

KODAK Continuous Tone Mapping Film CTM4



KODAK Continuous Tone Mapping Film CTM4 is a low contrast, continuous tone film with extended blue sensitivity designed for blowback applications in aerial mapping work. CTM4 Film is a negative working, projection speed film, but is also suitable for contact exposures using a tungsten point light source. Its low translucency makes it ideal for fast reproduction on blue print/diazo machines.

CTM4 Film features outstanding resolution of fine detail and very good tone reproduction of highlights and shadows. It has a dimensionally stable polyester (PET) base with a white, matte drafting surface on both sides for pencil and ink drafting, erasures, and revisions.

Process CTM4 Film in KODAK RA 2000 Developer and Replenisher and KODAK ULTRALINE Developer and Replenisher.

Note: Not recommended for processing in KODALITH Blender Concentrates or in KODAK ACCUMAX Rapid Access Developer and Replenisher.

SUPPORT

Dimensionally stable support 0.004-inch (0.10 mm) white, opaque, polyester (PET) base.

SAFELIGHT

Use a KODAK 1A Safelight Filter / light red in a suitable safelight lamp equipped with a 15-watt bulb. Keep the film at least 4 feet (1.2 metres) from the safelight.

STORAGE

Keep unexposed film and processed film in a cool, dry place. Process film as soon as possible after exposure.

EXPOSURE

CTM4 Film can be exposed in a camera, enlarger, or contact frame. When exposing in a camera, focus the lens carefully and keep the lens, negative holder, and copyboard glass clean and free of dust.

Exposure Examples

Camera:	Blowup Size: 200% Light Source: White fluorescent, 1000 watts Exposure: 10 seconds at f/22
Contact:	Expose to the Emulsion. K&M Point Light Source 100-watt bulb Distance: 5 feet (1.5 metres) Tap 3 (on a 6-Tap unit) 5 seconds

RECIPROCITY

With recommended processing, the reciprocity speed change is negligible (1/3-photographic stop or less) within exposure range of 1/1000 second to 100 seconds; there is no change in contrast.

PROCESSING

Notice: Observe precautionary information on product labels and on the Material Safety Data Sheets.

TRAY PROCESSING:

Develop with continuous agitation using KODAK ULTRALINE Developer and Replenisher or KODAK RA 2000 Developer and Replenisher (1:4).

Recommended Temperature	Recommended Time (Minutes)	Useful Range* (Minutes)
75° F (24° C)	2	1 to 10
75° F (24° C)	3	2 to 10

* Satisfactory results can usually be obtained from properly exposed films within this range.

Rinse at 65 to 80° F (18 to 27° C) with agitation.

KODAK 4001 Stop Bath	10 seconds
KODAK Indicator Stop Bath	10 seconds
Diluted 4% acetic acid solution	10 seconds

Fix at 65 to 80° F (18 to 27° C) with frequent agitation.

KODAK ULTRALINE Fixer and Replenisher (1:3)*	1 to 2 minutes
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* When using ULTRALINE Developer, do not use Part B or hardener in the fixer. With RA 2000 Developer, hardener may be used.

Wash at 65 to 80° F (18 to 27° C) in running water for about 10 minutes.

Note: Do not use KODAK PHOTO-FLO Solution or similar chemical aid for dispersing surface water. These chemical aids may cause “feathering” when ink lines are added.

Dry in a dust-free place.

MECHANIZED PROCESSING:

The recommended starting points for optimum results using KODAK ULTRALINE Developer and Replenisher are:

Deep-Tank Processors	80 seconds at 80° F (26.5° C)
Rapid Access Processors	38 seconds at 95° F (35° C)

Use a non-hardening fixer such as KODAK ULTRALINE Fixer and Replenisher or KODAK Rapid Fixer, Part A (no Part B).

RETOUCHING

Photographic-image lines can be removed with any commercially available eradicator solution. Contact a photographic supplies dealer.

Both pencil and line ink can be used for revisions or additions. Pencil lines can be removed with a soft, nonabrasive eraser. Ink lines will come off with a damp cloth or ink eraser. Further revisions can be made in the eradicated and erased areas.

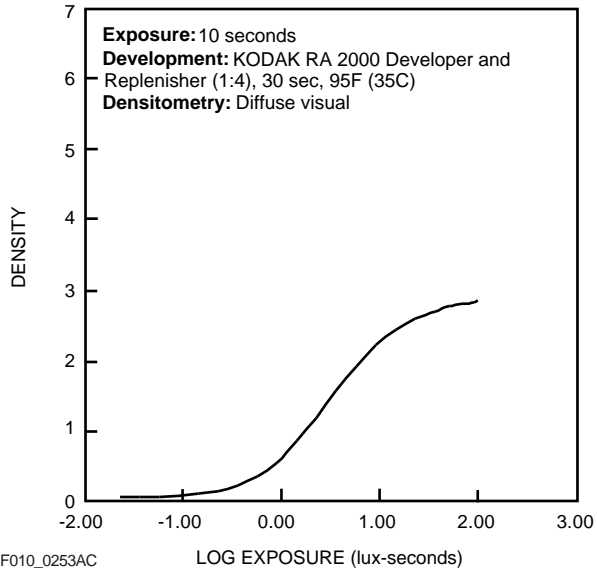
DIMENSIONAL STABILITY

Dimensional stability is an all-inclusive term. In photography, it applies to size changes caused by changes in humidity and in temperature, and by processing and aging. The dimensional properties of this base may vary slightly in different directions within a sheet; the differences that may exist, however, are not always equal in both the length and width directions.

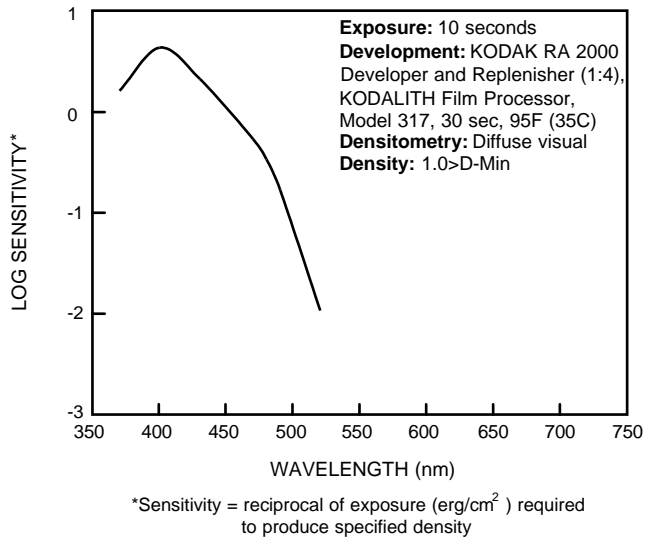
Differences in size change between length and width should be within 10 percent of each other.

CURVES

Characteristic Curve



Spectral Sensitivity



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MORE INFORMATION

For the latest version of technical support publications for Kodak products, visit Kodak on-line at:
<http://www.kodak.com/go/SDRproducts>

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)

From outside the US/Canada: 1-716-724-4000

Note: The Kodak materials described in this publication for use with KODAK Continuous Tone Mapping Film CTM4 are available from dealers who supply Kodak products. You can use other materials, but you may not obtain similar results.

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.

Industrial Imaging
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