

LyondellBasell Petrothene® LP540200 High Density Polyethylene, Film Extrusion Grade

Category: Polymer, Film, Thermoplastic, Polyethylene (PE), HDPE, High Density Polyethylene (HDPE), Film Grade

Material Notes:

PETROTHENE LP540200 is a copolymer resin designed for blown film applications. This resin offers high ESCR, stiffness, excellent appearance and bubble stability. LP540200 is recommended for high strength multi-wall sack liners and barrier sheeting. It is also useful as a blend component for improved stiffness and machinability.Regulatory Status: LP540200 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. This product is from the former Equistar product line.

Order this product through the following link:

http://www.lookpolymers.com/polymer_LyondellBasell-Petrothene-LP540200-High-Density-Polyethylene-Film-Extrusion-Grade.php

Physical Properties	Metric	English	Comments
Density	0.940 g/cc	0.0340 lb/in³	ASTM D1505
Water Vapor Transmission	5.10 g/m²/day	0.328 g/100 in²/day	ASTM F372
Oxygen Transmission Rate	2450 cc/m²/day	158 cc/100 in²/day	ASTM D3965
ESCR 100% Igepal®	>= 1000 hour	>= 1000 hour	molding; ASTM D1693
Thickness	50.8 microns	2.00 mil	
Melt Flow	0.17 g/10 min	0.17 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	62	62	molding; ASTM D2240
Film Tensile Strength at Yield, MD	19.3 MPa	2800 psi	ASTM D882
Film Tensile Strength at Yield, TD	228 MPa	33000 psi	ASTM D882
Tensile Strength, Yield	21.9 MPa	3180 psi	molding; ASTM D638
Film Elongation at Break, MD	510 %	510 %	ASTM D882
Film Elongation at Break, TD	680 %	680 %	ASTM D882
Elmendorf Tear Strength MD	40 g	40 g	ASTM D1922
Elmendorf Tear Strength TD	1150 g	1150 g	ASTM D1922
Dart Drop	1.38 g/micron	35.0 g/mil	ASTM D1709
Film Tensile Strength at Break, MD	46.9 MPa	6800 psi	ASTM D882



Mechanical Properties Break, TD	Metric Metric	Énglish i	Comments	
1% Secant Modulus, MD	565 MPa	82000 psi	ASTM E111	
1% Secant Modulus, TD	758 MPa	110000 psi	ASTM E111	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	64.0 °C	147 °F	molding; ASTM D648
Vicat Softening Point	119 °C	246 °F	ASTM D1525
Brittleness Temperature	<= -76.0 °C	<= -105 °F	molding; ASTM D746

Processing Properties	Metric	English	Comments
Melt Temperature	210 - 221 °C	410 - 430 °F	
Die Opening	0.1524 cm	0.06000 in	
Blow-up Ratio (BUR)	2.5	2.5	

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