



Pentalabel®

Films for shrink labels



innovation. delivered.

Our films deliver

Imagine your product wrapped in vivid, glossy graphics. The kind of packaging that shines on the shelf—and sells. With Pentalabel® shrink films, kp delivers.

Pentalabel® print quality is unsurpassed. Cover the entire body of your product with high-resolution graphics and brilliant color, the kind of dynamic design that makes an impact. Pentalabel® offers you the flexibility to print whatever you need to successfully build your brand, making this fast-growing technology ideal for launching new or redesigned products.



The innovation doesn't end with print quality: the films can cover the kind of unusual container shapes that customers notice. Full-body shrink sleeves and roll-sleeve labels screen what's inside while allowing for easy-opening, tamper-evident seals for enhanced product protection. Films can be reverse-printed to protect labels from wear, while maintaining a high-gloss finish. They accommodate even the most difficult multi-pack combinations, offering you unlimited innovative surfaces and promotional opportunities. Wine capsules and security closures complement label graphics while offering maximum product integrity.

At kp, we know that innovative packaging sells products. Whether you're in the beverage, dairy, food, health and beauty, household, or home and garden business, Pentalabel® films maximize shelf visibility, so your products get noticed.



solutions.
delivered.

Innovative products that meet your needs

Pentalabel® is the most comprehensive labeling film line in the industry. Challenge us with a new product or idea and we'll develop the optimal film—your needs power our innovation. At kp, we're not just innovating, we're innovating for you—and the opportunities are endless.



Pentalabel® shrink films offer specific benefits:

- Excellent lay-flat properties
- Proper ink adhesion and shrinkage ensure uniformity
- Gauge uniformity so you have fewer rejects and greater processability
- Superior print resolution
- High transparency
- Surface brilliance
- High-impact strength
- Food grades available



Pentalabel® films overview

application			shrink tunnel			high-speed application	container design/ configuration			
			infrared	hot air	steam		simple contour	multiple contours	high shoulder	narrow neck
polymer/shrinkage										
shrink sleeve	PETG (TDO)	High	+	+	+	+	+	+	+	+
		Super High	*	+	+	+	+	+	+	+
	PVC (TDO)	Medium	*	+			+			
		Standard	*	+	+	+	+	+		
		High	*	+	+	+	+	+	+	+
Super High	*	+	+	+	+	+	+	+	+	
roll sleeve	PETG (MDO)	Standard		+	+	+	+	+	+	
		High		+	+	+	+	+	+	+
	PVC (MDO)	Medium	*	+	+	+	+	+		
		Standard	*	+	+	+	+	+	+	
		High	*	+	+	+	+	+	+	+
wine capsule	PETG (TDO)	Standard	+			+	+			
	PETG (MDO)	Standard	+			+	+			
	PVC (TDO)	Medium	+			+	+			
	PVC (MDO)	Medium	+			+	+			
pressure-sensitive shrink label	PETG (TDO)	High				+	+			
	PETG (MDO)	High				+	+			
	PVC (TDO)	High				+	+			
	PVC (MDO)	High				+	+			

* Under certain conditions, film can be used in an infrared shrink tunnel.



shrink films

Shrink-sleeve films

These films create high-impact full-body sleeves, completely covering your product in text and graphics. Available with a range of shrinkage properties, they shrink beautifully around both simple and multiple contours. They are also ideal for multi-packs and tamper-evident bands/ security closures.

- PETG and PVC transverse-direction oriented (TDO) films
- Medium to super high shrinkage properties
- Simple and multiple contours, high shoulder, and narrow neck configurations
- Suitable for gravure, flexographic, rotary offset, and digital printing
- Use in steam, hot-air, or infrared shrink tunnels
- Ideal for sleeve application machinery
- Excellent processability during printing, slitting, tube forming, and shrinking
- High-impact strength
- High performance surface for enhanced printability allows multiple graphic schemes
- Gloss/gloss and matte/gloss surface finishes
- Transparent or opaque colors

- Custom formulations:
 - For narrow neck, highly contoured containers, that prevent labels from “smiling”; remain uniform across the container with little to no machine-direction (MD) shrinkage and low- or high-shrink force
 - With fluorescent optical brightener for automatic detection scanning requirements
 - With UV inhibitor to increase product shelf life
 - For wet pasteurization

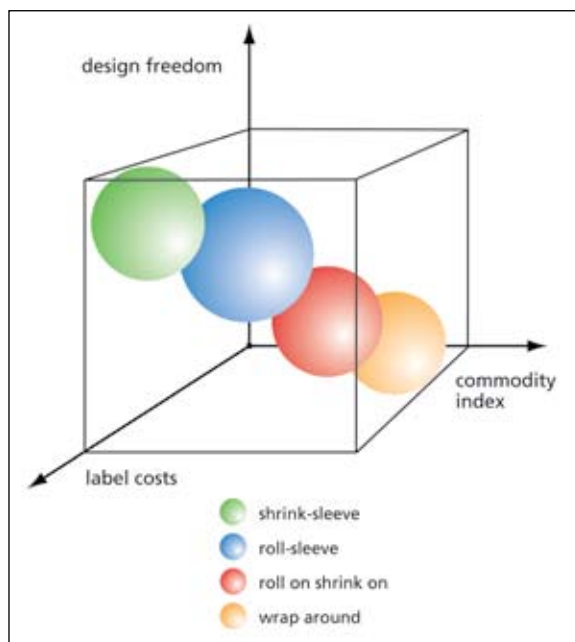
Roll-sleeve films

Providing full or partial body coverage, roll-sleeve films are formulated to work on roll-fed label machinery. So you get the superior graphics of shrink-label films and the high efficiency production of roll-fed labels.

- PETG and PVC machine-direction oriented (MDO) films
- Low shrink-initiation temperature requires minimal shrink tunnel length for energy savings and high-output line speed
- Medium to high shrinkage properties

Roll-sleeve films *continued*

- Simple and multiple contours, symmetrical shaped configurations allow for flexibility in container shape and design
- Suitable for gravure, flexographic, and rotary offset printing
- Runs on existing printing equipment using conventional inks
- Works with heat-bar, solvent, hot-melt adhesive, and laser seaming
- Use in steam or hot-air shrink tunnels
- Excellent processability during printing and shrinking (smooth flat seams)
- No de-lamination
- High-impact strength
- Gloss/gloss surface finish
- Clear, transparent film
- Attractive total system cost due to high-speed labeling, low scrap rate, quick changeover, and wide-web printing



There are 3 factors to consider when determining the type of shrink label to use: 1) design freedom; 2) label costs; and 3) commodity index.

Wine capsule films

Wine capsule films protect your product and enhance shelf appeal. With these films, formulated specifically for the beverage industry, you can print wine capsules and disk plates with graphics.

- PVC and PETG transverse-direction oriented (TDO) and PVC machine-direction oriented (MDO) films
- Low to high shrinkage properties
- Simple contours
- Use in infrared shrink tunnels; ideal for wine capsule machinery
- Excellent processability
- Medium-impact strength
- Gloss/gloss and matte/gloss surface finishes
- Clear and opaque colors

Pressure-sensitive shrink-label films

Pressure-sensitive shrink labels are designed with optimal coating and laminating properties. They are ideal for batteries and many other PSA applications.

- PVC and PETG transverse-direction oriented (TDO) films for PSA-coated shrink labels
- Range of high shrinkage properties
- Functional adhesive/shrinkage interaction characteristics
- Brilliantly clear
- Suitable for gravure, flexographic, and rotary offset printing
- High-impact strength
- Gloss/gloss surface finish
- Transparent or opaque colors
- Ability to reverse-print for ink protection





performance.
delivered.

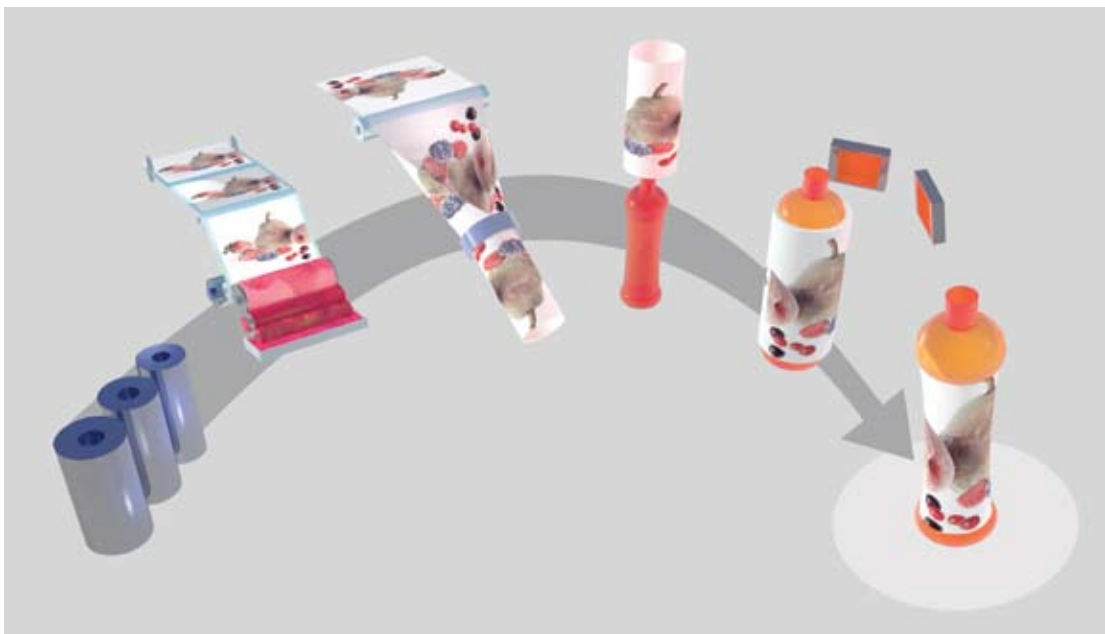
Advanced technology, global sourcing

Since the first film rolled off a kp calender line in 1966, we have continually invested in state-of-the-art calendering, extrusion, and orienting equipment. These operations impart shrink film with its most critical characteristics, including shrinkage, mechanical properties, gloss, and transparency.

To meet the needs of global companies, we use kp advanced technology at manufacturing sites across the globe. Wherever you package products, we can supply identical high-quality Pentalabel®

film from our sites in Asia, Europe, and North America. kp global sourcing ensures security of supply. Re-qualifications for product transfers are no longer needed, so you get quicker access to new markets.

When you buy kp film, you know it will perform on your machinery. We offer a full range of thicknesses, with tolerances so close, you can write tighter specifications to yield cost savings. All films are phthalate-free, raw materials are fully traceable, and your material is kept clean.



Shrink-sleeve label process



kp plants are ISO 9001:2000, 9001:2008, and 14001:2004 certified and we manufacture according to current GMP and HACCP standards. All Pentalabel® films meet or surpass FDA, HPB, and European Pharmacopoeia, and all international regulatory standards.

- Food contact directive 2002/72/EG
- Packaging directive 78/142/EWG



Roll-sleeve label process



Solutions for a changing world

kp's innovative portfolio of shrink films helps you to meet your social, economic, and environmental sustainability goals, while enhancing shelf appeal and maintaining production economies. We strive to produce film products that both enhance quality of life and protect our earth's resources. The Pentalabel® line includes a range of options for bottles and cans, including vinyl and PETG, so you can select among materials for recycling compatibility.



support.
delivered.

Our people stand behind our products

At kp, our people are there to help you make the most of Pentalabel® film. Our sales force is the best-trained in the industry. They work hand-in-hand with engineers to meet your needs.



kp is unique in backing every order with outstanding local technical and customer service. Our customer service teams, stationed across the globe, ensure on-time delivery wherever you need it. We also offer the industry's most comprehensive technical support. Our technicians will visit you on-site for consulting, troubleshooting, and training.

Wherever you package product, we're there to work with you.



results. delivered.

A world leader in film

At kp, we believe in meeting the needs of our customers comprehensively, with the highest quality films, the broadest range of formulations, and service and support from beginning to end. We offer the strength and stability of a global company, delivering results to you wherever you are.

Innovation. Solutions. Performance. Support. Results.

kp films deliver.

Film options

- Food grade
- Fluorescent optical brightener
- UV inhibitor



Asia:
64/48 Moo. 4 T. Pluakdaeng,
A. Pluakdaeng
Rayong 21140
Thailand
Phone: +66 38 955460
Fax: +66 38 955462
kpsasia.sale-support@kpfilms.com

Europe:
P.O. Box 1165, 56401 Montabaur
Industriestr. 3-5, 56412 Heiligenroth
Germany
Phone: +49 2602 915-0
Fax: +49 2602 915-297
kpinfo@kpfilms.com

North America:
3585 Klöckner Road
P.O. Box 500
Gordonsville, VA 22942 USA
Phone: +1.540.832.3600
Fax: +1.540.832.5656
kpainfo@kpfilms.com

South America:
Rua dos Estudantes, s/n
Rodovia Raposo Tavares Km 28,3
Bairro Moinho Velho - CEP 06707-050
Cotia - São Paulo - Brazil
Phone: +55 11 4613 9999
Fax: +55 11 4613 9990
kpainfo@kpfilms.com

www.kpfilms.com



klöckner pentaplast