Product Selector: JP ANTI UV PET FILM

Substrate PET thickness	Gloss Haze<1%	AG Haze 13%	Fine Haze 60%	Velvet Haze 70%
125 µm	JP- G130XE	JP- A130XE	JP- F150XE	JP- V150XE
188 µm	JP- G180XE	JP- A180XE	JP- F200XE	JP- V200XE
250 µm	JP-G250XE	JP-A250XE	JP-F280XE	JP-V280XE

Main Features

- Excellent scratch resistance 2H~3H
- Multiple Textures and haze levels available including Gloss, Anti-glare and Matte (Fine and Velvet)
- Receptive to a range of UV and solvent based varnishes
- Embossable
- Resistant to wide range of chemicals
- Very high optical clarity
- Exceptional flex life

Variants:

JP FILM comes in a variety of combinations of PET thickness, haze and texture.

See the product selector at the top of the page for the most popular products.

Applications

JP FILM is optimised for the following applications-

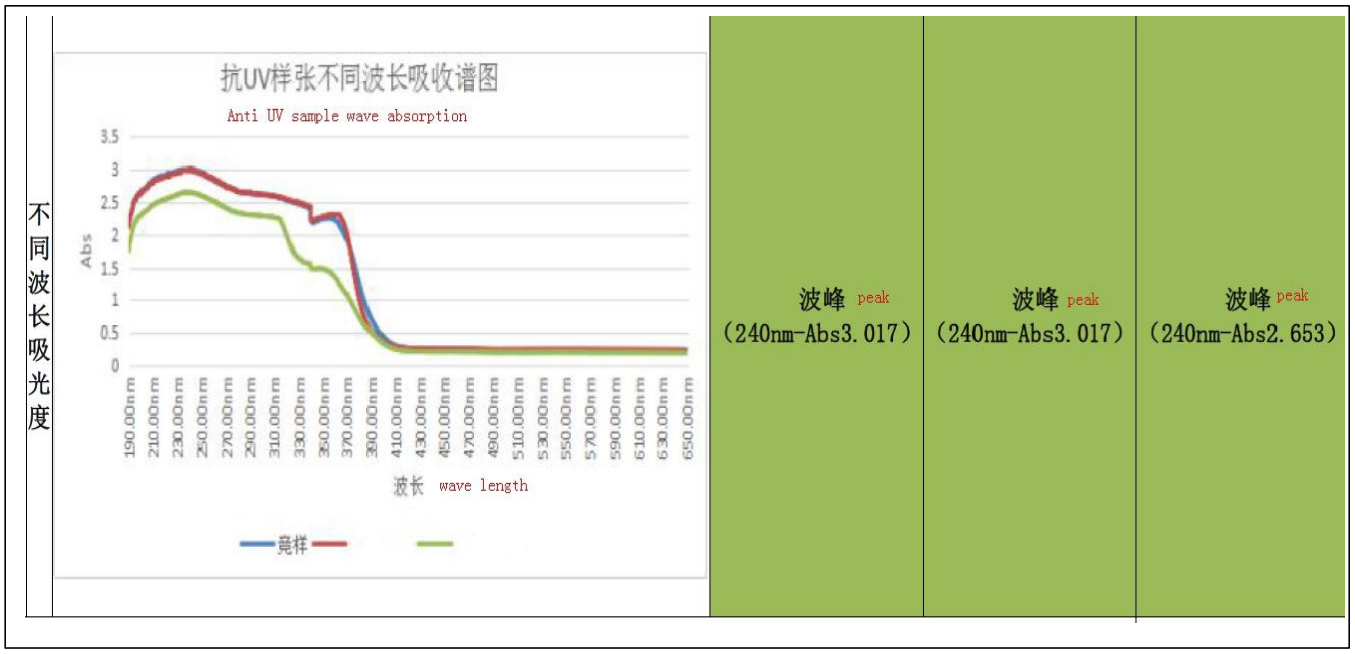
- Membrane touch switches
- Fascia panels
- Touch panels
- Nameplates
- Labels/ logos and Product marking

General description

JP FILM is a high quality, embossable, hard coated polyester film, consisting of a chemically bonded UV-cured hard surface coating on a base polyester film. Film supplied as sheets or rolls, with or without protective films. The coating significantly enhances the chemical resistance and the flex life of the base film thus extending the functionality of polyester film into areas demanding high abrasion resistance together with excellent receptivity to graphic inks. Film is optimised for a range of applications requiring a combination of high abrasion resistance and flexibility.

Versions using special heat stabilized polyester film with a typical residual shrinkage of < 0.3% @ 150°C are also available for demanding applications.

Figure 1 - Example product using JP XE film



Technical Properties

Type	Property	Test Method	Typical Value/ Units
Optical	Haze (Gardner)	ASTM -1003	Gloss: <1 %
			AG: ~13 %
			Fine: ~60 %
			Velvet: ~70 %
	60° Gloss (Gloss film)	ASTM D-2457	95 %
	Yellowness Index	ASTM E 313	< 2.0
	Transmission(Tp):Gloss	ASTM D1003	90~91%
Chemical	Immersion Test	MEK, 24hrs	Satisfactory
	Spot Test	ASTM 1308	Satisfactory
	Wetting Index- Hard side	ASTM D-2578	40 dynes/cm
	Wetting Index- Clear side	ASTM D-2578	45 dynes/cm
Mechanical[1]	Pencil Hardness	See note (2)	2H~3H @ 750g
	Taber Abrader	See note (3)	<4 %
	Cross Hatch Adhesion	ASTM D-3359	5B
	Switch Life	See note (4)	>2 millions
Thermal	Suggested Usage Temp.	Min	-40 °C
	Suggested Usage Temp.	Max (see note 5)	105 °C
	Dimensional Stability- MD	30 min @ 120°C	0.34 %
	Dimensional Stability- TD	30 min @ 120°C	0.24 %
Electrical	Volume Resistivity	ASTM D257	10^{15} ohm/m
	Surface Resistivity	ASTM D257	10^{13} ohm/sq
	Dielectric Strength	ASTMD149	125 kV/mm

Notes-

1- The coating layer on the PET film does not significantly change the basic properties such as elastic modulus, tensile strength and elongation at break of the film. These parameters will remain similar to uncoated polyester film. Typical values are:

Elastic modulus = 3600 N/m2
Tensile Strength = 15 kg/mm2
Elongation at break = 80-85%

2- Testing is based on ASTM D-3363. The pencil is sharpened using a standard sharpener and then the tip is flattened perpendicular to the pencil. The pencil is held at 45° to the sample surface using a pencil trolley based on ASTM D-3363 requirements. As the trolley is moved pressure is gradually increased downwards on the pencil trolley until either the sample surface is scored or the pencil breaks. This is repeated 5 times. If the surface is unmarked at least 3 of the times the full process is repeated for the next hardest pencil. The hardest pencil which doesn't damage the sample more than 2 out of 5 times is defined as the hardness of the sample.

3- Taber Test (ASTM D-1044): A Taber abrader is used to abrade the test samples. 100 cycles are applied using CF10F Type 4 wheel under a load of 500g. Measurements of the haze value before and after abrasion are taken and the change is recorded. The average of three test samples is given.
4- Switch Life: An embossed dome switch is flexed continuously at a rate of 2 flexes/second using a standard rubber finger (45° Shore hardness). Pressure applied is kept sufficient to force the apex of the dome to make contact with the support table. The switch is examined at regular intervals to check for weight loss due to particles flaking off or cracking.
5- Without protective film.

Chemical Resistance

JP films have been tested* for solvent resistance to:

- Household cleaning agents
- Alcohols
- Acetone
- Dilute acids
- Dilute alkalis
- Esters
- Hydrocarbons
- Methyl Ethyl Ketone
- Gasoline and Diesels
- Common Inks
- Water salt solution
- Coffee
- Tea

Ordering Information

Product Name	Thickness	Size
JP-**G130XE**	131um +/-10%	100/200m x 610/1220mm Roll
JP-**G180XE**	194um +/-10%	100/200m x 610/1220mm Roll
JP-**G250XE**	256um +/-10%	100/200m x 610/1220mm Roll
JP-**A130XE**	131um +/-10%	100/200m x 610/1220mm Roll
JP-**A180XE**	194um +/-10%	100/200m x 610/1220mm Roll
JP-**A250XE**	256um +/-10%	100/200m x 610/1220mm Roll
JP-**F150XE**	137um +/-10%	100/200m x 610/1220mm Roll
JP-**F200XE**	200um +/-10%	100/200m x 610/1220mm Roll
JP-**F280XE**	262um +/-10%	100/200m x 610/1220mm Roll
JP-**V150XE**	147um +/-10%	100/200m x 610/1220mm Roll
JP-**V200XE**	210um +/-10%	100/200m x 610/1220mm Roll
JP-**V280XE**	272um +/-10%	100/200m x 610/1220mm Roll

Notes:

1. Gloss has single-sided protect film as standard and is the most cost effective option although double-sided is also available upon request.

- For all cases protect film is laminated on PET side (see note 1 for gloss options)
- Diameter of roll cores is 6” (15.2cm) as standard.
- Sheets can also be provided for sampling and lower volumes in a variety of dimensions although the most cost effective delivery format is whole rolls.

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