C

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