

KODAK EKTACHROME 100D

COLOR REVERSAL FILM / 7294



TECHNICAL DATA / COLOR REVERSAL FILM

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Description

KODAK EKTACHROME 100D Color Reversal Film / 7294 is a 100-speed, color reversal motion picture camera film intended for photography under daylight illumination (5500K). It offers a moderately enhanced color saturation performance while maintaining a neutral gray scale and accurate flesh reproduction. 7294 Film has exceptional sharpness that is unsurpassed by any other 100-speed reversal film, and its grain performance is excellent. This film also offers very strong reciprocity uniformity and keeping stability.

7294 Film offers outstanding results in outdoor and studio applications where moderate color saturation is desired. It is excellent for advertising, nature cinematography, documentaries, music videos, and is especially good for telecine transfers and television filming.

Base

KODAK EKTACHROME 100D Color Reversal Film / 7294 has an acetate safety base.

Darkroom Recommendations

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

Storage

Store unexposed film at 13°C (55°F) or lower. For extended storage, store at -18°C (0°F) or lower. Process exposed film promptly. Store processed film according to the recommendations in NAPM IT9.11-1992: for medium-term storage (minimum of ten years), store at 10°C (50°F) or lower at a relative humidity of 20 to 30 percent; for extended-term storage (for preservation of material having permanent value), store at 2°C (35°F) or lower at a relative humidity of 20 to 30 percent. For active use, store at 25°C (77°F) or lower, at a relative humidity of 50 +/- 5 percent. This relates to optimized film handling rather than preservation; static, dust-attraction and curl-related problems are generally minimized at the higher relative humidity. After usage, the film should be returned to the appropriate medium- or extended-term storage condition as soon as possible.

For more information about medium- and extended-term storage, see NAPM IT9.11-1992, and KODAK Publications No. H-1, EASTMAN Professional Motion Picture Films and No. H-23, The Book of Film Care.

Exposure Indexes

Daylight (5500K) - 100 / Tungsten (3200K) - 25²

Use these indexes with incident or reflected light exposure meters and cameras marked for ISO or ASA speeds or exposure indexes. These indexes apply for meter readings of average subjects made from the camera position or for readings made from a gray card of 18 percent reflectance held close to and in front of the subject. For unusually light or dark colored subjects, decrease or increase the exposure indicated by the meter accordingly.

| Light Source | KODAK Filters on Camera ¹ | Exposure Index |
|--------------------------------|--------------------------------------|----------------|
| Daylight (5500 K) ² | None | 100 |
| Metal Halide | None | 100 |
| H.M.I. | None | 100 |
| KINO FLO KF55 | None | 100 |
| Tungsten (3000 K) | WRATTEN2 Optical No. 80A | 25 |
| Tungsten (3200 K) ² | WRATTEN2 Optical No. 80A | 25 |
| KINO FLO KF29 | WRATTEN2 Optical No. 80A | 25 |
| KINO FLO KF32 | WRATTEN2 Optical No. 80A | 25 |
| Fluorescent, Warm White | WRATTEN2 CC40B + CC05C | 40 |
| Fluorescent, Cool White | WRATTEN2 CC20M | 80 |

¹These are approximate corrections only.

²With a KODAK WRATTEN2 Gelatin Filter No. 80A.

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

Exposure Table-Daylight Illumination

At 24 frames per second (fps), 170-degree shutter opening

| EXPOSURE TABLE FOR TUNGSTEN LIGHT | | | | | | | |
|-----------------------------------|-------|-----|-------|-----|-------|-----|------|
| Lens Aperture | f/1.4 | f/2 | f/2.8 | f/4 | f/5.6 | f/8 | f/11 |
| Footcandles Required | 25 | 50 | 100 | 200 | 400 | 800 | 1600 |

Based on 24 frames per second (fps), 170-degree shutter opening. At 18 frames per second (fps), use 3/4 of the footcandles (fc) shown.

Reciprocity Characteristics

You do not need to make any filter corrections or exposure adjustments for exposure times from 1/10,000 to 1 second.

Processing

Process this film in E-6 Chemicals, cine machine only.

Note: KODAK EKTACHROME 100D Color Reversal Film / 7294 contains special sensitizing and filter dyes that improve color reproduction. Because these dyes are designed to rinse out of the film during processing, they will change the color of the first developer, the reversal bath, the final wash, and the final rinse. This solution discoloration is only cosmetic. It will not affect sensitometry or the quality of any Process E-6 film or control material. However, the solutions will cause splicing tape and processing equipment (rollers, racks, etc.) to have a pinkish color. The pink dye residue can easily be washed off processing equipment by following the normal maintenance procedures.

Duplication

Making Duplicates

To make color positive duplicates, scan the film images and output them KODAK VISION Color Print Film / 2383.

Identification

After processing, the product code numbers 7294 (16mm), emulsion and roll number information, KEYKODE numbers, and internal product symbol (EA) are visible along the length of the film, but when processed in a reversal process, the KEYKODE barcode will not read in barcode reading equipment. If the film is cross-processed in an ECN process, the KEYKODE barcodes should read properly.

Image Structure

The modulation-transfer curves, and the diffuse rms granularity data were generated from samples of 7294 Film exposed with tungsten light filtered to 5500K and processed as recommended in Process E-6 chemicals.

MTF: The "perceived" sharpness of any film depends on various components of the motion picture production system. The camera and projector lenses and film printers, among other factors, all play a role. But the specific sharpness of a film can be measured and charted in the Modulation Transfer Curve.

rms Granularity:

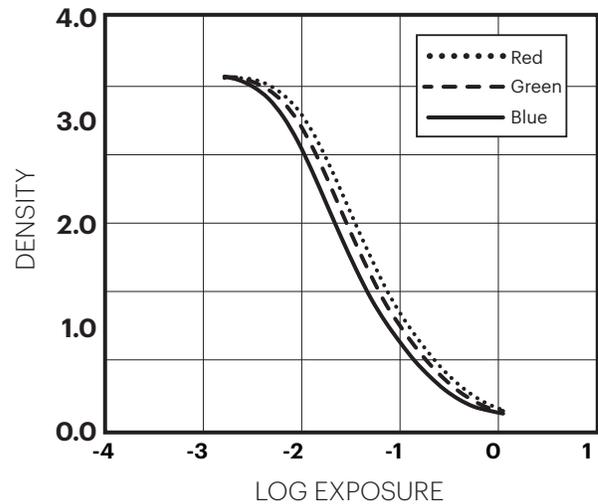
Refer to curve. Read with a microdensitometer, (red, green, blue) using a 48-micrometre aperture.

The "perception" of the graininess of any film is highly dependent on scene content, complexity, color, and density. Other factors, such as film age, processing, exposure conditions, and telecine transfer may also have significant effects.

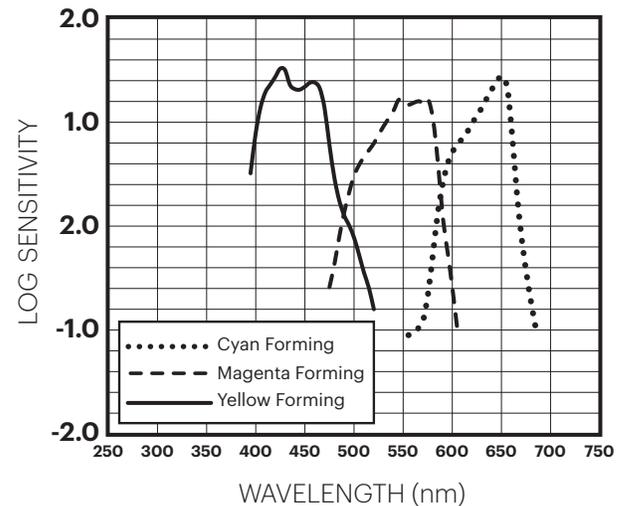
Available Roll Lengths

For information on film roll lengths, check Kodak's Motion Picture Products Price Catalog at Kodak.com, or see a Kodak sales representative in your country.

Characteristic

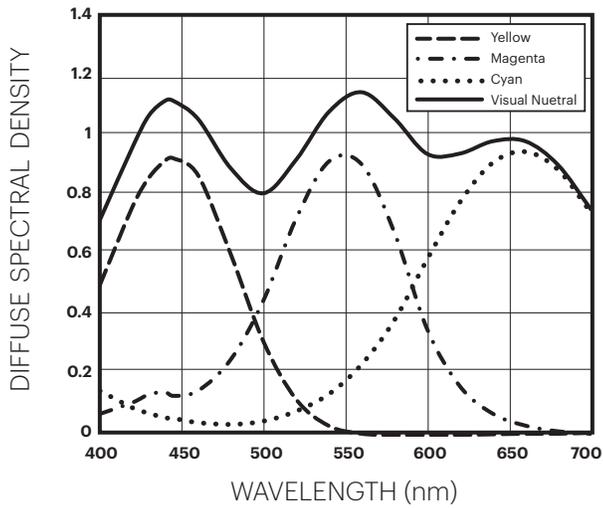


Spectral Sensitivity

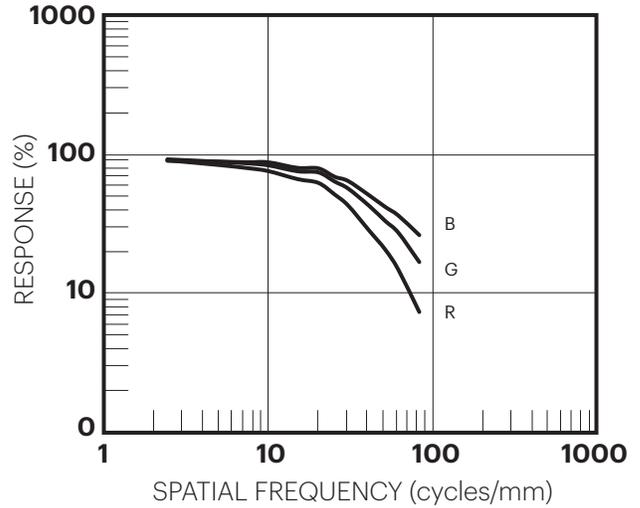


NOTICE: The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply to a particular box or roll of photographic material. They do not represent standards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

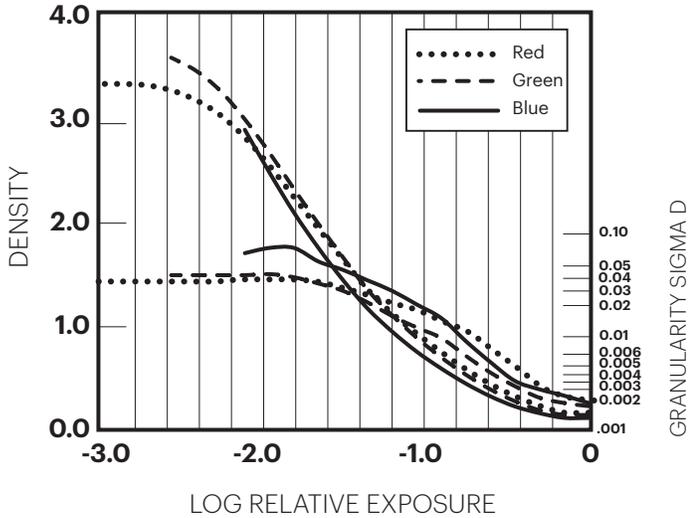
Spectral Dye Density



MTF



Granularity



MTF curve - This graph shows a measure of the visual sharpness of the film. The x-axis, "Spatial Frequency", refers to the number of sine waves per millimeter that can be resolved. The y-axis, "Response", corresponds to film sharpness. The longer and flatter the line, the more the film can resolve, and therefore, the sharper the film.

Note: These photographic modulation-transfer values were determined by using a method similar to the one described in ANSI Standard PH2.39-1977(R1992). The film was exposed with the specified illuminant to spatially varying sinusoidal test patterns having an aerial image modulation of a nominal 60 percent at the image plane, with processing as indicated. In most cases, the photographic modulation-transfer values are influenced by development-adjacency effects and are not equivalent to the true optical modulation-transfer curve of the emulsion layer in the particular photographic product.

rms Granularity curve - To find the rms Granularity value for a given density, find the density on the left vertical scale and follow horizontally to the characteristic curve and then go vertically (up or down) to the granularity curve. At that point, follow horizontally to the Granularity Sigma D scale on the right. Read the number and multiply by 1000 for the rms value. Note: This curve represents granularity based on modified measuring techniques.

Characteristic

