



KODAK EKTAPRESS Professional Films

DESCRIPTION

This family of professional color negative films is intended for photojournalists and other photographers to use in situations that prohibit refrigerated film storage. These films are designed for exposure with daylight or electronic flash, but they can also be exposed with photolamps (3400 K) or tungsten illumination (3200 K) with filters. KODAK EKTAPRESS Professional Films are excellent choices when negatives will be electronically scanned.

KODAK EKTAPRESS 100 Professional Film features medium speed (EI 100), extremely high sharpness, and extremely fine grain. It has finer grain than KODAK EKTAPRESS Plus 100 Professional Film and allows a very high degree of enlargement. Use EKTAPRESS 100 Professional Film for brightly lit scenes when you need maximum image quality.

KODAK EKTAPRESS Multispeed Professional Film features medium to very high speed (from EI 100 to EI 1000, and even EI 1600 with extended development time) and fine grain. It is the “film of choice” for situations when the lighting changes rapidly or scene brightness varies.

KODAK EKTAPRESS Plus 1600 Professional Film features very high to ultra-high speed (up to EI 6400 with push processing). Use this film in low-light or fast-action situations.

The intended exposure range of EKTAPRESS Professional Films is 1/10,000 second to 10 seconds with daylight or electronic flash.

FEATURES

BENEFITS

- | FEATURES | BENEFITS |
|---|---|
| <ul style="list-style-type: none"> EKTAPRESS 100 Professional Film—medium speed, extremely fine grain, and extremely high sharpness. | <ul style="list-style-type: none"> Provides maximum image quality under relatively bright daylight or flash conditions Excellent for making high-quality enlargements |
| <ul style="list-style-type: none"> EKTAPRESS Multispeed Professional Film—medium to very high speed | <ul style="list-style-type: none"> Multispeed capability—expose film from EI 100 to 1000 without extending development time; add an additional minute for exposures at EI 1000 to 1600 High-quality, low-noise digital scans |
| <ul style="list-style-type: none"> EKTAPRESS Plus 1600 Professional Film—very high speed, very fine grain, and medium sharpness. Intended for push processing to higher exposure indexes | <ul style="list-style-type: none"> Good-quality prints with a moderate degree of enlargement Allows for higher shutter speeds to stop action, smaller apertures to extend depth of field Allows great versatility for photography under an extremely wide variety of subject and lighting conditions Excellent when hand-holding telephoto lenses, or for subjects that require good depth of field and high shutter speeds |

FEATURES

BENEFITS

- | FEATURES | BENEFITS |
|---|---|
| <ul style="list-style-type: none"> Consistent scanning performance between film speeds | <ul style="list-style-type: none"> Saves time. When scanner is set up for EKTAPRESS Professional Films, there is less need for additional image adjustments. |
| <ul style="list-style-type: none"> Wide exposure latitude | <ul style="list-style-type: none"> Bright, rich colors maintained with under and overexposure |
| <ul style="list-style-type: none"> Room-temperature storage | <ul style="list-style-type: none"> Ideal when conditions prohibit refrigerated storage |

STORAGE AND HANDLING

Load and unload film in subdued light.

Store unexposed film at 70°F (21°C) or lower in the *original sealed package*. Always store film (exposed or unexposed) in a cool, dry place. Process film as soon as possible after exposure. Protect negatives from strong light, and store them in a cool, dry place. For more information about storing negatives, see KODAK Publication No. E-30, *Storage and Care of KODAK Photographic Materials—Before and After Processing*.

Note: EKTAPRESS Plus 1600 Professional Films is sensitive to environmental radiation; expose and process it promptly. As exposure to radiation is cumulative, you may also want to request *visual* inspection of this film at airport and other security x-ray inspection stations.

DARKROOM RECOMMENDATIONS

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

EXPOSURE

Exposure Compensation

For light sources other than daylight, use the filtration and exposure compensation in the table below.

Light Source	KODAK WRATTEN Gelatin Filter	Exposure Compensation (lens stops)
Photolamp (3400 K)	No. 80B	+1 $\frac{2}{3}$
Tungsten (3200 K)	No. 80A	+2

Daylight

Use the exposures in the table below for frontlit subjects from 2 hours after sunrise to 2 hours before sunset when you expose each of these films at its *nominal speed*.

Lighting Conditions	Shutter Speed (second) and Lens Opening—KODAK EKTAPRESS Professional Film		
	100	Multispeed (EI 640)	Plus 1600
Bright or Hazy Sun on Light Sand or Snow	1/125 <i>f/16</i>	1/1000 <i>f/16</i>	1/1000 <i>f/22</i>
Bright or Hazy Sun (Distinct Shadows)	1/125 <i>f/11*</i>	1/1000 <i>f/11†</i>	1/1000 <i>f/16‡</i>
Weak, Hazy Sun (Soft Shadows)	1/125 <i>f/8</i>	1/1000 <i>f/8</i>	1/1000 <i>f/11</i>
Cloudy Bright (No Shadows)	1/125 <i>f/5.6</i>	1/1000 <i>f/5.6</i>	1/1000 <i>f/8</i>
Heavy Overcast or Open Shade§	1/125 <i>f/4</i>	1/1000 <i>f/4</i>	1/1000 <i>f/5.6</i>

* Use *f/5.6* for backlit close-up subjects.

† Increase exposure by 2 stops for backlit close-up subjects.

‡ Use *f/8* for backlit close-up subjects.

§ Subject shaded from the sun but lighted by a large area of clear sky.

Electronic Flash

Use the guide numbers in the table below as a starting point for your equipment when you expose each of these films at its *nominal speed*. Select the unit output closest to the number given by your flash manufacturer. Then find the guide number for feet or metres. To determine the lens opening, divide the guide number by the flash-to-subject distance.

Unit Output (BCPS*)	Guide Number Distances in Feet/Metres KODAK EKTAPRESS Professional Film		
	100	Multispeed (EI 640)	Plus 1600
350	40/12	110/33	170/50
500	50/15	130/40	200/60
700	60/18	150/46	240/70
1000	70/21	180/55	280/85
1400	85/26	210/65	340/105
2000	100/30	260/75	400/120
2800	120/36	300/90	480/145
4000	140/42	360/110	560/170
5600	170/50	430/130	670/205
8000	200/60	510/160	800/245

* BCPS = beam candlepower seconds

Adjustments for Long and Short Exposures

No filter corrections or exposure adjustments are required for exposure times of 1/10,000 to 10 seconds.

PROCESSING

Normal Processing

Process these films in KODAK FLEXICOLOR Chemicals for Process C-41 using automated or manual processing techniques.

Film Speeds and Development Times for EKTAPRESS Multispeed Professional Film

Scanner Applications			
Exposure Index	100 to 1000	> 1000 to 1600	
Development Time (minutes:seconds)	3:15	4:15	
Photographic Printing			
Exposure Index	100 to 640	800	1600
Development Time (minutes:seconds)	3:15	3:45	4:15

Push Processing

When you expose EKTAPRESS Plus 1600 Professional Film at speeds higher than EI 1600, use the extended development times in the table below.

EKTAPRESS Plus 1600 Professional Film	1-Stop Push	2-Stop Push
Exposure Index	3200	6400
Development Time (minutes:seconds)	3:45	4:15

Note: These times are starting points. Make tests to determine the best development time for your application.

JUDGING NEGATIVE EXPOSURE

Expose these films properly for optimum results.

You can check the exposure level with a suitable electronic densitometer equipped with a filter such as a KODAK WRATTEN Gelatin Filter No. 92 or the red filter for Status M densitometry. Depending on the subject and the light source used for exposure, a normally exposed and processed color negative measured through the red filter should have the approximate densities listed below.

Area Measured	EKTAPRESS Professional Film Density Reading				
	100	Multispeed (EI 640)	Plus 1600	Plus 1600 (EI 3200)	Plus 1600 (EI 6400)
KODAK Gray Card (gray side), receiving same illumination as subject	0.80 to 1.00	0.80 to 1.00	0.85 to 1.05	0.80 to 1.10	0.70 to 0.90
Lightest step (darkest in negative) of KODAK Paper Gray Scale receiving same illumination as subject	1.15 to 1.35	1.25 to 1.45	1.20 to 1.40	1.15 to 1.35	1.05 to 1.25
Highest diffuse density on normally lighted forehead—light complexion	1.05 to 1.35	1.10 to 1.45	1.20 to 1.50	1.15 to 1.45	1.05 to 1.35
—dark complexion	0.90 to 1.25	0.90 to 1.25	0.90 to 1.30	0.85 to 1.25	0.75 to 1.15

Because of the extreme range in skin color, use these red density values for a normally lighted forehead only as a guide. For best results, use a KODAK Gray Card (gray side).

PRINTING NEGATIVES

You can make color prints by direct contact printing or enlarging on KODAK EKTACOLOR PORTRA III, EKTACOLOR SUPRA II, or EKTACOLOR ULTRA II Paper or KODAK DURAFLEX™ RA Print Material.

Make color transparencies or slides by direct exposure onto KODAK VERICOLOR Print Film or KODAK VERICOLOR Slide Film. Make display transparencies on KODAK DURATRANS® RA or DURACLEAR® RA Display Material.

Make black-and-white prints on KODAK PANALURE SELECT RC Paper or KODAK EKTAMAX RA Professional Paper.

SCANNING NEGATIVES

You can easily scan EKTAPRESS Professional Film negatives with a variety of linear-array-CCD, area-array-CCD, and laser film scanners. You can scan negatives on desk-top scanners as well as high-end drum scanners.

Note: For scanner applications, expose EKTAPRESS Multispeed Professional Film at EI 100 to 1000 and use standard development times to produce negatives that provide higher-quality scans (with lower levels of image noise) than negatives that are push-processed.

Because no standards exist to define the colored filter sets that film scanners use to capture the red, green, and blue information of the film image, each manufacturer's scanner has its own characteristic output. The output depends on the scanner's sensitivity to the dyes in the film. This sensitivity is determined by the spectral distribution of the colored filter sets and/or the spectral sensitivity of the charge-coupled-device (CCD). In addition to these spectral specifications, scanner output depends on the look-up tables or matrices that the scanner uses to output information for CRT monitors, transmission, etc. These tables or matrices are part of either "plug-in" programs used with specific software packages designed for image manipulation, updateable ROMs included with the equipment, or fixed algorithms for calibrating and balancing, similar to those used in photographic color printing equipment.

The generic "color negative film" channel designation available with scanner software is only a starting point. You can adjust the final color balance and the scene-dependent contrast and brightness of an image by using the scanner's controls during pre-scan, or by using an image-manipulation software program or workstation after acquisition.

When you scan EKTAPRESS Professional Films with KODAK RFS 2035/2035 Plus Film Scanners, be sure to use the most recent scanner driver with updated film terms. To verify that you have the latest software release, contact your Kodak Account Executive or visit the Kodak worldwide web site at "<http://www.kodak.com/>". New film terms were developed for EKTAPRESS Multispeed Film to improve scanning at exposure indexes of 100, 640, and 1000.

Some scanners allow you to use "plug-in" programs to make calibrations based on D-min film stock. Because different types of color negative films have different colored-coupler masks, the optimum D-min balance is different for each type of film. Therefore, for optimum results, set up a specific channel for each type of film you are scanning.

Note: For more information about scanning EKTAPRESS Professional Films, contact your Account Executive about KODAK Publication No. RQ-30, *KODAK Professional Photojournalism Digital Starter Kit*.

IMAGE STRUCTURE

Print Grain Index

The Print Grain Index number refers to a method of defining graininess in a print made with diffuse-printing illumination. It replaces rms granularity and has a different scale which cannot be compared to rms granularity.

- This method uses a uniform perceptual scale, with a change of four units equaling a *just-noticeable difference* in graininess for 90 percent of observers.
- A Print Grain Index rating of 25 on the scale represents the approximate visual threshold for graininess. A higher number indicates an increase in the amount of graininess observed.
- The standardized inspection (print-to-viewer) distance for all print sizes is 14 inches, the typical viewing distance for a 4 x 6-inch print.
- Print Grain Index numbers may not represent graininess observed from more specular printing illuminants, such as condenser enlargers.
- In practice, larger prints will likely be viewed from distances greater than 14 inches, which reduces apparent graininess.

To determine the Print Grain Index numbers listed below, prints were made from 135-size (24 x 36 mm) negatives. In each case, the viewing distance was the standard 14 inches.

Print Size (inches)	4 x 6	8 x 10	16 x 20
Magnification	4.4X	8.8X	17.8X
KODAK EKTAPRESS Professional Film	Print Grain Index No.		
100	28	50	79
Multispeed	39	60	90
Plus 1600	57	78	107

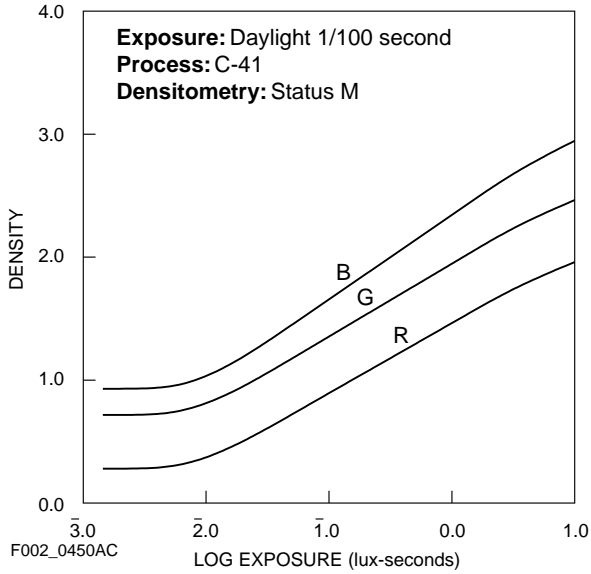
For more information, see KODAK Publication No. E-58, *Print Grain Index—An Assessment of Print Graininess from Color Negative Films*.

KODAK EKTAPRESS 100 Professional Film

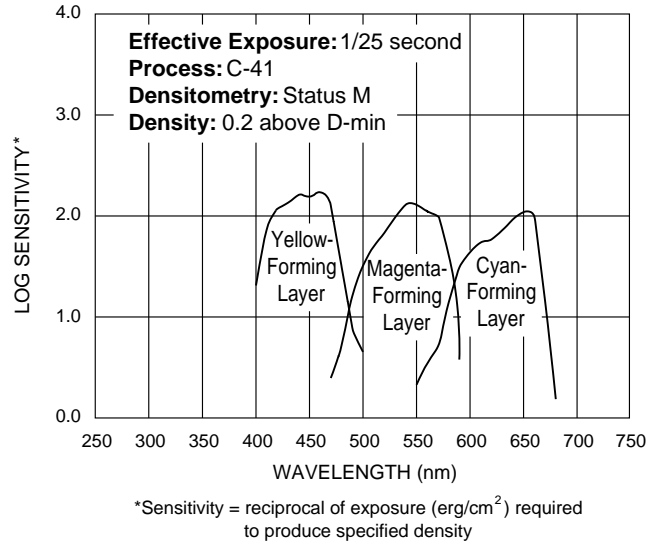
Image-Structure Data

Sharpness: Extremely High
Degree of Enlargement: Very High

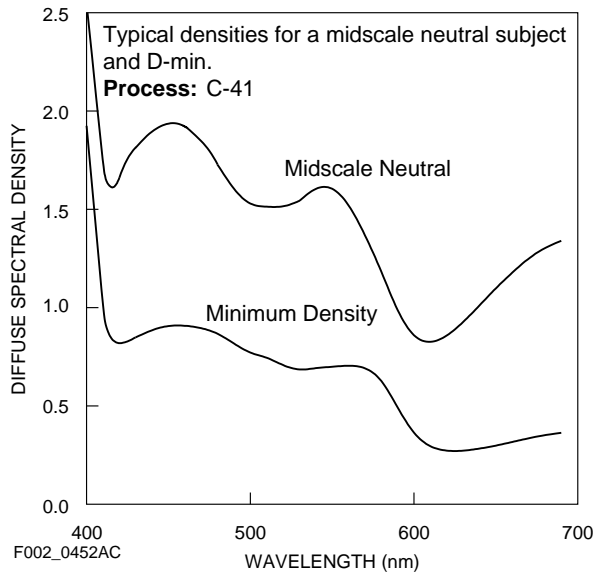
Characteristic Curves



Spectral-Sensitivity Curves



Spectral-Dye-Density Curves



Note: 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 Eastman Kodak Company. The company reserves the right to change and improve product characteristics at any time.

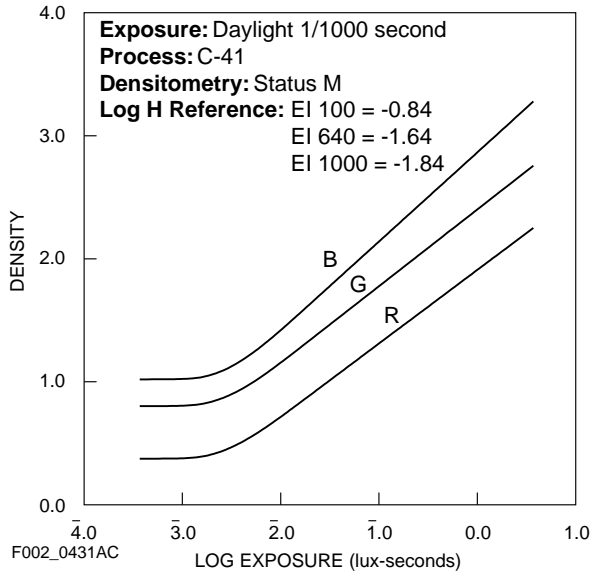
KODAK EKTAPRESS Multispeed Professional Film

Image-Structure Data

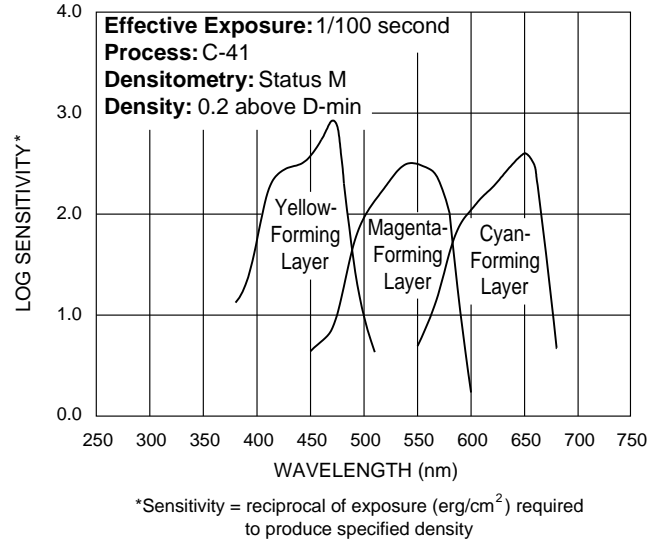
Sharpness: High

Degree of Enlargement: High

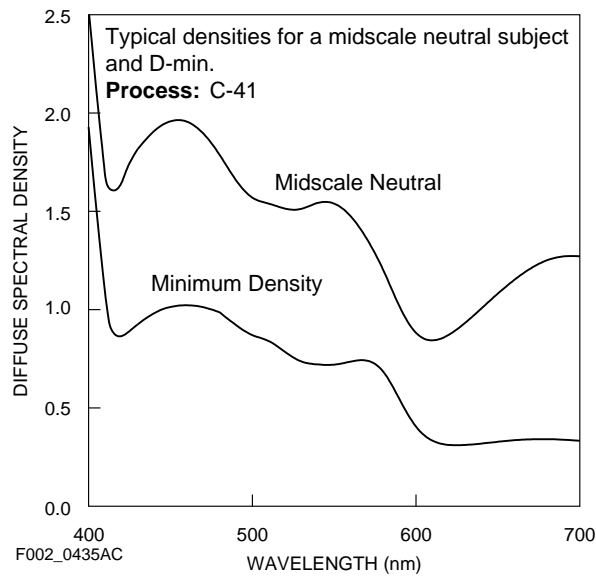
Characteristic Curves



Spectral-Sensitivity Curves



Spectral-Dye-Density Curves

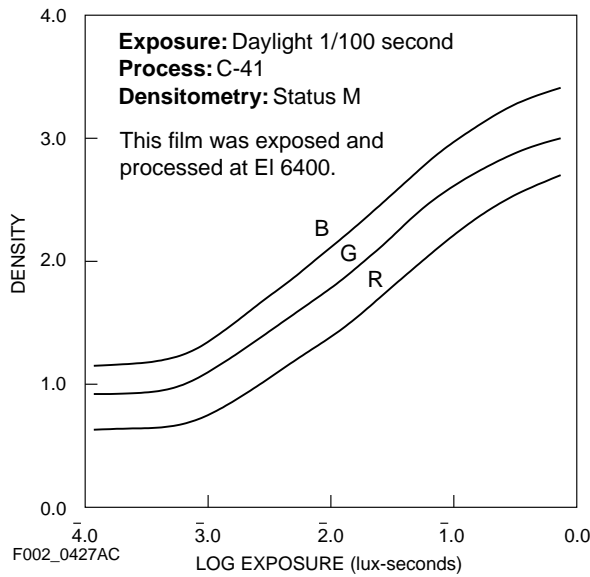
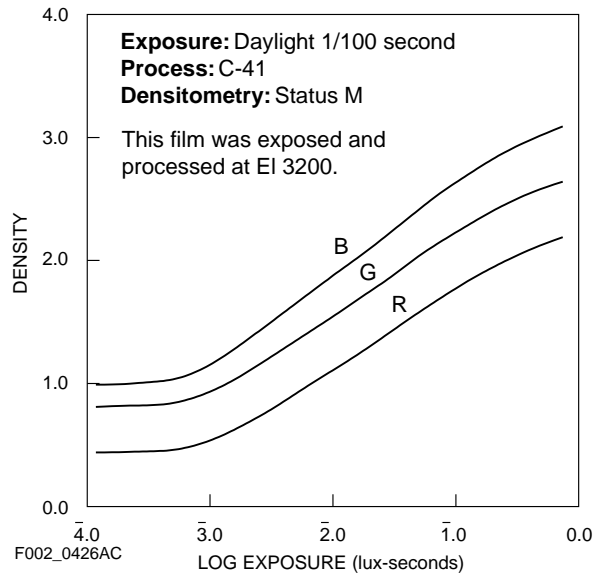
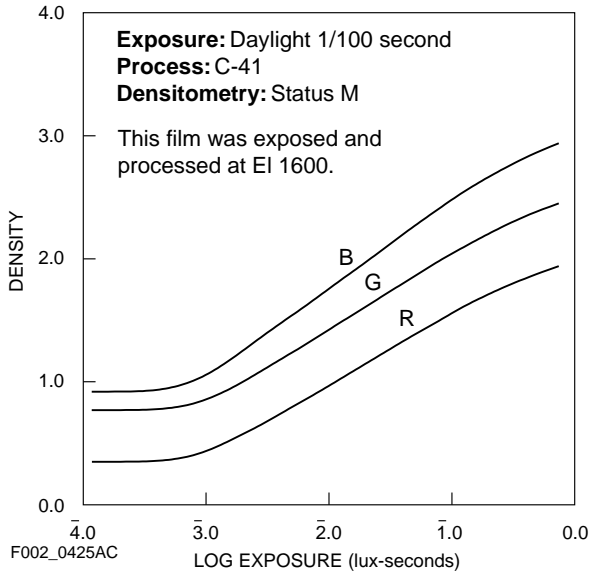


KODAK EKTAPRESS Plus 1600 Professional Film

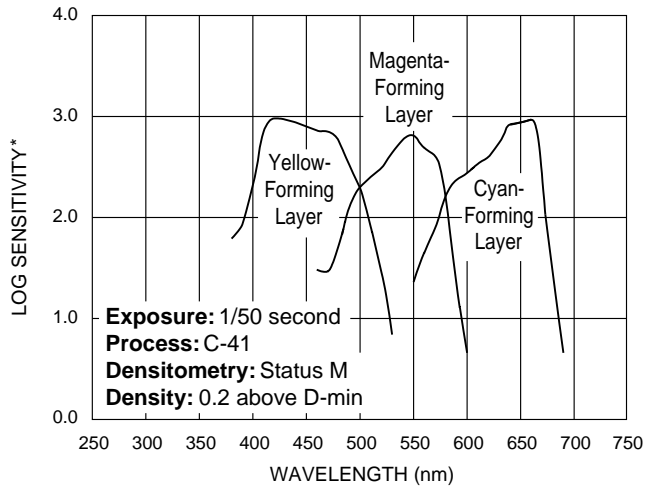
Image-Structure Data

Sharpness: Medium
 Degree of Enlargement: Moderate

Characteristic Curves



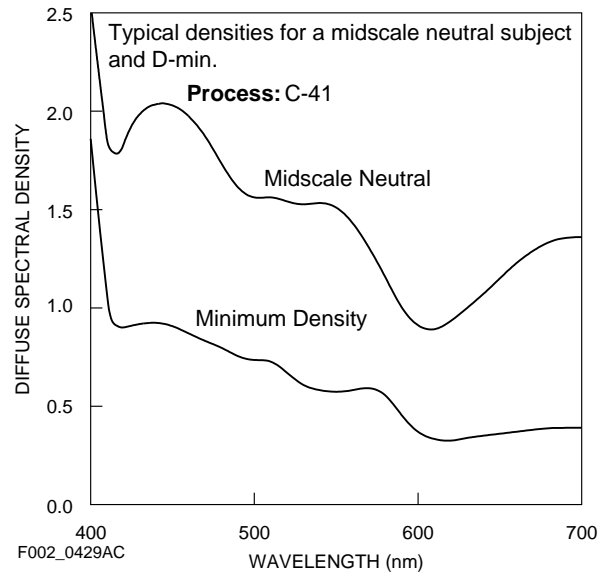
Spectral-Sensitivity Curves



*Sensitivity = reciprocal of exposure (erg/cm²) required to produce specified density

F002_0428AC

Spectral-Dye-Density Curves



F002_0429AC

SIZES AVAILABLE

Sizes and CAT numbers may differ from country to country.
See your dealer who supplies KODAK Professional
Products.

KODAK EKTAPRESS 100 Professional Film (PJA)

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack/5 rolls)	5115	5-mil acetate	827 5984
135-36 (Press-Pack/50 rolls)	5115	5-mil acetate	859 8146

KODAK EKTAPRESS Multispeed Professional Film (PJM)

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack/5 rolls)	5640	5-mil acetate	872 3835
135-36 (Press-Pack/50 rolls)	5640	5-mil acetate	144 4892

KODAK EKTAPRESS Plus 1600 Professional Film (PJC)

Film Size	Code	Base	CAT No.
135-36 (Pro-Pack/5 rolls)	5030	5-mil acetate	800 4269
135-36 (Press-Pack/50 rolls)	5030	5-mil acetate	192 8803

KODAK EKTAPRESS Professional Films

MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials. The following pamphlets are available directly from Kodak through the order form in KODAK Publication No. L-1, *KODAK Index to Photographic Information*. To obtain a copy of L-1, send your request with \$1 to Eastman Kodak Company, Department 412-L, Rochester, New York 14650-0532.

- E-24 *KODAK VERICOLOR Slide and Print Films*
- E-30 *Storage and Care of KODAK Photographic Materials—Before and After Processing*
- E-58 *Print Grain Index—An Assessment of Print Graininess from Color Negative Films*
- E-71 *Retouching Color Negatives*
- E-140 *KODAK EKTACOLOR PORTRA III Paper*
- E-141 *KODAK EKTACOLOR SUPRA II Papers*
- E-142 *KODAK EKTACOLOR ULTRA II Paper*
- E-143 *KODAK Display and Print Materials for Process RA-4*
- E-146 *KODAK EKTATRANS RA Display Material for Process RA-4*
- G-22 *KODAK EKTAMAX RA Professional Paper*
- G-27 *KODAK PANALURE SELECT RC Paper*
- J-38 *Using KODAK FLEXICOLOR Chemicals in Sink-Line, Batch, and Rotary-Tube Processors*
- RQ-30 *KODAK Photojournalism Digital Toolkit*
- Z-131 *Using KODAK FLEXICOLOR Chemicals*

Kodak Information Center's Faxback System

—Available 24 hours a day, 7 days a week—

Many technical support publications for Kodak professional products can be sent to your fax machine from the Kodak Information Center. Call:

U.S.A. 1-800-242-2424, Ext. 33

Canada 1-800-295-5531

If you have questions about Kodak products, call Kodak.

In the U.S.A.:

*1-800-242-2424, Ext. 19, Monday–Friday
8 a.m.–8 p.m. (Eastern time)*

In Canada:

*1-800-465-6325, Monday–Friday
8 a.m.–5 p.m. (Eastern time)*

Or contact Kodak on-line at:

<http://www.kodak.com/>

Note: The Kodak materials described in this publication for use with KODAK EKTAPRESS Professional Films are available from dealers who supply Kodak professional products. You can use other materials, but you may not obtain similar results.



PROFESSIONAL & PRINTING IMAGING