

## Technical Data Sheet

### Petrothene GA1810T



Linear Low Density Polyethylene

#### Product Description

*Petrothene* GA1810 is a series of pelletized linear low density polyethylene resins 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 *Petrothene* GA1810 series offers 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.

#### Regulatory Status

For regulatory compliance information, see *Petrothene* GA1810T Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS). To obtain copies of these documents, please contact your LyondellBasell product safety representative.

<b>Status</b>	Commercial: Active
<b>Availability</b>	Asia-Pacific; Europe; North America; South & Central America
<b>Application</b>	Agriculture Film; Bags & Pouches; Can Liners; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Lamination Film; Liner Film; Retail Carryout Bags; Shrink Film
<b>Market</b>	Flexible Packaging; Rigid Packaging
<b>Processing Method</b>	Blown Film; Sheet and Profile Extrusion

Typical Properties	Nominal Value	English Units	Nominal Value	SI Units	Test Method
<b>Physical</b>					
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 <sup>3</sup>	0.918	g/cm <sup>3</sup>	ASTM D792
Product Density, (23 °C)	0.923	g/cm <sup>3</sup>	0.923	g/cm <sup>3</sup>	ASTM D792
<b>Film</b>					
Dart Drop Impact Strength, F50	200	g	200	g	ASTM D1709
Tensile Strength at Break					
MD	7500	psi	52	MPa	ASTM D882
TD	6500	psi	45	MPa	ASTM D882
Tensile Elongation at Break					
MD	620	%	620	%	ASTM D882
TD	700	%	700	%	ASTM D882
1% Secant Modulus					
MD	35000	psi	240	MPa	ASTM D882
TD	42000	psi	290	MPa	ASTM D882
Elmendorf Tear Strength					
MD	400	g	400	g	ASTM D1922
TD	650	g	650	g	ASTM D1922
<b>Thermal</b>					
Vicat Softening Temperature	220	°F	105	°C	ASTM D1525
<b>Optical</b>					
Haze	17	%	17	%	ASTM D1003
Gloss, (45°)	45	%	45	%	ASTM D2457

#### Additive

Slip	1000 ppm	1000 ppm	LYB Method
Antiblock	6750 ppm	6750 ppm	LYB Method
Polymer Processing Aid	None	None	LYB Method

Product	Product Density(g/cm <sup>3</sup> )	Haze(%)	Gloss(%)	Slip(ppm)	Antiblock (ppm)
GA1810	0.918	9	60	None	None
GA1810T	0.923	17	45	1000	6750

#### 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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