EASTMAN EXR Color Intermediate Film 2244™ / 5244™ / 7244™

EASTMAN EXR Color Intermediate Film 2244 (35 mm and 65 mm ESTAR), 5244 (35 mm and 65 mm acetate), and 7244 (16 mm acetate) is intended for making color master positives from EASTMAN Color Negative Camera Films, and for making color duplicate negatives from those master positives.

You can also use EASTMAN EXR Color Intermediate Film for preparing color duplicate negatives from black-and-white silver separation positives. It contains an integral mask similar to the mask in Eastman color negative films but is more red in color. It has excellent image structure, tonal scale, and reproduction contrast near unity when recommended printing and processing procedures are followed. It features micro-fine grain, high sharpness and high resolving power.

BASE

This film has a clear acetate or ESTAR safety base with rem-jet backing.

DARKROOM RECOMMENDATIONS

Make careful safelight tests before proceeding with production work. Use a KODAK 8 Safelight Filter (dark yellow) with either low-intensity tungsten illumination or a sodium-vapor lamp. The sodium-vapor lamp provides the best visual efficiency with the least effect on the film.

Certain films (i.e. camera-speed and internegative) that are used in the same printing/processing room as EASTMAN EXR Color Intermediate Film 2244 / 5244 / 7244 are NOT recommended for use with safelights. In these instances, where illumination must be provided for dials, meters, etc, during printing or color development, you may use a fixture fitted with a KODAK No. 3 Safelight Filter (dark green) provided such illumination is not allowed to be incident upon the film itself. For a general discussion on safelights, see the paper "Considerations in the Illumination of Photographic Darkrooms," by Mr. C. B. Hunt, SMPTE Journal, Vol 91, March 1982, pp 266-276.

STORAGE

Store *unexposed* film at 13˚C (55˚F) or below. Process *exposed* film promptly. Store *processed* film at 21˚C (70˚F) or lower at a relative humidity of 40 to 50 percent for short-term commercial storage; for long-term storage, store it at 2 to 10˚C (35 to 50˚F) at 15- to 30-percent humidity. For more information on long-term storage, see KODAK Publication No. H-23, *The Book of Film Care*.

COLOR BALANCE

This film is balanced for printing from all color negative films using tungsten illumination.

RECIPROCITY CHARACTERISTICS

You do not need to make any exposure or filter adjustments for exposure times from 1/250 to 1 second.

PROCESSING

Most commercial motion-picture laboratories provide a processing service for this film. There are no packaged chemicals available for preparing the processing solutions. See KODAK Publication No. H-24, *Manual for Processing KODAK Motion Picture Films, Module 7, Process ECN-2 Specifications*, for more information on the solution formulas and the procedures for continuous machine processing this film.

IDENTIFICATION

After processing, product code numbers 2244, 5244, 7244; emulsion and roll number identification; EASTMAN KEYKODE Numbers; and a film identification code (V), are visible along the length of the film.

LABORATORY AIM DENSITY LAD CONTROL METHOD

To maintain optimum quality and consistency in the final prints, the laboratory must carefully control the color timing, printing, and duplicating procedures. Laboratory Aim Density (LAD) Control Film* provides a simple, effective, and easily implemented control method for the production of master positives and duplicate negatives from negative originals.

All film in the printing original should be color timed relative to LAD Control Film. The LAD Control Film is printed at the center of the printer range, usually TAPE 25-25-25. Printer setup (speed, bulb voltage, TRIM, filtration, etc) is determined by printing the large gray patch in the LAD Control Film to the specified Laboratory Aim Density values on the duplicating film, chosen to be at the center of the usable straight-line portion of the duplicating film's characteristic curves. The Status M Laboratory Aim Density values for EASTMAN EXR Color Intermediate Film are as follows. For the Master Positive LAD Aim:

Red	Green	Blue	Tolerance
1.15	1.60	1.70	± 0.10 density

For the Duplicate Negative LAD Aim:

Red	Green	Blue	Tolerance
1.00	1.45	1.55	± 0.10 density

The LAD Control Method† assumes that the film and process sensitometry are within specification.

FILM-TO-VIDEO TRANSFER

When you transfer the film directly to video, you can set up the telecine with Telecine Analysis Film produced on EASTMAN EXR Color Intermediate Film 5244. The Telecine Analysis Film (TAF) consists of a neutral density scale and an eight-bar color test pattern with a LAD surround.

The TAF gray scale provides the scanner operator (colorist) with an effective way to adjust subcarrier balance and to center the telecine controls before timing and transferring a film. The TAF color bars provide the utility of electronic color bars, even though they do not precisely match the electronically generated color bars. Using the TAF will help obtain optimum quality and consistency in the film-to-video transfer.

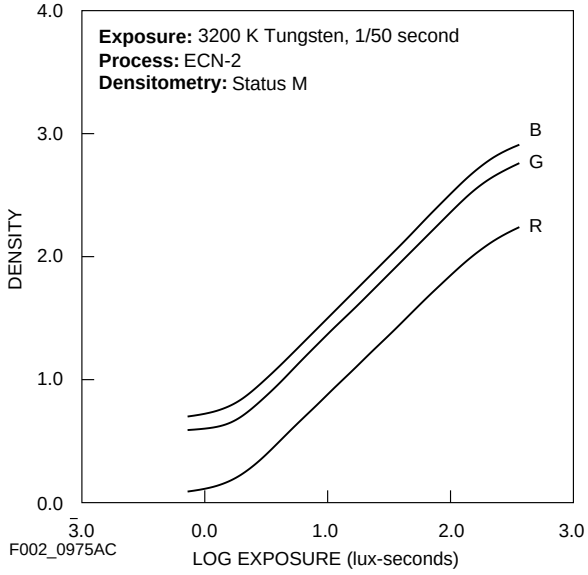
PRINTING CONDITIONS

In all printer setups for printing EASTMAN EXR Color Intermediate Film 5244 / 7244, include a heat absorbing (infrared) filter such as a KODAK Heat Absorbing Glass, No. 2043, and a KODAK WRATTEN Gelatin Filter No. 2E to absorb ultraviolet (UV) light. For high light output with very long bulb life, operate the printer bulb at approximately 80 percent of rated voltage. Use a well-regulated constant-current DC power supply.

Print LAD Control Film at the center of the printer balance range, usually TAPE 25-25-25 on an additive printer. Print other scenes in the original as determined by color timing relative to the LAD Control Film. Choose the printer speed and filtration to normalize the additive TRIM settings near the center of their range to allow for slight variations in film and printer.

On subtractive printers, choose the filter pack and light control for both the removal and addition of filters for color correction. You can use EASTMAN Lamphouse Modification Filters in subtractive printers to more closely balance the spectral characteristics of subtractive lamphouses with additive lamphouses so that prints made on a subtractive printer more closely match those made on additive printers. On optical printers, set the lens aperture considering sharpness, depth of focus, and light transmittance characteristics. Use ground glass or other diffusers to improve uniformity of illumination. Clean and align optics for optimum light output and uniformity.

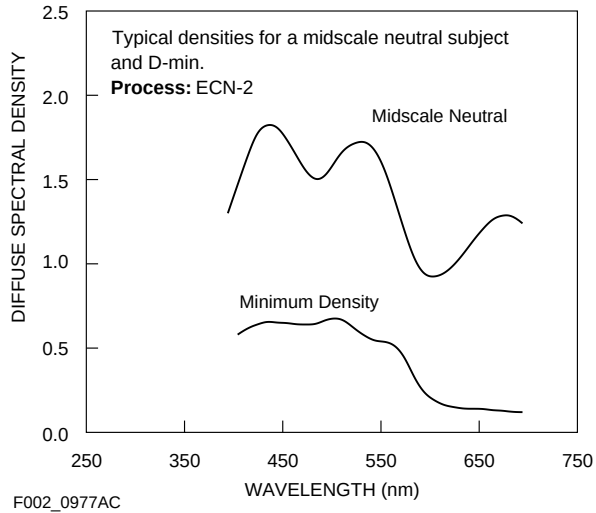
Characteristic Curves



* Laboratory Aim Density Control Film is supplied by Eastman Kodak Company. Direct any inquiries to Kodak in your country.

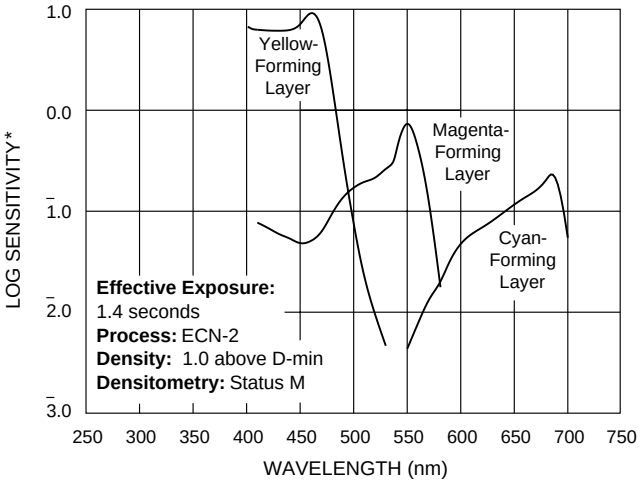
† The LAD control method is described in the paper "A Simplified Motion-Picture Laboratory Control Method for Improved Color Duplication," by John P. Pytlak and Alfred W. Fleischer in the October 1976 SMPTE Journal.
Also refer to KODAK Publication No. H-61, *LAD—Laboratory Aim Density.*

Spectral-Dye-Density Curves



F002_0977AC

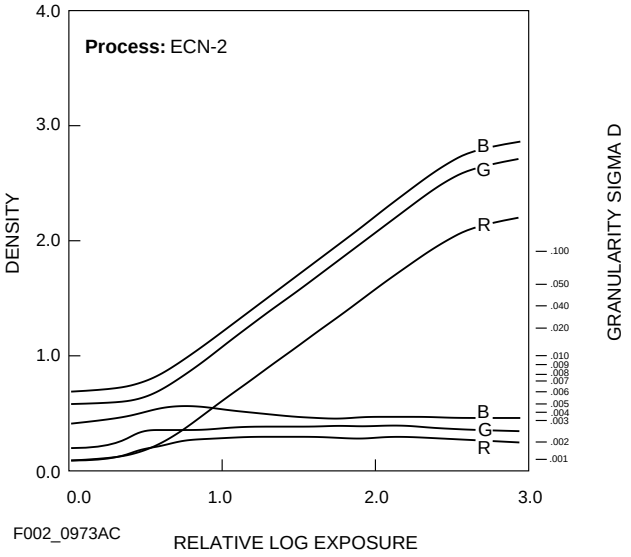
Spectral Sensitivity Curves



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

F002_0976AC

Diffuse RMS Granularity Curves



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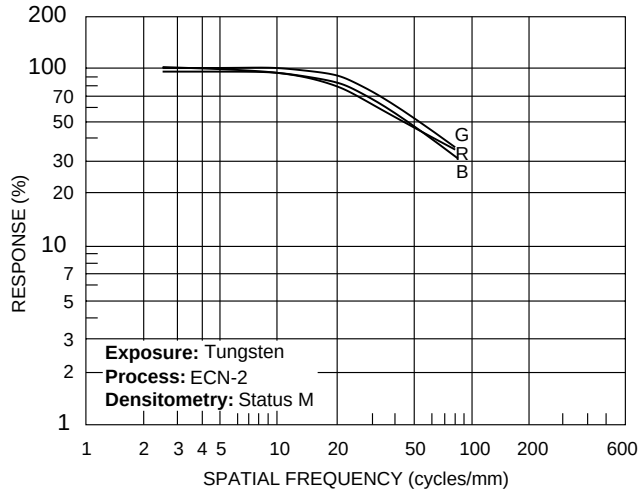
Modulation-Transfer Curves



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Notice: While the data presented are typical of production coatings, they do not represent standards which must be met by Kodak. Varying storage, exposure, and processing conditions will affect results. The company reserves the right to change and improve product characteristics at any time.

These photographic modulation-transfer values were determined by using a method similar to the one described in ANSI Standard PH2.39-1977(R1990). 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, these 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.

AVAILABLE ROLL LENGTHS

For information on film roll lengths, check Kodak's *Professional Motion Picture Imaging* price catalog or contact Kodak in your country.

KODAK LOCATIONS

FOR DIRECT ORDERING IN THE UNITED STATES:
1-800-621-FILM

ATLANTA, GEORGIA

4 Concourse Parkway
Suite 300
Atlanta, Georgia 30328-5379
Information: 800-800-8398

CHICAGO, ILLINOIS

815 West Van Buren, Suite 320
Chicago, Illinois 60607
Information: 312-492-1423

DALLAS, TEXAS

11337 Indian Trail
Dallas, Texas 75229
Information: 972-481-1150 or 312-492-1423

HOLLYWOOD, CALIFORNIA

6700 Santa Monica Boulevard
P. O. Box 38939
Hollywood, California 90038-1203
Information: 323-464-6131

NEW YORK, NEW YORK

360 West 31st Street
New York, New York 10001-2727
Information: 212-631-3450

LATIN AMERICAN REGIONAL OFFICE

8600 NW 17th Street, Suite 200
Miami, Florida 33126
Information: 305-507-5656

FOR DIRECT ORDERING IN CANADA:
1-800-621-FILM

MONTREAL, CANADA

Kodak Canada Inc.
4 Place du Commerce
Ile des Soeurs
Verdun, Quebec, H3E 1J4, Canada
Information: 514-761-3481

TORONTO, CANADA

Kodak Canada Inc.
3500 Eglinton Avenue West
Toronto, Ontario, M6M 1V3, Canada
Information: 416-766-8233

VANCOUVER, CANADA

Kodak Canada Inc.
4185 Still Creek Drive
Burnaby, British Columbia, V5C 6G9, Canada
Information: 604-320-1777

KODAK On Line At:
http://www.kodak.com/go/motion

Professional
Motion Imaging

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