

Technical Data Sheet

Petrothene GA501023

Linear Low Density Polyethylene



Product Description

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

For regulatory compliance information, see *Petrothene* GA501023 [Product Stewardship Bulletin \(PSB\)](#) and [Safety Data Sheet \(SDS\)](#).

Status	Commercial: Active
Availability	North America
Application	Agriculture Film; Bags & Pouches; Can Liners; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Lamination Film; Liner Film; Retail Carryout Bags; Shrink Film
Market	Flexible Packaging
Processing Method	Blown Film

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
Physical					
Melt Flow Rate, (190 °C/2.16 kg)	1.0	g/10 min	1.0	g/10 min	ASTM D1238
Base Resin Density, (23 °C)	0.918	g/cm ³	0.918	g/cm ³	ASTM D1505
Product Density, (23 °C)	0.922	g/cm ³	0.922	g/cm ³	ASTM D1505
Film					
Dart Drop Impact Strength, F50	100	g	100	g	ASTM D1709
Tensile Strength at Break					
MD	6600	psi	45.5	MPa	ASTM D882
TD	4700	psi	32.4	MPa	ASTM D882
Tensile Elongation at Break					
MD	580	%	580	%	ASTM D882
TD	725	%	725	%	ASTM D882
1% Secant Modulus					
MD	27000	psi	186	MPa	ASTM D882
TD	28000	psi	193	MPa	ASTM D882
Elmendorf Tear Strength					
MD	125	g	125	g	ASTM D1922
TD	330	g	330	g	ASTM D1922
Thermal					
Vicat Softening Point	225	°F	107	°C	ASTM D1525
Additive					

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Request #: 908792

Slip	900 ppm	900 ppm	LYB Method
Antiblock	5500 ppm	5500 ppm	LYB Method
Polymer Processing Aid	None	None	LYB Method

Product	Product Density(g/cm ³)	Slip(ppm)	Antiblock (ppm)	Polymer Processing Aid(ppm)
GA501020	0.918	None	None	None
GA501021	0.923	None	7000	None
GA501022	0.923	1350	7000	None
GA501023	0.922	900	5500	None
GA501150	0.918	None	None	None
GA501152	0.925	600	10000	Present

Notes

Film sample used for testing was 1.0 mil gauge, 2.5:1 BUR.

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

Processing Techniques

Recommended processing conditions for this product are a melt temperature of 400 - 450 °F and a 1.5 to 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 resin type and processing conditions can only be made when the end use, required properties and fabrication equipment are known.

Company Information

For further information regarding the LyondellBasell company, please visit <http://www.lyb.com/>.

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

This product(s) may not be used in the manufacture of any of the following, without prior written approval by Seller for each specific product and application:

- (i) U.S. FDA Class I or II Medical Devices; Health Canada Class I, II or III Medical Devices; European Union Class I or II Medical Devices;
- (ii) film, overwrap and/or product packaging that is considered a part or component of one of the aforementioned medical devices;
- (iii) 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;
- (iv) tobacco related products and applications, electronic cigarettes and similar devices.
- (v) safety components in automotive applications, for example: air bags, air bag unit housings and covers, seat belt mechanisms, brake systems, pedals and pedal supports, steering systems.

The product(s) may not be used in:

- (i) U.S. FDA Class III Medical Devices; Health Canada Class IV Medical Devices; European Class III Medical Devices;
- (ii) applications involving permanent implantation into the body;
- (iii) life-sustaining medical applications.

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

In addition to the above, LyondellBasell may further prohibit or restrict the use of its products in certain applications. For further information, please contact a LyondellBasell representative.

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