

Petrothene® NA963083

Low Density Polyethylene

LyondellBasell Industries

Message:

Petrothene NA963083 is selected by customers for use in a wide variety of industrial film applications where high impact strength and excellent drawdown are needed. NA963083 exhibits uniformity, ease of processing and good tensile strength.

General Information			
Additive	Anti-caking agent (4000 ppm)		
Features	Anti-caking property		
	Impact resistance, high		
	Workability, good		
	Good stripping		
	Good strength		
	Compliance of Food Exposure		
Uses	Films		
	Industrial application		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Film extrusion		
	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	0.919 - 0.921	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.70	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	46		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield	10.7	MPa	ASTM D638
Fracture	11.4	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	100	%	ASTM D638
Fracture	700	%	ASTM D638
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	32	µm	
secant modulus			ASTM D882
1% secant, MD: 32 µm	179	MPa	ASTM D882

1% secant, TD: 32 μm	221	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 32 μm	23.4	MPa	ASTM D882
TD: Yield, 32 μm	16.5	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Broken, 32 μm	160	%	ASTM D882
TD: Broken, 32 μm	480	%	ASTM D882
Dart Drop Impact (32 μm)	130	g	ASTM D1709
Elmendorf Tear Strength			ASTM D1922
MD : 32 μm	300	g	ASTM D1922
TD : 32 μm	180	g	ASTM D1922
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-75.0	°C	ASTM D746
Vicat Softening Temperature	90.0	°C	ASTM D1525
Extrusion	Nominal Value	Unit	
Melt Temperature	154 - 177	°C	

Extrusion instructions

Generally recommended extrusion conditions include a melt temperature range of 310°-350°F (155°-177°C) and a blow-up ratio range of 1.8-2.5:1. Drawdown to gauges below 1.0 mils (<25 microns) is possible at commercial rates when proper techniques are used.

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