

HARDEN Film is the sequentially biaxially stretched film whose main material is nylon 6 (polyamide).
 HARDEN Film: NAP (brand) is the new developed nylon film which is superior in slipperiness and half-tone printing with applying special process to the surface and improving water resistant adhesive properties.

FUTURE

- (1) Superior in water resistant adhesive properties
- (2) Good slipperiness under high humidity
- (3) Superior in half-tone printability

USE

Use for lamination for which the water resistant adhesive properties are required
 Use for filling under high humidity

General physical property of HARDEN Film NAP02 type

Item		Unit	NAP02		Other company product (Easy adhesive type)	Measuring method
Thickness		μm	15	25	15	JIS K7112
Haze		%	3.8	6.0	3.5	JIS K7105
Tensile breaking strength	Length	Mpa	216	220	200	JIS K7127
	Width		275	300	230	
Tensile breaking elongation	Length	%	105	110	105	JIS K7127
	Width		70	70	100	
Heat shrinkage rate (160 degrees C, 10mins)	Length	%	1.0	1.0	2.0	JIS K6782
	Width		1.0	0.7	0.7	
Impact strength	23°C	J	1.2	1.8	0.8	Toyobo method
Static friction coefficient	B/B	23°C×50%RH	0.3	0.3	0.65	JIS K7125
Dynamic friction coefficient			0.3	0.3	0.63	
Static friction coefficient	B/B	23°C×65%RH	0.3	0.3	0.77	JIS K7125
Dynamic friction coefficient			0.3	0.3	0.76	

Examples of printability evaluation

		NAP02	NAP02(25μm)	Other company product (Easy adhesive type)	
Half-tone printability	10% gradation	○	○	○	We evaluated dot miss while printing at our film development center
	5% gradation	○	○	△	

Example of lamination features

		NAP02	NAP02(25μm)	Other company product (Easy adhesive type)		
Lamination strength	Ordinary state	N/15mm	8.5	8	Dry lamination NY/LL(40) Adhesive agent: Ester type	
Before boiling	Water soaking		3	3.2		3
Lamination strength	Ordinary state		8.5	8		8.5
After boiling	Water soaking		3	3.2		3

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On these data, the representative values were measured under the specialized condition at our company's film feature evaluation agency.
 Surface B: Non-corona processed surface.

TOYOBO CO., LTD. Packaging Film
<http://www.toyobo.co.jp/seihin/film/>
 2-8, Dojima hama 2-chome, Kita-ku, Osaka
 530-8230, JAPAN
 [TEL]+81-6-6348-4156 [FAX]+91-6-6348-4159