KODAK EKTAMATIC SC Paper

Notice
KODAK EKTAMATIC SC Paper has been discontinued. There is no direct replacement.

KODAK EKTAMATIC SC Paper is a projection-speed, selective-contrast, black-and-white paper with a fiber base. It is designed for exposure with tungsten light, and used for applications requiring extremely short processing times, such as medical, military, photojournalist, and proof printing applications.

EKTAMATIC SC Paper is recommended for activation-stabilization processing. Stabilization processing produces prints that will keep for a limited time; therefore, this paper is a good choice where quality images are necessary, but long-term keeping is not. Stabilized prints can be treated by traditional fixing and washing methods and toning if long-term keeping is desired.

FEATURES	BENEFITS
• Neutral-black image tone and bright, clean whites when developed and fixed in trays • Warm-black image tone with stabilization processing	• Exceptional print quality
• White fiber base with incorporated optical brightener	• Crisp, clean whites • Added brilliance
• Selective contrast	• With KODAK POLYMAX Filters, provides a wide range of contrast grades
• High speed	• Short exposure times
• Available in single weight	• Suitable for a variety of printing applications

Base and Surface Characteristics

Symbol	Texture	Surface	Base Tint	Base Weight
F	Smooth	Glossy*	White	Single Weight

*When ferrotyped, this paper dries with a smooth lustre when dried on screens, blotters, or non-ferrotyping dryers.

SIZES AVAILABLE

Sizes and catalog numbers differ from country to country. For a complete list of sizes, contact a dealer who supplies KODAK PROFESSIONAL Products.

Single Weight

Sheets Per Package	Size in. x in.	Surface	CAT No.
500	5 x 7	F	192 2301
100	8 x 10	F	191 9398
500	8 x 10	F	191 9471

STORAGE AND HANDLING

Store unexposed paper in a cool, dry place (preferably at or below 21°C [70°F] and at a relative humidity of 30 to 50 percent). High temperatures or high humidity may produce undesirable changes. Always rewrap unused paper in its original packaging (the outer box as well as the inner wrapper) to protect it from light and moisture. Avoid or shield the paper from exposure to radioactivity or x-rays.

DARKROOM RECOMMENDATIONS

Use a KODAK OC Safelight Filter (light amber) in a suitable safelight lamp with a bulb of 15 watts or less at least 1.2 metres (4 feet) from the paper. Minimize safelight exposure to avoid unwanted quality changes. **Be especially careful** if you use other types of safelights.

See KODAK Publication No. K-4, *How Safe is Your Safelight?*, for information on safelight testing.

Note: Do not use a KODAK OA Safelight Filter (greenish yellow).

EXPOSURE

Light Source

Expose this paper with tungsten or tungsten-halogen enlarger lamps. You can use other light sources, such as cool-white fluorescent lamps, mercury-vapor lamps (cold light) or cathode-ray tubes, but you may need to use correction filters in addition to the filters for contrast control. For best results, make test prints to determine the exposure time and optimum filtration for each light source.Suggested starting-point filtrations for other light sources follow. Make trial exposures to determine the most desirable results.

Enlarging Lamp	KODAK Color Compensating Filter or KODAK Color Printing Filter
Cool white fluorescent	CP40Y or CC40Y
Daylight fluorescent	CP70Y or CC70Y

Note: Use gelatin contrast-control filters below the lens (between the lens and paper). Acetate filters made by Kodak and other manufacturers should go above the lens (between the light source and the negative).

Filters

To achieve the widest possible contrast range with this paper, use KODAK POLYMAX Filters. These filters provide twelve contrast increments with improved contrast spacing with this paper.

You can use the POLYMAX Filter *Set* above or below the enlarger lens (light path). The POLYMAX Filter *Kit* is similar to the set except it's mounted in plastic filter mounts. You can use these filters below the enlarger lens (in the optical path). They are supplied in a hinged plastic box with a filter holder and adapters to fasten the holder to the red filter post or to the lens.

You can also use other manufacturers' filters with this paper, but results may not be the same. For critical applications, make tests to determine the paper contrast.

The filter kit, filter sets, and filter upgrade sets are now distributed by Tiffen Co. L.L.C. In the U.S., call 800-368-6257 or view their website at **www.tiffen.com.**

ISO Paper Speed and Range—F Surface

KODAK POLYMAX Filter		No Filter	-1	0	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5+
KODAK EKTAMATIC Processor,* Model 214-K (Stabilization Processing)	Paper Speed	P400	NA	P200	P200	P200	P200	P200	P200	P200	P160	P100	P100	P100
	Paper Range†	R110	NA	R160	R130	R130	R130	R120	R110	R100	R90	R80	R80	R80
KODAK DEKTOL Developer (Tray Processing)	Paper Speed	P500	NA	P250	P200	P200	P250	P200	P250	P200	P200	P125	P160	P160
	Paper Range†	R100	NA	R140	R120	R120	R110	R110	R100	R90	R80	R70	R60	R60

*With KODAK SII Activator and KODAK S30 Stabilizer.

†These numbers indicate the relative ISO ranges of different contrasts produced with KODAK POLYMAX Filters. The ranges were calculated from the log exposure ranges of the paper. You can use them as guides for selecting the appropriate paper contrast for the density range of a specific negative. When the ISO range of the paper approximately equals 100 times the density range of the negative, the contrast of the print will usually be satisfactory. (For convenience, the log exposure ranges have been multiplied by 100 so that the ISO ranges are expressed as whole numbers.) The contrast you choose will also depend on the nature of the subject.

ISO Paper Speed and Range—N Surface

KODAK POLYMAX Filter		No Filter	-1	0	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5+
KODAK EKTAMATIC Processor, Model 214-K (Stabilization Processing)*	Paper Speed	P400	NA	P200	P200	P200	P200	P200	P200	P200	P160	P100	P100	P100
	Paper Range†	R80	NA	R130	R110	R100	R100	R100	R90	R80	R80	R70	R60	R60
KODAK DEKTOL Developer (Tray Processing)	Paper Speed	P400	NA	P250	P200	P200	P200	P200	P200	P200	P200	P100	P100	P125
	Paper Range†	R80	NA	R110	R100	R90	R90	R90	R80	R70	R60	R50	R50	R50

*With KODAK SII Activator and KODAK S30 Stabilizer.

†These numbers indicate the relative ISO ranges of different contrasts produced with KODAK POLYMAX Filters. The ranges were calculated from the log exposure ranges of the paper. You can use them as guides for selecting the appropriate paper contrast for the density range of a specific negative. When the ISO range of the paper approximately equals 100 times the density range of the negative, the contrast of the print will usually be satisfactory. (For convenience, the log exposure ranges have been multiplied by 100 so that the ISO ranges are expressed as whole numbers.) The contrast you choose will also depend on the nature of the subject.

LATENT-IMAGE KEEPING

You may notice shifts in latent image with keeping times over several minutes. The paper tends to increase in density slightly with increased latent-image time. For critical uses, with latent-image holding times of several minutes, a slight initial underexposure may be necessary to compensate for latent-image shifts under normal temperature and handling conditions.

PROCESSING

Stabilization Processing

Process prints in a two-bath stabilization processor such as the KODAK EKTAMATIC Processor, Model 214K. Treatment times will depend on the equipment you use. The following are starting points:

Activator	KODAK SII Activator • 1-qt bottle, CAT 186 5609 • 2 1/2 -gal flexible container, CAT 186 5567
Stabilizer	KODAK EKTAMATIC S30 Stabilizer • 1-qt bottle, CAT 177 9123 • 2 1/2 -gal flexible container, CAT 189 5192
Recommended Temperature	21°C (range 18 to 29°C) 70°F (range 65 to 85°F)
Activator/ Stabilizer Capacity	• Approximately 300 8 x 10 inch prints or equivalent after 1 week of use, whichever occurs first • Maintain solution levels in processor

Air dry the prints that come out of the processor for a few minutes at room temperature. Auxiliary drying equipment is not recommended.

Stabilization processing yields a print in about 15 seconds for applications that do not require prints for long-term keeping. Stabilization processing is considered "short term" keeping with respect to print stability. Prints from a stabilization process are inherently subject to deterioration from exposure to light, heat, and humidity. Depending on the application and storage, the useful life of stabilized prints is usually expected to be weeks or months.

Retention of stabilizer is important for image stability in prints intended for short-term use. Therefore, **do not** wash stabilized prints, unless as part of treatment for long-term keeping.

For longer keeping, fix and wash the stabilized prints as follows:

KODAK Chemical	Dilution (chemical: water)	Time (min:sec)	Capacity (8 x 10-inch Prints per gal/L)
Fixer (single bath)—18 to 24°C (65 to 75°F)			
KODAK Fixer	—	8:00 to 12:00	100/26
Rapid Fixer (Solution A and B)	1:7	8:00 to 12:00	100/26
Wash–			
With Washing Aid–10 to 30°C (50 to 86°F):			
Hypo Clearing Agent	stock solution 1:4	2:00	80/20 without pre-rinse; 200/50 with 1-minute pre-rinse
Wash	—	10:00	—
Without Washing Aid– 10 to 30°C (50 to 86°F):			
	—	60:00	—

Tray

Tray develop with continuous agitation at 20°C (68°F), using the appropriate dilution and development time recommended in the following table.

KODAK Chemical	Dilution (chemical: water)	Time (min:sec)	Capacity (8 x 10-inch Prints per gal/L)
Developer— 20°C (68°F)			
DEKTOL (powder)	1:2	1:00	120/32
POLYMAX T	1:9	1:00	120/32
D-72 (formula)	1:2	1:00	100/26
Stop Bath—18 to 24°C (65 to 75°F)			
Indicator	1:63	0:15	80/20*
EKTAFLO	1:31	0:15	80/20*
Fixer/Replenisher (single bath)†— 18 to 24°C (65 to 75°F)			
Non-hardening fixer (for general printing and for toning):			
Rapid Fixer, Solution A (do not use Solution B)	1:7	8:00 to 12:00	100/26
Hardening fixers (for general printing) ‡			
KODAK Fixer	—	8:00 to 12:00	100/26
POLYMAX T	1:7	8:00 to 12:00	100/26
Rapid Fixer (Solution A and B)	1:7	8:00 to 12:00	100/26
Wash—			
With Washing Aid— 10 to 30°C (50 to 86°F)			
Hypo Clearing Agent	stock solution 1:4	2:00	80/20 with pre-rinse; 200/50 with 1-minute pre-rinse
Wash	—	10:00	—
Without Washing Aid— 10 to 30°C (50 to 86°F)			
	—	60:00	—

*Discard the solution when color changes to a purplish blue.
†To increase capacity, use two fixing baths.
‡A hardening fixer may improve release on ferrotyping drums.

Developing

Immerse prints face up, flexing the paper so the entire surface gets wet as it goes into the developer. Drain prints for the last 5 seconds before immersing in stop bath.

Stop Bath

Bathe prints for at least 15 seconds at 18 to 24°C (65 to 75°F) with continuous agitation in KODAK EKTAFLO Stop Bath, KODAK Indicator Stop Bath, or 48 mL KODAK 28% Acetic Acid and water to make 1 L.

With EKTAFLO or Indicator Stop Bath, discard the solution when the color changes to a purplish blue. Change Acetic Acid and water stop bath after approximately twenty 8 x 10-inch prints per litre (eighty 8 x 10s per gallon).

Fixing

Fix prints at 18 to 24°C (65 to 75°F) with frequent agitation. Fix for 8 to 12 minutes if you use a single bath. If you use two fixing baths, fix prints for 4 to 6 minutes in each bath, draining for 5 seconds between baths.

Proper fixing is important. Underfixing will leave residual silver halide in the emulsion, which will darken or stain with exposure to light. Overfixing will make washing more difficult, and may slightly bleach the print.

Note: Using a hardening fixer makes toning less efficient. For the same amount of processing time, you'll see less of a toning effect.

Washing

To reduce time and conserve water, use KODAK Hypo Clearing Agent before washing. Transfer the prints, with or without a previous rinse, to the clearing agent. Following the Hypo Clearing Agent, wash the prints for 10 minutes with agitation and normal water flow.

Or wash for one hour in running water at 10 to 30°C (50 to 86°F), interleaving the prints carefully and frequently. The wash-water flow rate should provide at least one complete change of water in the container every 5 minutes.

Avoid prolonged washing and soaking times to minimize physical damage to the prints.

Drying

Remove as much surface water as possible from prints and dry the prints in a dust-free place. Place prints face down on clean cheesecloth, fiberglass, or plastic screen racks; between photo blotters; or on a belt dryer.

For glossy prints made on F-surface paper, transfer the wet prints directly from the wash to a ferrotype dryer (glazing machine) or to clean, wet ferrotype plates. Squeegee the prints into close contact with the plates and allow them to dry.

POST-PROCESS TREATMENTS

Except for treatment with a toner solution, post-processing treatment generally don't improve the image stability of prints on Kodak black-and-white papers. Some treatments—for example, laminating—provide physical protection. Some may actually have an adverse effect on prints. The effects of post-processing treatments on prints vary widely with the type of treatment and the manner in which the treatments are applied.

Toning

Treatment with a toner extends the life of prints that may be exposed to oxidizing gases or subjected to adverse storage or display conditions. KODAK Toners will protect prints whether or not they produce a tone shift.

<table>
<tr><th rowspan="2">Processing</th><th colspan="5">Tone Shift with KODAK Toners</th></tr>
<tr><th>Full</th><th>Full to Moderate</th><th>Moderate</th><th>Slight</th><th>None</th></tr>
<tr><td rowspan="2">Stabilization (KODAK EKTAMATIC Processor, SII Activator, and S30 Stabilizer)</td><td rowspan="2">Sepia II Warm</td><td rowspan="2">Sepia</td><td rowspan="2">—</td><td>POLY-TONER (1:4) (1:24) (1:50)</td><td rowspan="2">Rapid Selenium (1:3) (1:9) (1:20)</td></tr>
<tr><td>Brown</td></tr>
<tr><td rowspan="2">Tray (DEKTOL Developer)</td><td rowspan="2">Sepia II Warm</td><td rowspan="2">Sepia</td><td rowspan="2">Brown</td><td rowspan="2">POLY-TONER (1:24) (1:50)</td><td>POLY-TONER (1:4)</td></tr>
<tr><td>Rapid Selenium (1:3) (1:9) (1:20)</td></tr>
</table>

For more information on toning, see KODAK Publication No. G-23, *Toning KODAK Black-and-White Materials.* It explains the technique of toning, and describes Kodak toners and their effects on Kodak black-and-white papers and films.

Retouching

You can use liquid dyes, colored or graphite pencils, dry dyes, and opaque to retouch prints on Kodak black-and-white papers.

Use dry dyes, such as KODAK Retouching Colors, to make large-area corrections. Use liquid dyes, pencils, or opaque to make fine corrections—such as eliminating spots, scratches, and reflections—or to outline and accentuate details. Although KODAK Liquid Retouching Colors are intended primarily for color prints, you can use the neutral dye to retouch black-and-white prints, or mix the colored dyes to match toned black-and-white prints.

For more information on retouching, see KODAK Publication No. O-10, *Retouching Black-and-White Negatives and Prints.*

Lacquering and Laminating

Use lacquers with caution. If you choose to lacquer your prints, select a lacquer that is specifically intended for photographic applications.

Apply multiple light coats rather than a single thick coat of lacquer. Never allow a lacquered print to come into contact with the glass in a picture frame, because it may stick to the glass.

Laminating is really a variation on lacquering. Instead of a very thin polymer layer, laminating produces a much thicker layer. Laminates may contain UV absorbers, plasticizers, and matting agents. They provide protection against fungus and bacterial attack, moisture and dirt in the air, and physical abrasion.

Mounting

Mounting provides rigidity, helps prevent wrinkling, and gives some physical protection to prints.

For long-term keeping, it is best not to use adhesives or dry-mounting tissue. The best mounting method is to use plastic corners or hinge the print by using Japanese rice paper and water-soluble wheat paste. Do not use rubber cement, contact cement, or animal glue. If you must use a liquid adhesive, use starch paste or polyvinyl chloride.

If you choose to dry-mount your prints, use acid-free, pH-buffered, conservation-quality mounting board and conservation-quality mounting tissue.

An overmat, or window mat, will help protect a print from abrasion, keep the emulsion away from the glass in a frame, and provide a neutral or complementary field. Be sure to use conservation-quality mat boards and backing and non-reactive framing materials.

For more information on laminating, lacquering, and mounting, see KODAK Publication No. E-67, *Finishing Prints on KODAK Water-Resistant Papers*, or No.F-35 *Protecting and Displaying Black-and-White Prints.*

MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.

Additional information is available on the Kodak website and through the U.S.A. / Canada faxback system.

The following publications are available from Kodak Customer service, from dealers who sell Kodak products, or you can contact Kodak in you country for more information.

E-30	*Storage and Care of KODAK Photographic Materials—Before and After Processing*
E103BP	*KODAK PROFESSIONAL Black-and-White Papers Matrix*
E103CP	*Chemicals for KODAK PROFESSIONAL Black-and-White Papers Matrix*
F-2	*Pathways to Black and White*
F-35	*Protecting and Displaying Black-and-White Prints*
G-23	*Toning KODAK Black-and-White Materials*
J-5	*KODAK POLYMAX T Developer and KODAK POLYMAX T Fixer*
K-4	*How Safe is Your Safelight?*

For the latest version of technical support publications for KODAK PROFESSIONAL Products, visit Kodak on-line at:
http://www.kodak.com/go/professional

Many technical support publications for KODAK PROFESSIONAL Products can be sent to your fax machine from the Kodak Information Center. Call:
U.S. 1-800-242-2424, Ext. 33 / Canada 1-800-295-5531
—Available 24 hours a day, 7 days a week—

If you have questions about KODAK PROFESSIONAL Products, call Kodak.
In the U.S.A.:
1-800-242-2424, Ext. 19, Monday–Friday
9 a.m.–7 p.m. (Eastern time)
In Canada:
1-800-465-6325, Monday–Friday
8 a.m.–5 p.m. (Eastern time)

Note: The Kodak materials described in this publication for use with KODAK EKTAMATIC SC Paper are available from dealers who supply KODAK PROFESSIONAL Products. You can use other materials, but you may not obtain similar results.

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