Petrothene

NA942

Low Density Polyethylene
Film Extrusion Grade
Melt Index: 0.18 Density: 0.918

Applications

Petrothene NA942 is a series of resins selected by customers for heavy duty film applications, such as bags used to package fertilizer, peat moss, decorative stone and agricultural and construction materials. NA942 exhibits excellent impact properties and puncture resistance.

Regulatory Status

The base resin NA942 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 product safety representative for more information.

Processing Techniques

Generally recommended extrusion conditions include a melt temperature range of 330°-430°F (165°- 221°C); a blow-up ratio range of 1.8-2.5:1. Drawdown to 2.0 mils (51 microns) is possible at commercial rates when proper extrusion techniques are used. Specific recommendations for processing NA942 can only be made when the processing conditions, equipment and end use are known.

Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index	0.18	g/10 min	D1238
Base Resin Density	0.918	g/cc	D1505
Film*			
Dart Drop Impact Strength, F_{50}	220	g	D1709
Tensile Strength, MD	3,000	psi	D882
Elongation, MD (TD)	300 (450)	%	D882
Molding			
Low Temperature Brittleness, F_{50}	-75	°C	D746
Tensile Strength @ Yield (Break)	1,400 (2,600)	psi	D638
Elongation @ Yield (Break)	100 (750)	%	D638
Hardness, Shore D	42		D2240
Environmental Stress Crack Resistance, # Failures in 100% Igepal®	0 in 7 days		D1693

Products	NA942000	NA942094
Slip (ppm)	None	550
Antiblock (ppm)	None	4,000

* Data obtained from film produced on a 3½" (89 mm) blown film line, commercially available 8" (203 mm) die, 430°F (221°C) melt extrusion temperature, 2:1 BUR, 2.0 mil (51 micron) gauge, 0.025" die gap at 170 lb/hr.

These are typical values not to be construed as specification limits.