

Petrothene

# GA501

Linear Low Density Polyethylene  
Film Extrusion Grade

Melt Index: 1.0 Density: 0.918



## Applications

The *Petrothene* GA501 series of resins is pelletized linear low density polyethylene selected by customers for film extrusion applications that require excellent drawdown and toughness. These resins have excellent puncture resistance, elongation and heat seal strength. Typical applications include heavy duty shipping sacks, trash can liners, commercial and industrial packaging, as well as food and consumer packaging. GA501 is available without additives or fully formulated with slip and antiblock additives.

## Regulatory Status

The GA501 series resins meet 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 or 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

Typical extrusion conditions are 400°- 450°F melt temperature and a 1.5-3.0:1 blow-up ratio. Using proper techniques, these products can readily be drawn below 0.90 mils at optimum production rates. Specific recommendations for type of resin and extrusion conditions can be made only when the end use, required properties and processing equipment are known.

## Typical Properties

Property	Nominal Value	Units	ASTM Test Method
Melt Index (190/2.16)	1.0	g/10 min	D1238
Base Resin Density	0.918	g/cc	D1505
Vicat Softening Point	107	°C	D1525

### Film

Gauge	1.0	mil	
Blow-up Ratio	2.5:1		
Haze	20	%	D1003
Gloss, 45°	40		D523
Dart Drop Impact Strength, F <sub>50</sub>	100	g	D1709/A
Tensile Strength @ Break, MD (TD)	6,600 (4,700)	psi	D882
Elongation @ Break, MD (TD)	580 (725)	%	D882
1% Secant Modulus, MD (TD)	27,000 (28,000)	psi	D638
Elmendorf Tear, MD (TD)	125 (330)	g	D1922

Product	GA501020	GA501021	GA501022	GA501023	GA501152	GA501154
Slip (ppm)	None	None	1,350	900	600	900
Antiblock (ppm)	None	7,000	7,000	5,500	10,000	5,500
PPA	None	None	None	None	Present	Present

Product	GA501150X01
Slip (ppm)	None
Antiblock (ppm)	None
PPA	None

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

**See Page 2 for Additional Information**

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LyondellBasell markets this product through the following entities:

Equistar Chemicals, LP  
Basell Sales & Marketing Company B.V.  
Basell Asia Pacific Limited  
Basell International Trading FZE  
LyondellBasell Australia Pty Ltd

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This product(s) may not be used in:

(i) any U.S. FDA Class I, Health Canada Class I, and/or European Union Class I Medical Devices, without prior notification to Seller for each specific product and application; or

(ii) the manufacture of any of the following, without prior written approval by Seller for each specific product and application: (1) U.S. FDA Class II, Health Canada Class II or Class III, and/or European Union Class II Medical Devices; (2) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned Medical Devices; (3) packaging in direct contact with a pharmaceutical active ingredient and/or dosage form that is intended for inhalation, injection, intravenous, nasal, ophthalmic (eye), digestive, or topical (skin) administration; (4) tobacco related products and applications; (5) electronic cigarettes and similar devices; and (6) pressure pipe or fittings that are considered a part or component of a nuclear reactor.

(iii) Additionally, the product(s) may not be used in: (1) U.S. FDA Class III, Health Canada Class IV, and/or European Class III Medical Devices; (2) applications involving permanent implantation into the body; (3) life-sustaining medical applications; and (4) lead, asbestos or MTBE related applications.

All references to U.S. FDA, Health Canada, and European Union regulations include another country's equivalent regulatory classification.

Users should review the applicable Material Safety Data Sheet before handling the product.

Equistar Chemicals, LP  
1221 McKinney Street, Suite 300  
Houston, Texas 77010  
(888) 777-0232  
[www.lyondellbasell.com](http://www.lyondellbasell.com)