Technical Data Sheet

Petrothene GA601031

Linear Low Density Polyethylene

Product Description

The *Petrothene* GA601 series resins are pelletized linear low density polyethylenes selected by customers for applications that require maximum strength and toughness. These products offer excellent additive homogeneity, require no transfer equipment modification, and facilitate clean and safe handling. Typical applications include heavy duty shipping sacks, trash can liners, commercial and industrial packaging, as well as food and consumer packaging. The GA601 series resins offer enhanced film strength, drawdown, toughness and heat seal strength. In addition, these resins have excellent low temperature resistance for applications such as stretch film and frozen food packaging. The GA601 series resins can be purchased without additives or fully formulated with slip and antiblock.

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/cm³	0.918	g/cm³	ASTM D1505
Product Density, (23 °C)	0.922	g/cm³	0.922	g/cm³	ASTM D1505
Film					
Dart Drop Impact Strength, F50	190	g	190	g	ASTM D1709
Tensile Strength at Break					
MD	8100	psi	55.8	MPa	ASTM D882
TD	6100	psi	42.1	MPa	ASTM D882
Tensile Elongation at Break					
MD	580	%	580	%	ASTM D882
TD	700	%	700	%	ASTM D882
1% Secant Modulus					
MD	29000	psi	200	MPa	ASTM D882
TD	32500	psi	224	MPa	ASTM D882
Elmendorf Tear Strength					
MD	325	g	325	g	ASTM D1922
TD	650	g	650	g	ASTM D1922
Thermal					
Vicat Softening Point	221	°F	105	°C	ASTM D1525
Additive					
Slip	None		None		LYB Method

Antiblock	6500 ppm	6500 ppm	LYB Method

Product	Product Density(g/cm³)	Slip(ppm)	Antiblock (ppm)
GA601030	0.918	None	None
GA601031	0.922	None	6500
GA601032	0.922	1350	6500

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.