

Petrothene® NA980

Low Density Polyethylene

LyondellBasell Industries

Message:

PETROTHENE NA 980 is designed specifically for the shrink packaging industry and has a balance of properties over a wide range of blow-up ratios. NA 980 is also recommended for bundling, pallet wrap and heavy-duty liner where clarity is important. Excellent bubble stability, melt strength, impact and shrinkage make NA 980 an outstanding polymer for all these demanding applications.

General Information			
Features	Impact resistance, good		
	Good melt strength		
	Definition, high		
	Compliance of Food Exposure		
Uses	Packaging		
	Films		
	Lining		
	Shrinkable film		
Agency Ratings	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Film extrusion		
	Blow film		
Physical	Nominal Value	Unit	Test Method
Density	0.920	g/cm ³	ASTM D1505
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	0.25	g/10 min	ASTM D1238
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	45		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield	9.79	MPa	ASTM D638
Fracture	17.9	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	100	%	ASTM D638
Fracture	700	%	ASTM D638
Films	Nominal Value	Unit	Test Method
Film Thickness - Tested	51	µm	
secant modulus			ASTM D882
1% secant, MD: 51 µm	207	MPa	ASTM D882

1% secant, TD: 51 µm	241	MPa	ASTM D882
Tensile Strength			ASTM D882
MD: Yield, 51 µm	20.7	MPa	ASTM D882
TD: Yield, 51 µm	19.0	MPa	ASTM D882
Tensile Elongation			ASTM D882
MD: Fracture, 51 µm	310	%	ASTM D882
TD: Fracture, 51 µm	430	%	ASTM D882
Dart Drop Impact (51 µm)	180	g	ASTM D1709
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-75.0	°C	ASTM D746
Vicat Softening Temperature	93.0	°C	ASTM D1525
Extrusion	Nominal Value	Unit	
Melt Temperature	166 - 221	°C	
Extrusion instructions			

Optimum properties are obtained at melt temperatures between 330°-430°F (165°-221°C) and a blow-up ratio between 1.7-3.0:1, using proper techniques and equipment.

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