

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 ₅₀	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