

Printable Films Guide

Pentaprint® | Pentaclear® | Pentadur®

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Printable Films Portfolio

Thousands of brands and graphic products use kp printable films. Choose Pentaprint® for general print applications, Pentaclear® for box printing and Pentadur® for stationery materials.

Pentaprint® / Print Films

Engineered specifically for general print applications requiring brilliant clarity, excellent ink adhesion, high-impact strength, water, oil and chemical resistance and UV stability. Runs efficiently on all print processes without pre-treatment. Dimensionally stable. Easy to process resulting in fewer rejects. Manufactured in a controlled environment to the strictest current GMP standards. Can conform to FDA and BGVV standards upon request. Can meet HACCP directives.

Applications:

Advertising and promotional materials | tags and labels | banners | hot stamping | point-of-purchase items and displays | menus | charts | backlit panels | teaching materials | backer sheets | counter mats | mouse pads | floor graphics | printable and thermoformable items

Pentaclear® / Box Films

Provides clarity, printability, and scratch resistance for clear packaging. Available in a large spectrum of colors, finishes and surfaces. Offers brilliant and exceptional glossy appearance for enhanced shelf appeal.

Applications:

Prestige cosmetic, fragrance, and personal care gift sets | clear folding boxes/cartons | gift packaging where product visibility is desired | transparent windows | transparent packaging | round boxes | blisters in folding cartons

Pentadur® / Stationery Films

Highly durable films for protecting stationery products and materials. Available in an extensive range of colors and surfaces including gloss, matte, and embossed. High impact strength provides greater tear resistance. Easily processed for fewer rejects. Exceptional lay-flat and die-cutting properties.

Applications:

Binding systems | transparent covers | page protectors, files, folders, index cards

Benefits across the supply chain



Distributors

- Consistent quality means fewer processing issues and crisp, eye-catching results
- Reliable global sourcing minimizes supply issues
- kp/distributor short lead times and quick delivery
- Stocking programs for quick order fulfillment
- Personal technical support
- Extensive film selection with multiple polymer and color choices

Converters

- Efficient punchability
- Excellent bonding performance
- Seals, scores and cuts without difficulty
- High optical quality
- Outstanding durability
- Technical support available globally
- Dedicated sales contact

Printers

- Efficient processability
- Excellent ink adhesion
- Multiple surface textures
- Enhancements available including custom corona treatment
- High clarity
- Ideal for all print processes including flexo, digital, rotogravure and hybrid presses

Brand Owners

- Excellent graphic reproduction on high-quality materials
- Durable films for long service life
- Custom textures and surfaces
- Sustainable materials available
- Knowledgeable technical service team works with you to make your aspirations realities

How to choose the perfect print film

When determining which film is right for an application, the number of options can be overwhelming. Which polymer is the most printable? Which colors are available? Is one film more durable than another?

When is surface treatment necessary?

The kp printable films portfolio takes the guesswork out of finding the perfect film. The portfolio has options that enable you to choose a polymer, base type, surface/texture, and color.

Printable film choices are based on a combination of polymer, surface/texture and color.



Polymers

Vinyl, PET, APET, PP, HDPE, PS, HIPS, SmartCycle®



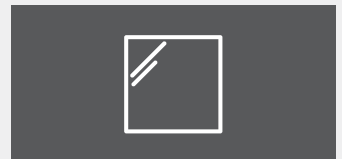
Base Type

High Impact, Matte or Gloss, UV Protected



Color

Clear, White, Blue, Gray, Transparent, Custom



Surface/Texture

Smooth, Embossed, Gloss/Gloss. Matte/Matte

Which polymer fits your application?

kp's printable films portfolio has a wide range of polymers so you can match the right film to your product specifications. Use this guide to select the best polymer for your project.



Polyvinyl Chloride (PVC)

- PVC is the traditional mainstay of graphic films
- Processes and handles well
- Provides great separating properties
- Accepts all major printing methods
- Sealable with all common technologies
- Can meet UV protection & optical brightener needs
- Easy to form

Polyethylene Terephthalate (PETG and APET)

- Best clarity of all polymers
- Great recyclability
- Excellent printing surface
- PETG sealable with all common technologies
- APET seals well with glues
- Accepts all major printing methods
- Easy to form

Polyethylene (HDPE)

- Lower specific gravity provides increased yield and lower overall cost*
- Easy to cut
- Corona treatment recommended for superior printing
- Sealable with glue, heat sealing, or ultrasonic technologies

*Compared to other polymers

SmartCycle®

- Made from recycled plastic beverage bottles
- Post-consumer recycled (PCR) content from 25% to 50%
- Complies with all applicable international packaging and FDA food contact regulations
- Thermoform and print properties comparable to APET

Polypropylene (PP)

- Great mechanical strength
- Lower specific gravity provides increased yield and lower overall cost*
- Easy to cut
- Difficult to form
- Corona treatment recommended for superior printing
- Sealable with glue, heat sealing, or ultrasonic technologies

*Compared to other polymers

Polystyrene (PS and HIPS)

- Good mechanical properties
- Great thermoformability
- Easy to cut
- Needs corona treatment to be printable
- Sealable with glue, heat sealing, or ultrasonic technologies

Select a base type*

kp printable films are available for virtually any application. To find your perfect film, start by selecting a polymer from page 5, then use the Pentaprint®, Pentaclear® and Pentadur® base type charts to compare your product with the suggested applications. Choose a base type that most closely matches your project. Finally, use the color and surface choices on page 10 to optimize your film. It's that easy.

*material selections available in North America

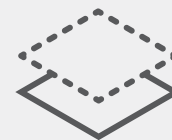
Base Type Pentaprint® Films

For unique printing solutions



Polymer	Application	Description	Base Type	Color
PVC	General print applications, POP displays, Gift cards	Premium matte/matte film with high-impact strength for wide range of prints from conventional- , screen- and UV-Offset. Optimized cutting properties.	PR-M280/16	White & Clear
PVC	General print applications, POP displays, Gift cards	Basic matte/matte film with good-impact strength for UV-Offset print and die-cutting applications.	PR-M280/06	White
PVC	General print applications, POP displays, Print application requiring clear windows	The clear glossy/glossy kp standard with high-impact strength for wide range of print and die-cutting applications.	PR-M280/36	Clear
PVC	POP displays, table-top mats, floor graphics, others marketed as scratch resistant	Clear embossed film with unique scratch resistance, great impact strength and printable with all common methods.	PR-M280/39	Clear
PVC	Outdoor signs	Matte/matte film specially designed for outdoor signage and great UV-Offset printability.	PR-M254/64	White
PP	Signage and stick stakes in the horticulture market	PP matte/matte high tear resistance film with UVI additive.	PR-E801T10	White
PETG	General print applications, POP displays, Gift cards	Clear glossy/glossy film with good mechanical and printing properties.	PR-G10T08	Clear
PS	All print applications	General print applications.	ST-ES13T00	White

Base Type Pentaclear® Box Film



For general box applications

Polymer	Application	Description	Base Type	Color
APET	Clear and print folding applications	Prime glossy/glossy Box APET grade with good slip performance for printed folding box applications.	BX-E610T14	Clear
APET	Clear and print folding applications	Glossy/glossy Box APET grade with enhanced slip performance for printed folding box applications.	BX-E610T05	Clear
APET - SmartCycle®	Clear and print folding applications	APET film with guaranteed minimum 25% certified post consumer recycled (PCR) to reduce plastic waste and the consumption of virgin material.	BX-ES125B1	Clear
PETG	Clear and print folding applications	Utility grade film with glossy/glossy surface.	BX-EG30T05	Clear
PVC	Clear and print folding applications	Glossy/glossy high-impact Vinyl for die cut and folding box applications.	BX-M280/36	Clear
PVC	Clear and print folding applications	Superior impact strength for folding box applications where cracking is an issue. Glossy/glossy surface.	BX-M288/01	Clear
PVC	Box lid applications	Moderate-impact strength and low crease whitening for box lid applications. Glossy/glossy surface.	BX-M285/36	Clear

Base Type Pentadur® Stationery Films



For a wide range of applications

Polymers	Application	Description	Base Type	Color
PVC	Tabs, clear protectors, multi layer applications	High-impact strength suitable for metallizing and coating applications. Glossy/glossy surface.	ST-M280/80	Clear White
PVC	Tabs, clear protectors, multi layer applications	The clear glossy/glossy kp standard with high-impact strength for wide range of print and die-cutting applications.	ST-M280/36	Clear
PVC	Box lid applications	Moderate-impact strength and low crease whitening for box lid applications. Glossy/glossy surface.	ST-M285/36	Clear
PE	Hanging tags, price tags, straps, print applications	Polyethylene film with moderate-impact strength and low crease whitening for box lid applications. Glossy/glossy surface.	ST-EE00T00	Clear
PS	All print applications	Basic polystyrene with gloss/matte or matte/matte surface.	ST-ES13T00	White
PETG	Report covers, folders	Utility grade film for stationery applications.	ST-EG30T05	Clear, Translucent, Blue

Options Color



kp printable films hold color beautifully, adding a new level of excitement to brands.

Polymer	Color Category	Opacity	Color Code
PVC	Bright White	Low	03/9027
PVC	Bright White	Medium	05/9030
PVC	Bright White	High	09/9200
PVC	Tinted Blue	Clear	51/9400
PVC	Colorless	Clear	71/9400
PS	Blue	High	54S7210
PS	Warm White	Medium	04S9501
PS	Warm White	Medium	04S9502
PS	Bright White	High	05S9400
PS	Warm White	Low	04S9601
PP	Warm White	Medium	0489800
PET	Colorless	Clear	116000 (APET) 11G000 (GPET)
PE	Warm White	Medium	04E9800
PE	Warm White	Translucent	12E0000

Options Surface/Texture



kp printable films are available in a variety of surfaces and textures which improve printing and add interest to your designs.

Polymer	Surface Category	Surface Code	Description	Gloss	Ra
All	Glossy/Glossy	100×0	High gloss surface for clear films. Designed for all shiny applications. Offers good printability and processing with excellent slip behavior.	20° = 120 %	
PVC	Glossy/Glossy	120_1	Gloss surface for opaque films. Designed for all shiny applications. Offers good printability and processing with excellent slip behavior.	20° = 70 %	
PET	Micro-matte/Glossy	101×0	Designed for improved slip behavior.		
PVC	Matte/Matte	495×0	The surface for conventional printing. Combines lowest gloss level with increased roughness. This supports high ink load and oxidative drying processes like UV inks. Avoids ghosting.	85° = 3 %	2.10
PVC	Matte/Matte	494×0	Most used matte/matte surface from kp. Offers a great balance of illustration accuracy, processability and drying. It is the standard for all UV-offset printing processes and inks.	85° = 3 %	1.7
PVC	Matte/Matte	493×0	Fine matte surface. Ideal for light designs like pastel colors. Supports full-face covering images especially with low ink load.	85° = 6 %	1.30
PP, PS	Embossed Gloss	453×0	Rough embossed surface on the prime side and glossy surface on the reverse side.	85° = 11 % (PS) 85° = 9 % (PP)	
PE	Embossed Gloss	552×0	Fine matte embossed surface on the prime side and glossy surface on the reverse side.	85° = 9 %	
PVC	Embossed Gloss	681_2	Very rough embossed prime side with a glossy reverse side.	60° = 16 %	
PVC	Embossed Gloss	680_0	Rough embossed prime side with a glossy reverse side.	60° = 16 %	
PVC	Embossed/Matte	781×7	Rough embossed surface with a chemical fine matte reverse side.	60 ° = 17 %	
PP, PS	Embossed Gloss	050D0	Smooth matte surface on the prime side and glossy surface on the reverse side.	85° = 17 %	

Your perfect printable film

Put it all together



You have selected a polymer, film base type, color and surface. Now use these specification tables to make your final film choice.

Pentaprint® film codes for general application printable films

Polymer	Application	Base Type	Color	Surface	Thickness Range *(mil)
PVC	General print applications, POP displays, Gift cards	PR-M280/16	09/9200 05/9030	493_9 494_9 495_9	4 - 25
PVC	General print applications, POP displays, Gift cards	PR-M280/06	03/9027	494D9	4 - 25
PVC	General print applications, POP displays, Print application requiring clear windows	PR-M280/36	51/9400 71/9400	100_0	4 - 25
PVC	POP displays, table-top mats, floor graphics, others marketed as scratch resistant	PR-M280/39	51/9500	781C7	4 - 25
PVC	Outdoor signs	PR-M254/64	04/0040	120_1	4 - 25
PP	Signage and stick stakes in the horticulture market	PR-E801T10	0489800	453D0	10 - 30
PETG	General print applications, POP displays, Gift cards	PR-G10T08	09G9620	100_0	8 - 25
PS	All print applications	PR-ES13T00	04S9400 04S9501 04S9502 04S9601	050D0 453D0	10 - 40

*Note: Rolls and sheets may differ

Pentaclear® film codes for box and display applications

Polymer	Application	Base Type	Color	Surface	Thickness Range *(mil)
APET	Clear and print folding applications	BX-E610T14	1160000	100_0 101_0	8 - 25
APET	Clear and print folding applications	BX-E610T05	1160000	100_0 101_0	8 - 25
APET - SmartCycle®	Clear and print folding applications	BX-ES125B1	1160000	100_0	8 - 25
PETG	Clear and print folding applications	BX-EG30T05	1160000	100_0	8 - 25
PVC	Clear and print folding applications	BX-M280/36	51/9400 71/9400	100_0	4 - 25
PVC	Clear and print folding applications	BX-M288/01	71/9400	100_0	4 - 25
PVC	Box lid applications	BX-M285/36	51/9400	100_0	4 - 25

*Note: Rolls and sheets may differ

Pentadur® film codes for stationery applications

Polymer	Applications	Base Type	Colors	Surface	Thickness Range *(mil)
PVC	Tabs, clear protectors, multi layer applications	ST-M280/80	51/9400	100_0 681_2	4 - 25
PVC	Tabs, clear protectors, multi layer applications	ST-M280/36	51/9400 71/9400	100_0	4 - 25
PVC	Box lid applications	ST-M285/36	51/9400	100_0	4 - 25
PE	Hanging tags, price tags, straps, print applications	ST-EE00T00	12E000	453_4	10 - 50
PS	All print applications	PR-ES13T00	04S9400 04S9501 04S9502 04S9601	050D0 453D0	10 - 40
PETG	Report covers, folders	ST-EG30T05	1160000	100_0	8 - 25

*Note: Rolls and sheets may differ