

## LyondellBasell Petrothene® NA940000 Low Density Polyethylene (Film Grade)

Category : Polymer , Film , Thermoplastic , Polyethylene (PE) , LDPE , Low Density Polyethylene (LDPE), Film Grade

### Material Notes:

**Applications**PETROTHENE NA 940 is a series of resins designed for heavy duty film applications. Superior puncture resistance combined with excellent impact properties make NA 940 an ideal choice for bags used to package fertilizer, peat moss, decorative stone and agricultural and construction materials. **Regulatory Status**NA 940 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 more information.

**Processing Techniques**NA 940 has been designed for excellent processability, bubble stability and good heat sealing over a wide range of extrusion conditions. Optimum properties are found at melt temperatures of 330°430°F and blow-up ratios between 1.8:1 and 2.5:1.

Drawdown to 1.5 mil is possible at commercial rates when proper extrusion techniques are used. Specific recommendations for processing NA 940 can be made only when the end use applications, required properties and processing equipment are known. For exact recommendations, contact your Equistar sales representative. **Physical Properties**These are typical values and not to be construed as specific product limits. Data obtained from film produced in a 3.5"(89mm) 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.This product is from the former Equistar product line.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LyondellBasell-Petrothene-NA940000-Low-Density-Polyethylene-Film-Grade.php](http://www.lookpolymers.com/polymer_LyondellBasell-Petrothene-NA940000-Low-Density-Polyethylene-Film-Grade.php)

Physical Properties	Metric	English	Comments
Density	0.918 g/cc	0.0332 lb/in <sup>3</sup>	ASTM D1505
Environmental Stress Crack Resistance	>= 168 hour	>= 168 hour	Cond. A 100% Igepal, 0 failures in 7 days; ASTM D1693
Thickness	50.8 microns	2.00 mil	2:1 BUR; 25 mil die gap
Melt Flow	0.25 g/10 min	0.25 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	Molded; ASTM D2240
Tensile Strength, Yield	14.5 MPa	2100 psi	Molded; ASTM D638
Film Elongation at Break, MD	300 %	300 %	ASTM D882
Film Elongation at Break, TD	500 %	500 %	ASTM D882
Elongation at Break	>= 600 %	>= 600 %	Molded; ASTM D638
Flexural Modulus	0.234 GPa	34.0 ksi	Molded; ASTM D790
Elmendorf Tear Strength MD	220 g	220 g	ASTM D1922
Elmendorf Tear Strength TD	200 g	200 g	ASTM D1922

Mechanical Properties	Metric	English	Comments
Dart Drop Test	220 g	0.485 lb	F<sub>50</sub>; ASTM D1709
Film Tensile Strength at Break, MD	20.7 MPa	3000 psi	ASTM D882
Film Tensile Strength at Break, TD	19.3 MPa	2800 psi	ASTM D882
1% Secant Modulus, MD	165 MPa	24000 psi	ASTM D882
1% Secant Modulus, TD	186 MPa	27000 psi	ASTM D882

Thermal Properties	Metric	English	Comments
Vicat Softening Point	90.0 °C	194 °F	ASTM D1525
Brittleness Temperature	<= -76.0 °C	<= -105 °F	Molded; F<sub>50</sub>; ASTM D746

Processing Properties	Metric	English	Comments
Melt Temperature	221 °C	430 °F	

Descriptive Properties	Value	Comments
Antiblock	None	
Slip	None	

## Contact Songhan Plastic Technology Co.,Ltd.

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