

Bynel® 40E529

High Density Polyethylene

DuPont Packaging & Industrial Polymers

Message:

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 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 just two examples.

BYNEL 4000 series resins are most often used in coextrusion with EVA, EVOH, polyamide and PE.

General Information	
Features	Hydrocarbon resistance
Uses	Pipe fittings
	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	0.940	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	3.5	g/10 min	ASTM D1238, ISO 1133
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	119	°C	ASTM D1525, ISO 306
Melting Temperature	135	°C	DSC, ISO 3146

Additional Information

The value listed as Melting Point, DSC, was tested in accordance with ASTM D3418. Freezing Point (DSC), ASTM D3418: 117°C

Extrusion	Nominal Value	Unit
Cylinder Zone 1 Temp.	160	°C
Cylinder Zone 2 Temp.	210	°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

Extrusion instructions

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

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