KODAK PROFESSIONAL EKTACHROME Film E100

Kodak alaris

TECHNICAL DATA / **COLOR TRANSPARENCY FILM**

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KODAK PROFESSIONAL EKTACHROME Film E100 delivers extremely fine grain (rms 8), a low D-min for whiter, brighter whites, and features moderately enhanced color saturation with a neutral color balance and a low contrast tone scale. This film is designed for exposure with daylight or electronic flash.

FEATURES	BENEFITS
• High efficiency T-GRAIN Emulsion Technology	• Extremely fine grain • Remarkably detailed scans • Greater enlargements
• Low D-min	• Whiter, brighter whites
• Low contrast tonal scale	• Extended tonal range from highlights to shadows • Superb highlight and shadow detail
• Matched color records for a neutral tone scale	• Pleasing, natural skin tone reproduction • Consistent gray scale rendition throughout the tonal range
• Outstanding reciprocity	• No speed or color compensation required for exposures from 1/10,000 to 10 seconds
• Image archivability	• Dark storage image stability of at least 80 years* • Images can be accessed for further use many years into the future

* In storage conditions of 10°C (50°F) and 15-20% relative humidity.

STORAGE AND HANDLING

Load and unload film in subdued light.
Store unexposed film in a refrigerator at 13°C (55°F) or lower in the original sealed package. To avoid moisture condensation on film that has been refrigerated, allow the film to warm up to room temperature before opening the package. Process film as soon as possible after exposure. Protect processed film from strong light, and store it in a cool, dry place.

DARKROOM RECOMMENDATIONS

Do not use a safelight. Handle unprocessed film in total darkness.

EXPOSURE

Use the exposure index (EI) numbers below with meters and cameras marked for ISO or ASA speeds or exposure indexes. Do not change the film-speed setting when metering through a filter. Metering through filters may affect light meter accuracy; see your meter or camera manual for specific information. For critical work, make a series of test exposures:

Light Source	KODAK WRATTEN Gelatin Filter	Exposer Index
Daylight or Electronic Flash	None	100
Photo lamp (3400 K)	80B	32
Tungsten (3200 K)	80A	25

Daylight

Use the exposures in the table below for average front lit subjects from 2 hours after sunrise to 2 hours before sunset.

Lighting Condition	Shutter Speed (in seconds)	Lens Opening
Bright/hazy sun on sand or snow	1/125	F/22
Bright or hazy sun, distinct shadows	1/125	F/16†
Weak, hazy sun, soft shadows	1/125	F/11
Cloudy bright, no shadows	1/125	F/8
Heavy overcast, open shade††	1/125	F/5.6

† Use F/8 for backlit close-up subjects.

†† Subject shaded from the sun but lit by a large area of clear sky.

Electronic Flash

Use the appropriate guide number in the table below as a starting point for your equipment. First select the unit output closest to the number given by your flash manufacturer, then find the guide number in either English or Metric units.

Calculating the Correct Aperture

To determine the recommended lens aperture (f/ number), divide the guide number by the flash-to-subject distance. That is, f/# = GN / Subject Distance. For example, if measuring in English units the flash has a Guide Number of 100, and the flash to subject distance is 9 feet, the recommended aperture setting is: f# = 100 feet / 9 feet = 11. In metric units, this would be: f/# = 30 metres / 2.75metres = 11. If transparencies are consistently too thin (overexposed), use a higher guide number; if they are too dense (underexposed), use a lower number.

Unit Output (BCPS)†	Guide Number	
	English Units (feet)	Metric Units (metres)
350	40	12
500	50	15
700	60	18
1000	70	21
1400	85	26
2000	100	30
2800	120	36
4000	140	42
5600	170	50
8000	200	60

† BCPS = beam candlepower seconds

Multiple Exposure with Electronic Flash

No filter corrections or exposure adjustments are required for the effects of multiple, consecutive flashes (multipops) up to 4 flashes. For 8 flashes, add CC05M filtration.

Adjustments for Long and Short Exposures

No filter correction or exposure compensation is required for exposure times from 1/10,000 to 10 seconds. At exposure times of 120 seconds, add CC10R filtration.

Note: This information applies only when the films are exposed to daylight. The data are based on average emulsions rounded to the nearest 1/3 stop and assume normal, recommended processing. Use the data only as a guide. For critical applications, make tests under your conditions.

Fluorescent and High-Intensity Discharge Lamps

Use the color-compensating filters and exposure adjustments below as starting points to expose these films under fluorescent or high-intensity discharge lamps. For critical applications, make a series of test exposures under your actual conditions.

To avoid the brightness and color variations that occur during a single alternating-current cycle, use exposure times of 1/60 second or longer with fluorescent lamps; with high-intensity discharge lamps, use exposure times of 1/125 second or longer.

Fluorescent Lamp	KODAK Color Compensating Filters	Exposure Adjustment
Daylight	50R	+ 1 stop
White	40M	+ 2/3 stop
Warm White	20C + 40M	+ 1 stop
Warm White Deluxe	30B + 30C	+ 1 1/3 stops
Cool White	40M + 10Y	+ 1 stop
Cool White Deluxe	20C + 10M	+ 2/3 stop
Unknown Fluorescent†	30M	+ 2/3 stop

† When the type of fluorescent lamp is unknown, try this filter and exposure adjustment; color rendition may be less than optimum.

High-Intensity Discharge Lamps	KODAK Color Compensating Filters	Exposure Adjustment
General Electric Lucalox†	80B + 20C	+ 2 1/3 stop
General Electric Multi-Vapor	20R + 20M	+ 2/3 stop
Deluxe White Mercury	30R + 30M	+ 1 1/3 stops
Clear Mercury	70R	+ 1 1/3 stops

† This is a high-pressure sodium-vapor lamp. The information in the table may not apply to other manufacturers' high-pressure sodium-vapor lamps due to differences in spectral characteristics.

Note: Consult the manufacturer of high-intensity lamps for ozone ventilation requirements and safety information on ultraviolet radiation.

Some primary color filters were used in the previous tables to reduce the number of filters and keep the exposure adjustment to a minimum. Red filters were substituted for equivalent filtration in magenta and yellow. Blue filters were substituted for equivalent filtration in cyan and magenta.

PROCESSING

Chemicals

Process E-6

Push Processing Characteristics

You can increase the effective speed (i.e., push) of E100 by adjusting the first developer time. Increased film speed is useful under dim lighting conditions, or when you need high shutter speeds to stop action or small lens openings for increased depth of field. You can also use a short push to slightly increase contrast, sharpen highlights, or compensate for underexposure. By understanding these effects in advance, you can use pushing creatively and reliably.

Exposure for Push Processing

Labs that provide push processing usually offer the service for fixed time increases (i.e. push 1/2 or push 1) in the first developer. It is a good idea to make a series of test exposures and then work with your lab to determine optimum exposure settings. A recommended starting point is to underexpose by 1 stop (EI 200) for a push 1 process (8 minutes in the first developer).

PRINTING TRANSPARENCIES

You can reproduce images made on E100 by using a variety of KODAK PROFESSIONAL materials.

Color Prints

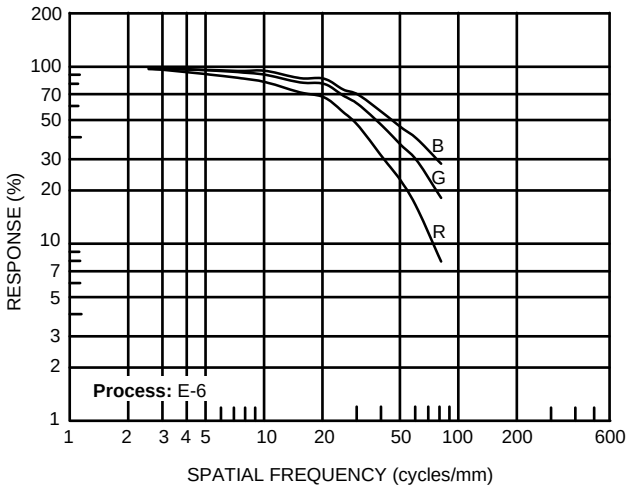
You can scan your image to a file and print digitally to:

- KODAK PROFESSIONAL ENDURA Premier Papers
- KODAK PROFESSIONAL ENDURA Premier Metallic Paper
- KODAK PROFESSIONAL ENDURA Transparency Display Material
- KODAK PROFESSIONAL ENDURA Clear Display Material
- KODAK PROFESSIONAL ENDURA Transparency Display Material
- KODAK PROFESSIONAL UV-Curable Display Film - Plus
- KODAK PROFESSIONAL UV-Curable Clear Display Film

CURVES

Diffuse rms Granularity* 8 (extremely fine)
*Read at a gross diffuse visual density of 1.0, using a 48-micrometre aperture.

Modulation-Transfer Curves



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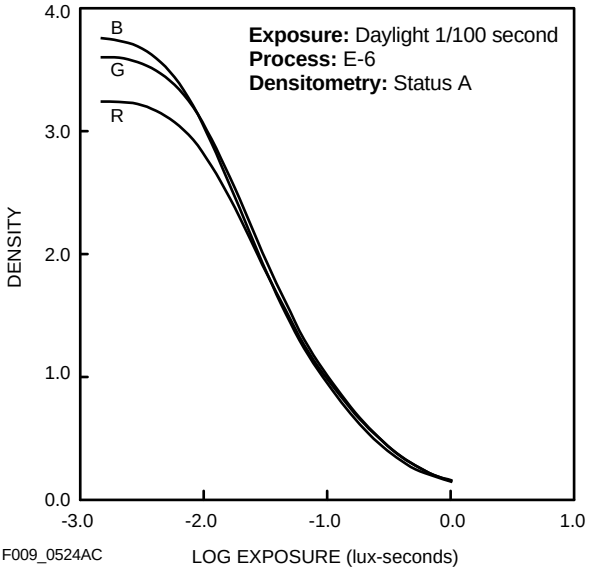
Characteristic Curves



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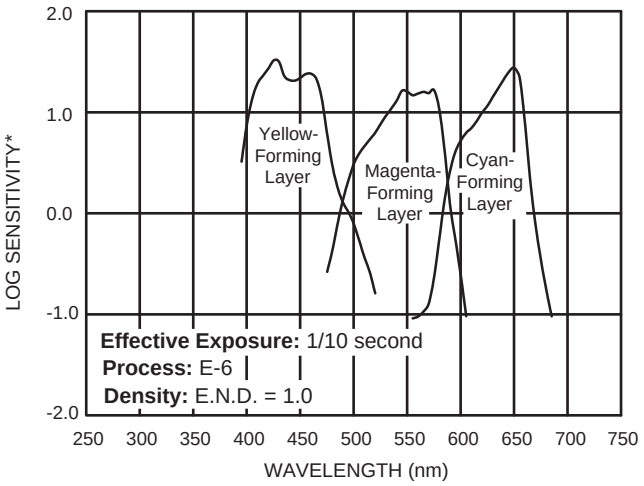
Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm^2) required to produce specified density

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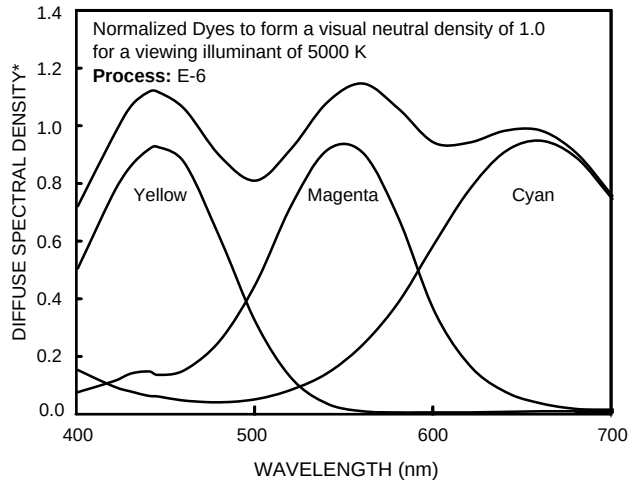
Spectral-Dye-Density Curves



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NOTICE: The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply directly to a particular box or roll of photographic material. They do not represent standards or specifications that must be met by Kodak Alaris. The company reserves the right to change and improve product characteristics at any time.

MORE INFORMATION

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

For the latest version of technical support publications for KODAK PROFESSIONAL Products, visit: www.kodakalaris.com/go/professional.

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