Technical Data Sheet

Petrothene NA940085

Low Density Polyethylene

Product Description

Petrothene NA940085 is a low density homopolymer resin used for heavy duty film applications. Excellent puncture resistance combined with impact properties make NA940085 an exceptional choice when selected by customers for bags used to package fertilizer, peat moss, decorative stone and agricultural and construction materials. NA940085 also has excellent heat shrink properties.

Regulatory Status

For regulatory compliance information, see *Petrothene* NA940085 Product Stewardship Bulletin (PSB) and Safety Data Sheet (SDS).

Status	Commercial: Active
Availability	North America
Application	Agriculture Film; Bags & Pouches; Bottles and Vials; Bottles For Consumer Goods; Bottles for Industrial Use; Can Liners; Clear Containers; Film Wrap; Food Packaging Film; Heavy Duty Packaging; Liner Film; Opaque Containers; Shrink Film; Specialty Film; Textile Packaging 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)	0.25	g/10 min	0.25	g/10 min	ASTM D1238
Base Resin Density, (23 °C)	0.918	g/cm³	0.918	g/cm³	ASTM D1505
Product Density, (23 °C)	0.921	g/cm³	0.921	g/cm³	ASTM D1505
Mechanical					
Flexural Modulus	34000	psi	234	MPa	ASTM D790
Tensile Strength at Break	2100	psi	14.5	MPa	ASTM D638
Tensile Elongation at Break	>600	%	>600	%	ASTM D638
Film					
Dart Drop Impact Strength, F50	220	g	220	g	ASTM D1709
Tensile Strength at Break					
MD	3000	psi	20.7	MPa	ASTM D882
TD	2800	psi	19.3	MPa	ASTM D882
Tensile Elongation at Break					
MD	300	%	300	%	ASTM D882
TD	500	%	500	%	ASTM D882
1% Secant Modulus					
MD	24000	psi	165	MPa	ASTM D882
TD	27000	psi	186	MPa	ASTM D882
Elmendorf Tear Strength					
MD	220	g	220	g	ASTM D1922
TD	200	g	200	g	ASTM D1922
Hardness					

Shore Hardness, (Shore D)	50		50		ASTM D2240
Thermal					
Vicat Softening Temperature	194	°F	90	°C	ASTM D1525
Low Temperature Brittleness, F_{50}	<-105	°F	<-76	°C	ASTM D746
Additive					
Slip	None		None		LYB Method
Antiblock	4000	ppm	4000	ppm	LYB Method

Product	Product Density(g/cm³)	Slip(ppm)	Antiblock (ppm)
NA940000	0.918	None	None
NA940085	0.921	None	4000
NA940094	0.921	500	4000

Notes

Data obtained from 2.0 mil (51 micron) film produced on a blown film line with a 8" (203 mm) die, 430°F (221°C) melt temperature, 2:1 BUR, 0.025" die gap at 170 lbs/hr.

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

Processing Techniques

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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