

# KODAK Commercial Film



## DESCRIPTION

KODAK Commercial Film is a medium-speed, blue-sensitive film with moderately high contrast. You can use it for copying continuous-tone originals when red and green sensitivity is unnecessary or unwanted. Because of its blue sensitivity, you can use a red safelight when you expose and process this film, which allows ease of use and development by inspection.

| FEATURES  | BENEFITS  |
|---|---|
| • High resolving power                          | • Good for producing high-quality black-and-white images                                |
| • Fine grain                                    | • Good rendition of detail  |
| • Retouching surface on base and emulsion sides | • Can be retouched on either side   |
| • Low ultraviolet absorption                    | • Reduces exposure variability between positives used to expose the same gravure resist |
| • Blue spectral sensitivity                     | • Allows use of a KODAK 1 Safelight Filter (red) during handling and processing         |

## SIZES AVAILABLE

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

| Sheets Per Package | Size (inches) | Film Code | Base        | CAT No.  |
|--------------------|---------------|-----------|-------------|----------|
| 25                 | 4 x 5         |           | 7-mil       | 198 7894 |
| 50                 | 8 x 10        |           | ESTAR Thick | 197 6661 |

## STORAGE AND HANDLING

Load and unload your camera in subdued light.

High temperatures or high humidity may produce unwanted quality changes. Store unexposed film at 24°C (75°F) or lower in the original package. Always store film (exposed or unexposed) in a cool, dry place. For best results, process film as soon as possible after exposure.

Protect processed film from strong light and store it in a cool, dry place. For more information on storing negatives, see KODAK Publication No E-30, *Storage and Care of Photographic Materials—Before and After Processing*.

## EXPOSURE

### Speed

Daylight: EI 50/18°

Tungsten or Quartz-Iodine: EI 8/10°

Pulsed-Xenon Arc: EI 12/12°

These exposure indexes are provided primarily as indicators of the relative speed of this film compared with other photographic materials. Use the exposure indexes for daylight, tungsten, or quartz-iodine illumination with exposure meters to establish trial exposures. The pulsed-xenon arc value indicates the relative speed of this film to pulsed-xenon illumination measured with a light integrator.

### Exposure and Development Adjustments for Long and Short Exposures

At the exposure times in the table below, compensate for the reciprocity characteristics of this film by increasing exposure and adjusting the development as shown.

| If Indicated Exposure Time Is (seconds) | Use This Lens-Aperture Adjustment | OR | This Adjusted Exposure Time (seconds) | AND Use This Development Adjustment |
|---|-----------------------------------|----|---------------------------------------|-------------------------------------|
| 1/100                                   | None                              |    | None                                  | +10%                                |
| 1/25                                    | None                              |    | None                                  | None                                |
| 1/10                                    | None                              |    | None                                  | -10%                                |
| 1                                       | None                              |    | None                                  | -20%                                |
| 10                                      | +½ stop                           |    | 15                                    | -30%                                |
| 100                                     | +1 stop                           |    | 300                                   | -40%                                |

It may be difficult to use the table to estimate the adjusted times for calculated exposure times between 1 and 100 seconds. The graphs on the next page will help you find the adjusted times for calculated exposure times between those given in the table.

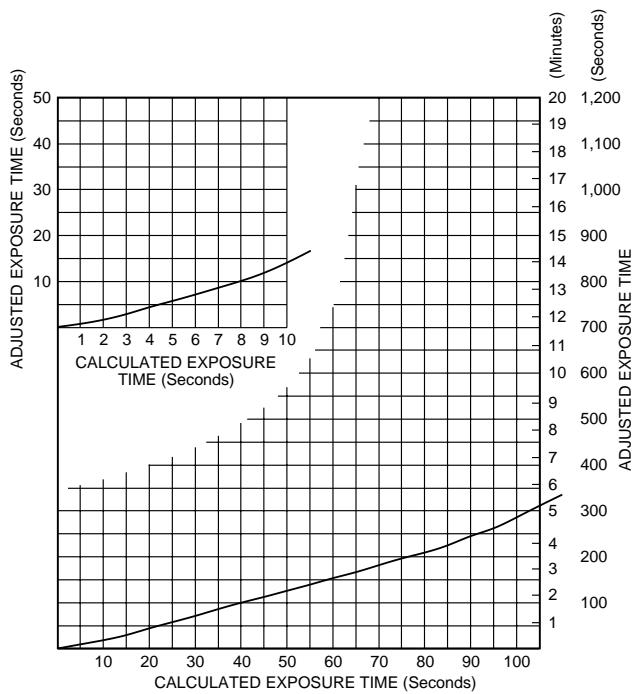
The development times in the table below are based on film used for graphic arts applications.

| Application               | KODAK Developer | Development Time in Minutes at 20°C (68°F) |
|---------------------------|-----------------|--|
|                           |                 | Tray*                                      |
| Gravure                   | DK-50           | 3  |
|                           | HC-110 (Dil C)  | 3  |
| Gravure (Higher Contrast) | D-11            | 3  |
| For Maximum Contrast      | D-11            | 8  |

\* With continuous agitation

### Final Steps in Processing—18 to 24°C (65 to 75°F)

| KODAK Chemical                       | Time (min:sec) |
|--------------------------------------|----------------|
| <b>Rinse</b> —with agitation:        |                |
| KODAK Indicator Stop Bath            | 0:30           |
| <b>Fix</b> —with frequent agitation: |                |
| KODAK Fixer                          | 5:00 to 10:00  |
| KODAK Rapid Fixer                    | 2:00 to 4:00   |
| KODAFIX Solution                     | 5:00 to 10:00  |
| <b>Wash:</b>                         |                |
| Running water<br>—OR—                | 10:00 to 20:00 |
| Rinse with water                     | 0:30           |
| KODAK Hypo Clearing Agent            | 1:00 to 2:00   |
| Running water                        | 5:00           |
| <b>Final rinse:</b>                  |                |
| KODAK PHOTO-FLO Solution             | 0:30           |
| <b>Dry</b> —in a dust-free place     |                |



## DARKROOM RECOMMENDATIONS

Use a KODAK 1 Safelight Filter (red) in a suitable safelight lamp with a 15-watt bulb. Keep the safelight at least 1.2 metres (4 feet) from the film. Run tests to determine that safelight use gives acceptable results for your application.

For information on safelight testing, see KODAK Publication K-4, *How Safe Is Your Safelight?*

## PROCESSING

The development times in the table below are based on film used for copying or general applications at an exposure time of  $\frac{1}{25}$  second.

| KODAK Developer               | Development Time in Minutes |             |             |             |             |
|-------------------------------|-----------------------------|-------------|-------------|-------------|-------------|
|                               | Tray* or Large Tank†        |             |             |             |             |
|                               | 18°C (65°F)                 | 20°C (68°F) | 21°C (70°F) | 22°C (72°F) | 24°C (75°F) |
| D-11—<br>For maximum contrast | 9                           | 8           | 7           | 6½          | 5½          |
| DK-50                         | 2½                          | 2           | 2           | 1¾          | 1¾          |
| DK-50 (1:1)                   | 4¼                          | 3¼          | 3¼          | 3           | 2½          |
| HC-110 (Dil B)                | 2¾                          | 2¼          | 2¼          | 2           | 1¾          |
| HC-110 (Dil D)                | 4¾                          | 4½          | 4¼          | 4           | 3¾          |

\* With continuous agitation.

† With gaseous-burst agitation (1 second every 10 seconds) that provides pressure to raise the solution level 16 mm ( $\frac{5}{8}$  inch). Development times shorter than 5 minutes may produce unsatisfactory uniformity.

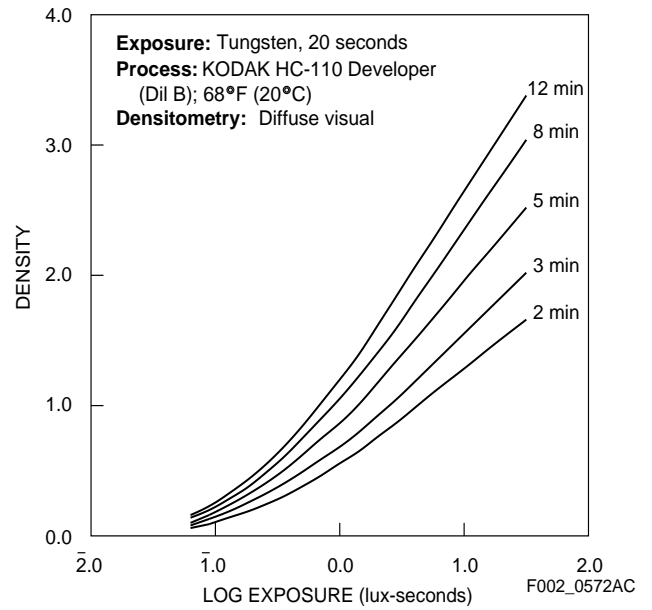
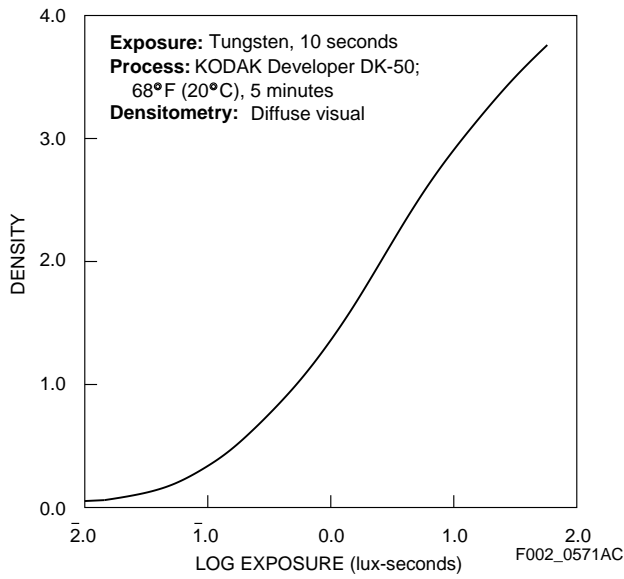
## IMAGE-STRUCTURE CHARACTERISTICS

The data in this section is based on development at 20°C (68°F) in KODAK HC-110 Developer for 2¼ minutes.

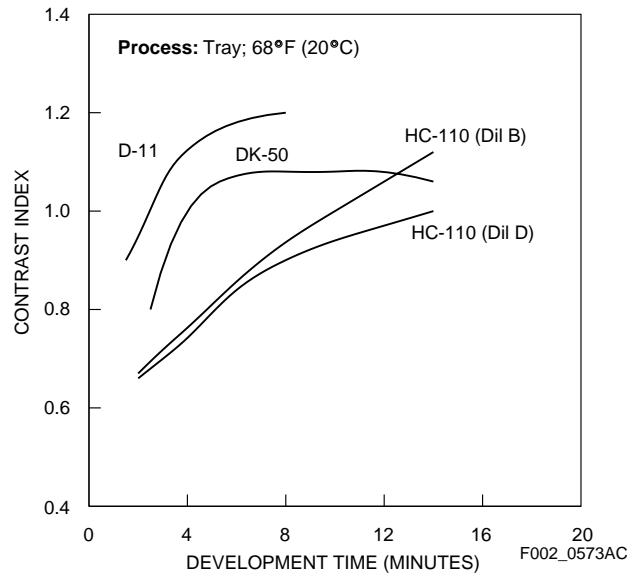
**Diffuse rms Granularity\*** 12

\*Read at a net diffuse density of 1.0, using a 48-micrometre aperture, 12X magnification.

## Characteristic Curves



## Contrast-Index Curves



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

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## MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials. The following publications are available 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-30 *Storage and Care of KODAK Photographic Materials—Before and After Processing*
- F-2 *Pathways to Black and White*
- K-4 *How Safe Is Your Safelight?*

### Kodak Information Center's Faxback System

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

Many technical support publications for Kodak 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  
9 a.m.–7 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/go/professional/>*

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



Kodak Professional Division  
EASTMAN KODAK COMPANY

**Kodak Professional**