

LyondellBasell Petrothene® NA442051 Low Density Polyethylene

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

Material Notes:

ApplicationsPETROTHENE NA 442 is a series of low density/EVA copolymer resins for high impact/high clarity packaging and lamination applications. NA 442 exhibits excellent processability and good balance of optics and strong heat sealing characteristics. **Regulatory Status**NA 442 meets the requirements of the Food and Drug Administration regulation 21 CFR 177.1350. This regulation allows the use of this ethylene vinyl acetate copolymer "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 442 has excellent drawdown characteristics that yield outstanding output rates. Optimum properties are obtained over a broad range of extrusion conditions at melt temperatures between 330°-380°F melt temperatures and a blow-up ratio between 1.7-3.0:1. Using proper techniques and equipment, NA 442 can be drawn to 1.0 mil at commercial production rates. Specific recommendations for the processing of NA 442 can be made only when the end use application, required properties and the processing equipment are known. For exact recommendations, please contact your Equistar 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-NA442051-Low-Density-Polyethylene.php

Physical Properties	Metric	English	Comments
Density	0.927 g/cc	0.0335 lb/in ³	ASTM D1505
Vinyl Acetate Content	5.0 %	5.0 %	
Thickness	31.8 microns	1.25 mil	2:1 BUR; 25 mil die gap
Melt Flow	5.0 g/10 min	5.0 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Film Elongation at Break, MD	320 %	320 %	ASTM D882
Film Elongation at Break, TD	550 %	550 %	ASTM D882
Elmendorf Tear Strength MD	160 g	160 g	ASTM D1922
Elmendorf Tear Strength TD	180 g	180 g	ASTM D1922
Dart Drop Test	140 g	0.309 lb	F ₅₀ ; ASTM D1709
Film Tensile Strength at Break, MD	24.8 MPa	3600 psi	ASTM D882
Film Tensile Strength at Break, TD	19.3 MPa	2800 psi	ASTM D882
1% Secant Modulus, MD	131 MPa	19000 psi	ASTM D882
1% Secant Modulus, TD			ASTM D882

Mechanical Properties	165 MPa Metric	24000 psi English	Comments
Thermal Properties	Metric	English	Comments
Vicat Softening Point	88.0 Â°C	190 Â°F	ASTM D1525

Optical Properties	Metric	English	Comments
Haze	4.0 %	4.0 %	ASTM D1003
Gloss	75 %	75 %	at 45Â°; ASTM D2457

Processing Properties	Metric	English	Comments
Melt Temperature	191 Â°C	375 Â°F	

Descriptive Properties	Value	Comments
Antiblock	Low	
Slip	Medium	

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