Technical Data Sheet

Petrothene GA501020

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* GA501020 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; Rigid Packaging
Processing Method	Blown Film; Sheet and Profile Extrusion

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/cm³	0.918	g/cm³	ASTM D1505
Product Density, (23 °C)	0.918	g/cm³	0.918	g/cm³	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					
Slip	None		None		LYB Method
Antiblock	None		None		LYB Method
Polymer Processing Aid	None		None		LYB Method

Manufacturer website: https://www.lyondellbasell.com/en/

Product	Product Density(g/cm³)	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
GA501029	0.923	1350	7000	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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