

Mitsubishi Chemical America, Inc.

# **Product Bulletin**

# **Description**

Hostaphan® 4LAP is an ultra-clear polyester film that is chemically treated on one side to improve handleability and reduce potential for scratching, and chemically primed on the other side to promote adhesion of solvent-based inks and coatings. It combines high durability, optical clarity, and improved flatness after thermal processing.

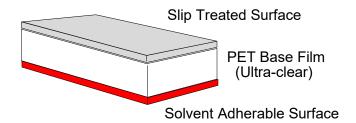
### **Performance**

Hostaphan® 4LAP is designed for the distinct requirements of the lamination market. It is a glass-clear film with excellent color, exhibiting superior flatness through the reduction of corner to corner curl. 4LAP is chemically treated on one side to provide resistance to scratching and the slip necessary to handle and wind an unfilled film. Although the slip treated surface is not designed for adhesion, it is compatible with magnetic striping. 4LAP is chemically treated on the other side to promote adhesion to solvent based inks, coatings, and adhesives for laminating.

#### **Benefits**

- Low corner to corner curl
- Excellent handling achieved by slip treatment
- Superior base film flatness
- Excellent color and clarity
- Reduced potential for scratching in the laminating process
- Adhesion to solvent based coatings

### Schematic of Hostaphan® 4LAP



## Typical Properties of Hostaphan® 4LAP Film

The Hostaphan® 4LAP property values below are typical measurements. Further guidance on series selection, functional behavior by end use, film processing, standard roll configuration and gauges is available through a Polyester Film Sales Representative.

Property		Unit of Measure	Т	ypical Value	Test Method
Area Yield		in²∙mil/lb m²∙µm/kg		19,800 717	ASTM D 4321
Tensile Strength	MD	psi kg/cm²		30,000 2,110	ASTM D 882
Yield Strength (F5)	MD	psi kg/cm²		15,000 1,050	ASTM D 882
Ultimate Elongation	MD	%		150	ASTM D 882
Modulus	MD	psi kg/cm²		500,000 35,200	ASTM D 882
Coefficient of Friction (A/B)	Kinetic		·	0.50	ASTM D 1894
Shrinkage	MD TD	%		1.2 1.5	30 min. at 150°C
Density		g/cm <sup>3</sup>		1.395	ASTM D 1505
Total Haze*		%	200 gauge 300 " 400 " 500 " 700 "	0.20 0.24 0.28 0.32 0.40	ASTM D-1003

<sup>\*</sup> Values for reference data only. Contact a Polyester Film Sales Representative for actual gauges available. Approved MB 1/2008

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