EQUISTAR
A Lyondell Company

Petrothene®
NA963

Low Density Polyethylene
Film Extrusion Grade
Melt Index 0.7 Density 0.919

Applications

PETROTHENE NA963 is a series of resins formulated with special antiblock additive and designed for a wide variety of industrial film applications where high impact strength and excellent drawdown are needed. NA963 exhibits uniformity, ease of processing and good tensile strength.

Regulatory Status

The basic resin NA963 meets the requirements of the Food and Drug Administration, 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 regarding the suitability of specific products for specific applications.

Processing Techniques

Generally recommended extrusion conditions include a melt temperature range of 310°-350°F (155°-177°C) and a blow-up ratio range of 1.8-2.5:1. Drawdown to gauges below 1.0 mils (<25 microns) is possible at commercial rates when proper techniques are used. Specific recommendations for processing NA963 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	0.7	g/10 min	D 1238
Density	0.919	g/cc	D 1505
Vicat Softening Point	90	°C	D 1525
Film*			
Dart Drop Impact Strength, F_{50}	130	g	D 1709
Tensile Strength, MD (TD)	3,400 (2,400)	psi	D 882
Elongation, MD (TD)	160 (480)	%	D 882
1% Secant Modulus, MD (TD)	26,000 (32,000)	psi	E 111
Elmendorf Tear Strength, MD (TD)	300 (180)	g	D 1922
Molding			
Low Temperature Brittleness, F_{50}	-75	°C	D 746
Tensile Strength @ Yield (Break)	1,550 (1,650)	psi	D 638
Elongation @ Yield (Break)	100 (700)	%	D 638
Hardness, Shore D	46		D 2240

Products	NA963046	NA963083
Slip	1,000 ppm	None
Antiblock	None	4,000 ppm

These are typical values and 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, 350°F (177°C) melt extrusion temperature, 2:1 BUR, 1.25 mil (32 micron) gauge, 0.025" die gap at 150 lb/hr.

LYONDELL

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