Petrothene

NA345

Low Density Polyethylene
Film Extrusion Grade

Applications

Petrothene NA345 is a series of homopolymer resins that combine premium clarity with strength and stiffness. In addition, NA345 exhibits good impact strength on both flat and creased film. NA345 is recommended for textile packaging, light produce, bread bags and other thin packaging films enhanced by clarity and sparkle. The optical values of NA345 actually improve with decreases in film gauge and are maintained at wide die gap settings. This fact leads to important cost savings. Film can be drawn down to a minimum gauge consistent with required physical properties, with the assurance that optical properties will not suffer, but improve. With wider die gaps back pressures are reduced, as are extrusion costs.

Regulatory Status

The basic resin NA345 meets the requirements of the Food and Drug Administration, regulation 21 CFR 177.1520. This regulation allows the use of this olefin polymer in "...articles or components of articles intended for use in contact with food." Specific limitations or conditions of use may apply. Contact your Equistar sales representative for further information.

Processing Techniques

Specific recommendations for processing NA345 resins can only be made when the processing conditions, equipment and end use are known. For further suggestions please contact your Equistar sales representative.

Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index	1.8	g/10 min	D 1238
Base Resin Density	0.921	g/cc	D 1505
Vicat Softening Point	100	°C	D 1525
Film*			
Haze[1]	5.0	%	D 1003
Gloss, 45°[1]	70	units	D 2457
Dart Drop impact Strength, F_{50}	90	g	D 1709
Tensile Strength @ Yield, MD (TD)	1,500 (1,600)	psi	D 882
Tensile Strength @ Break MD (TD)	4,000 (3,400)	psi	D 882
Elongation, MD (TD)	300 (500)	%	D 882
1% Secant Modulus, MD (TD)	26,000 (30,000)	psi	D 882
Elmendorf Tear Strength, MD (TD)	360 (200)	g	D 1922

Product	**NA345013**	**NA345184**	**NA345196**	**NA345245X01**
Slip	0	0	750	1,500
Antiblock	0	1,500	1,600	6,000

These are typical values and are not to be construed as specific product limits.

*   Data obtained from film produced in a 3½" (89 mm) blown film line, commercially available 8" (203 mm) die, 375°F (191°C) melt extrusion temperature 2:1 BUR, 1.25 mil (32 micron) gauge, 0.025" die gap at 130 lb/hr.

[1]   Optical properties given for NA345196 (medium slip, medium antiblock)

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