BYNEL™ 4125

The Dow Chemical Company - Linear Low Density Polyethylene

General Information

Product Description

BYNEL™ Series 4100 series resins are anhydride-modified, linear low-density polyethylene (LLDPE) resins. All BYNEL™ Series 4100 series resins are available in pellet form for use in conventional extrusion and coextrusion equipment designed to process polyethylene resins.

Composition

- Low% By Weight Maleic Anhydride
- Graft levels are defined as:
- Low < 0.2%; Medium 0.2-0.5%; High 0.5-1.0%; Ultra high > 1.0%

Characteristics / Benefits

- Physical properties of BYNEL™ Series 4100 resins are typical of linear low density polyethylene resins with similar density and melt index values. Use of these adhesive resins in coextruded PE/barrier structures offers improved thermal resistance over that of ethylene vinyl acetate-based adhesive resins.

Applications

- BYNEL™ 4100 series resins adhere to a variety of materials. They are most often used to adhere to EVOH, polyamide, PE and ethylene copolymers.

Series 4100 resins can be used in coextrusion processes including:

- blown film
- cast film/sheet
- blow molding
- melt and solid phase thermoforming
- sheet and tubing

LLDPE resins are known for their temperature resistance, clarity and toughness.
These physical properties make the 4100 series resins work well in applications such as:

- boil-in-bag structures
- blow molded containers in which drop strength is important
- bag-in-box films
- film where LLDPE is the heat seal layer.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Agency Ratings	• FDA 21 CFR 175.105		
Forms	• Pellets		
Processing Method	• Blow Molding • Coextrusion	• Extrusion • Solid Phase Press. Form. Thermoforming	• Thermoforming

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	0.932		ASTM D792
Density	0.930	g/cm³	ISO 1183
Melt Mass-Flow Rate (190°C/2.16 kg)	2.5	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	2.5	g/10 min	ISO 1133

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Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	228	°F	ASTM D1525
Vicat Softening Temperature	228	°F	ISO 306
Peak Melting Temperature	259	°F	ASTM D3418
Melting Temperature (DSC)	259	°F	ISO 3146
Freezing Point			
--	230	°F	ISO 3146
--	230	°F	ASTM D3418

Notes

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