Technical Data Sheet

Petrothene NA983085

LyondellBasell

Low Density Polyethylene

Product Description

Petrothene NA983085 is a low density homopolymer resin selected by customers for use in shrink packaging, bundling, pallet wrap and heavy-duty liner applications. Excellent bubble stability, melt strength, impact and shrinkage are key attributes of NA983085.

Regulatory Status

For regulatory compliance information, see *Petrothene* NA983085 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; Liner Film; 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)	0.920	g/cm³	0.920	g/cm³	ASTM D1505
Product Density, (23 °C)	0.922	g/cm³	0.922	g/cm³	ASTM D1505
Mechanical					
Tensile Strength at Break	2600	psi	17.9	MPa	ASTM D638
Tensile Strength at Yield	1420	psi	9.79	MPa	ASTM D638
Tensile Elongation at Break	700	%	700	%	ASTM D638
Tensile Elongation at Yield	100	%	100	%	ASTM D638
Film					
Dart Drop Impact Strength, F50	180	g	180	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	310	%	310	%	ASTM D882
TD	430	%	430	%	ASTM D882
1% Secant Modulus					
MD	30000	psi	207	MPa	ASTM D882
TD	35000	psi	241	MPa	ASTM D882
Water Vapor Transmission Rate			10	g/m²/day	ASTM F1249
Hardness					
Shore Hardness, (Shore D)	45		45		ASTM D2240
Thermal					
Vicat Softening Temperature	199	°F	93	°C	ASTM D1525

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Low Temperature Brittleness, F_{50}	-103	°F	-75	°C	ASTM D746
Additive					
Slip	None		None		LYB Method
Antiblock	4000	ppm	4000	ppm	LYB Method

Product	Product Density(g/cm³)	Water Vapor Transmission Rate (g/m²/day)	Antiblock (ppm)
NA980000	0.920	Not Available	None
NA983085	0.922	10	4000

Notes

Data obtained from 1.25 mil (32 micron) film produced on a blown film line with a 8" (203 mm) die, 350°F (177°C) melt temperature, 2:1 BUR, 0.025" die gap at 150 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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