

# Capran® PIR-1000 Biaxially Oriented Nylon 6 Film



## Description

Capran® PIR-1000 film from AdvanSix contains 100% post-industrial recycled (PIR) raw materials<sup>1</sup> while providing the same top performance and processability as Capran® 1000, its standard, non-recycled counterpart.

Capran® PIR-1000 is a 0.39 mil (10 micron) biaxially oriented nylon 6 film. It features a superior balance of properties, including high gas barrier, excellent toughness and puncture resistance, optical clarity, and exceptional flex crack resistance. Capran® PIR-1000 nylon 6 film is well-suited for packaging applications requiring optimum protection and performance.

Properties @ 73°F (22.7°C), 50% RH		Typical Value		Test Method
		English	Metric	
Average Thickness	Target	0.390 mil	10 micron	AdvanSix Method
	Tolerance	+/- 5%	+/- 5%	
Basis Weight		7.129 lbs/ream	11.60 g/sq.m	AdvanSix Method
Yield		60,600 sq.in/lb	86.2 sq.m/kg	AdvanSix Method
Tensile Strength @ Break	MD	32,000 - 45,000 psi	220 - 310 MPa	ASTM D-882
	TD	32,000 - 45,000 psi	220 - 310 MPa	
Elongation @ Break	MD	80 - 110%		ASTM D-882
	TD	80 - 110%		
Modulus, Secant	MD	250,000 - 350,000 psi	1,724 - 2,413 MPa	ASTM D-882
	TD	250,000 - 350,000 psi	1,724 - 2,413 MPa	
Dimensional Stability	MD	< 3.0%		Hot air at 320°F (160°C), 5 mins
	TD	< 2.5%		
Haze		< 2.0%		ASTM D-1003
Surface Tension	Treated Side	> 56 dynes/cm		ASTM D-2578
	Untreated Side	48 - 54 dynes/cm		
Coefficient of Friction, Kinetic	Film to Film	0.5 - 0.9		ASTM D-1894
	Film to Metal	0.2 - 0.3		
Oxygen Transmission Rate @ 77°F/0% RH, 25°C/0% RH		3.8 - 4.8 cc/100 in <sup>2</sup> /day	60 - 75 cc/m <sup>2</sup> /day	ASTM D-3985
Water Vapor Transmission Rate @ 100°F/100% RH, 37.7°C/100% RH		25 - 28 gm/100 in <sup>2</sup> /day	383 - 434 gm/m <sup>2</sup> /day	ASTM F-1249

<sup>1</sup>Using an industry-accepted mass balance method, AdvanSix allocates recycled material into 100% PIR Capran® films. PIR grades are certified by an independent third-party organization (SCS Global Services) for recycled content, with annual audits.

The values presented in this data sheet are typical values and are not to be interpreted as product specifications.

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#### Contact AdvanSix

To learn more about the benefits of Capran® films, visit

[AdvanSix.com/NylonSolutions](https://www.advansix.com/NylonSolutions) or call:

**1-844-890-8949** (toll free, U.S./Can.)

**+1-973-526-1800** (international)

#### AdvanSix

300 Kimball Drive, Suite 101  
Parsippany, NJ 07054

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