



## CHARACTERISTICS OF GLOSS BOPP LAMINATING FILM

1. TYPE : EM 21-1 (Glossy type of thermal laminating film)
2. APPLICATION : BOOK COVER & PRINTS, PHOTO and PAPERS
3. MELTING TEMPERATURE : 70 ~ 120°C or less on the Laminator  
(Depend on the machine and its lamination speed)
4. SPECIFICATION

PROPERTIES		UNIT	TYPICAL VALUES	TEST METHOD
AVERAGE THICKNESS	X-BAR	μm	24 mic	PKC-METHOD
	R-BAR		2% +/-	
TREATMENT		DYNE/CM	I.S 44 ↑ , O.S 38 ↑	
TENSILE STRENGTH	MD	kg/mm <sup>2</sup>	10	ASTM
	TD		14.2	D-882
ELONGATION AT BREAK	MD	%	162	ASTM
	TD		42	D-882
Heat Shrinkage	MD	%	1.5	ASTM
	TD		0.3	D-1204
Coefficient of Friction	out/inside	us	1.02/0.34	ASTM
	opp/opp	uk	0.9/0.23	D-1894
Haze	BASE FILM	%	1.9	ASTM D-1003
GLOSS	45°		142	ASTM D-2457

\*\*\* The above data is based on BOPP Laminating Film.

\*\*\* All properties are tested under standard laboratory conditions:

23 ±2°C : 50 ±5% RH, unless otherwise stated.

\*\*\* MD : Machine Direction, TD : Transverse Direction

\*\*\* The above data is for reference only.



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## CHARACTERISTICS OF MATT BOPP LAMINATING FILM

1. TYPE : EM 21-1 (Matt type of thermal laminating film)
2. APPLICATION : BOOK COVER & PRINTS, PHOTO and PAPERS
3. MELTING TEMPERATURE : 70 ~ 120°C or less on the Laminator  
(Depend on the machine and its lamination speed)
4. SPECIFICATION

PROPERTIES		UNIT	TYPICAL VALUES	TEST METHOD
AVERAGE THICKNESS	X-BAR	μm	27 mic	PKC-METHOD
	R-BAR		2% +/-	
TREATMENT		DYNE/CM	I.S 44 ↑ , O.S 38 ↑	
TENSILE STRENGTH	MD	kg/mm <sup>2</sup>	8.9	ASTM
	TD		13	D-882
ELONGATION AT BREAK	MD	%	188	ASTM
	TD		45	D-882
Heat Shrinkage	MD	%	1.2	ASTM
	TD		0.1	D-1204
Coefficient of Friction	out/inside	us	1.54/0.19	ASTM
	opp/opp	uk	1.63/0.20	D-1894
Haze	BASE FILM	%	84	ASTM D-1003
GLOSS	45°		4.3	ASTM D-2457

\*\*\* The above data is based on BOPP Laminating Film.

\*\*\* All properties are tested under standard laboratory conditions:

23 ±2°C : 50 ±5% RH, unless otherwise stated.

\*\*\* MD : Machine Direction, TD : Transverse Direction

\*\*\* The above data is for reference only.