

KODAK 600 Film / ESTAR Base KODAK 651/652 Film / ESTAR Base KODAK 671/672 Film / ESTAR Base

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July 2014

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PET Films

KODAK 600, 651/652, and 671/672 Films / ESTAR Base are polyester (PET) films with a high clarity, optical-grade surface quality that offer improved haze stability when subjected to high temperatures for extended times with shrinkage characteristics of 0.2% or less.

In laboratory tests, uncoated KODAK ESTAR Film with a thickness of 127 microns (5 mil) was subjected to temperatures of 150°C for one hour with a change in haze from 0.2% to 0.4%. The same laboratory tests of the film with an adhesion promoting primer on one side resulted in a change in haze from 0.4% to 0.5% (ASTM D 1003).

The new film is manufactured with a proprietary in-line process to control shrinkage and haze. It is available without any coating or can have adhesion promoting primer on one or both sides of the film. Currently the film is available in the 127 micron (5 mil) thickness, with a maximum width of 1441 mm (56.75 inches).

Features:

- Optical-grade surface quality — products are manufactured with minimal surface contact, then scanned to meet the stringent requirements for optical applications
- Shrinkage in both the machine direction (MD) and transverse direction (TD) of $\leq 0.2\%$
- Available in 127 micron (5 mil) thickness
- Greater than 90% transmittance with less than 1% haze

Uses:

- Flexible electronic displays
- Membrane touch switches
- Metalization
- Vacuum mold applications

Physical Condition

Roll Integrity

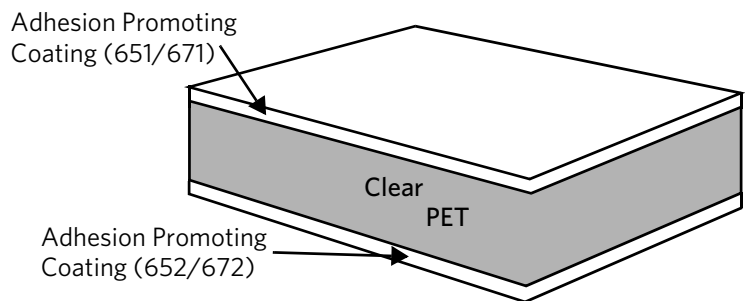
- The edge of the roll will be free of nicks, cuts or visible telescoping greater than ± 6.3 mm (0.25 inches)
- The roll will not contain gauge bands which visibly distort the film surface
- There are no splices or cutouts in the roll

Product Quality

- Kodak inspects material during the manufacturing process using in-line scanners to detect, correct, and deliver material that meets or exceeds specifications. Kodak quality technicians consistently evaluate sample product quality using internal and external standards to confirm quality standards are met.

Packaging

- Standard core; inside diameter 152mm \pm 3mm (6 inches \pm 0.04 inch)
- Each roll is suitably wrapped to seal the product.
- Each roll is horizontal, supported on core ends.
- Each container is labeled with product and roll identification.



KODAK 600 Films / ESTAR Base

Typical Properties	Value			Test Method
	600 Film	651/652 Film	671/672 Film	
Physical				
Width Tolerance	± 3 mm			Kodak Inline Scanner
Length Tolerance	± 30 m			Kodak Inline Scanner
Knurls — each side	12.5 mm wide			
Planarity	< 0.5 mm			Kodak Planarity Method (Max "flute" — 10 ft sample)
Mechanical				
Tensile Strength	> 25,000 psi			ASTM D 882
Break Elongation	> 70%			ASTM D 882
Young's Modulus	> 500,000 psi			ASTM D 882
Thermal				
Heat Shrinkage — Machine (MD)	≤ 1.0%			Kodak Method (30 min @ 150°C)
Heat Shrinkage — Transverse (TD)	≤ 1.0%			
Optical				
VLT — with primer	> 90%	> 91%	> 92%	
Haze as made	0.30%	0.40%	0.50%	ASTM D 1003
Haze after 60 minutes @ 150°C	0.40%	0.50%	0.55%	ASTM D 1003
Color				
L*	95%	96%	96.3%	
a*	-0.05	-0.05	-0.05	
b*	0.67	0.34	-0.05	
Yellowness	1.29	0.65	1.29	

SIZES AVAILABLE

The table below shows catalog numbers available at the time of publication. It is by no means inclusive, please contact us regarding your specific needs.

CAT No.	Class	Thickness	Width (mm)	Length (m)	Shrink (%)
KODAK 600 Film / ESTAR BASE (no coating)					
197 7347	6RF1-520R	127	1372	1829	0.2
KODAK 651 Film / ESTAR BASE (PVDC on one side)					
199 4268	6RF1-536R	127	1372	1829	0.2
KODAK 652 Film / ESTAR BASE (PVDC on both sides)					
TBD					
KODAK 671 Film / ESTAR BASE (acrylic on one side)					
TBD	6RF1-510	127	1321	1829	1.0
190 1503	6RF1-516R	127	1372	1829	0.2
KODAK 672 Film / ESTAR BASE (acrylic on both sides)					
TBD					

MORE INFORMATION

Kodak has many publications to assist you with information about KODAK Products, Equipment, and Materials.

For the latest version of technical support publications for KODAK Industrial Materials Group, please visit Kodak online at <http://www.kodak.com/go/img>.

To find out what PET Films can do for your business, please send us an email at PETproducts@kodak.com.

NOTICE: While the data in this publication are typical of production coatings, they do not represent standards which must be met by Kodak. Varying storage, exposure, and processing conditions will affect results. Kodak makes no guarantee of results and assumes no obligation or liability whatsoever in connection with this information. The company reserves the right to change and improve product characteristics at any time.

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