

Mitsubishi Chemical America, Inc.

### Description

Hostaphan® 4TLM is an ultra-clear polyester film that is chemically treated on one side to improve handleability and reduce potential for scratching. It combines high durability and optical clarity with improved flatness after thermal processing.

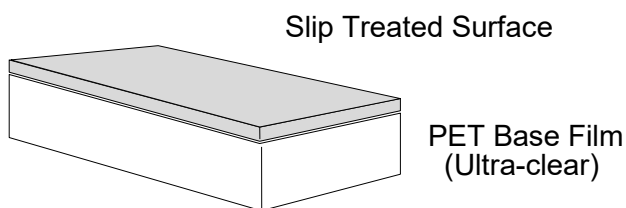
### Performance

Hostaphan® 4TLM 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. 4TLM is chemically treated on one side for scratch resistance and to improve slip for handling and windability. Although the treated surface is not designed for adhesion, it is compatible with most magnetic striping.

### Benefits

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

### Schematic of Hostaphan® 4TLM



## Typical Properties of Hostaphan® 4TLM Film

The Hostaphan® 4TLM 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	Typical Value	Test Method
Area Yield		in <sup>2</sup> •mil/lb m <sup>2</sup> •µm/kg	19,800 717	ASTM D 4321
Tensile Strength	MD	psi kg/cm <sup>2</sup>	35,000 2,460	ASTM D 882
Yield Strength (F5)	MD	psi kg/cm <sup>2</sup>	15,000 1,050	ASTM D 882
Ultimate Elongation	MD	%	180	ASTM D 882
Modulus	MD	psi kg/cm <sup>2</sup>	410,000 28,800	ASTM D 882
Coefficient of Friction (A/B)	Kinetic	--	0.50	ASTM D 1894
Shrinkage	MD TD	%	1.0 1.4	30 min. at 150°C
Density		g/cm <sup>3</sup>	1.395	ASTM D 1505
Total Haze*		%	200 gauge 0.20 300 " 0.24 400 " 0.28 500 " 0.32 650 " 0.38 700 " 0.40	ASTM D-1003

\* Values for reference data only. Contact a Polyester Film Sales Representative for actual gauges available.  
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