

KODAK PROFESSIONAL B/W Duplicating Film SO-132



KODAK PROFESSIONAL B/W Duplicating Film SO-132 is an orthochromatic, medium-contrast film designed for one-step duplication of continuous-tone black-and-white negatives. This film does not require reversal processing. You can use it to duplicate images on bulky or fragile photographic plates or films. For long-term keeping, treat duplicates on this film with KODAK Rapid Selenium or KODAK Brown Toner.

FEATURES	BENEFITS
• Long tonal range	• Excellent reproduction of original
• Adjustable contrast (by varying development time)	• High-quality duplicates over a wide contrast range
• Direct-working: no reversal process required	• Can be processed in trays, tanks, or roller-transport processors

SIZES AVAILABLE

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

Sheets Per Package	Size (inches)	Code Notch	Base	CAT No.
25	4 x 5		7-mil ESTAR Thick	852 0272
25	8 x 10		7-mil ESTAR Thick	159 5032

STORAGE AND HANDLING

Store unexposed film at 55°F (13°C) or lower in the original sealed package. Always store film (exposed or unexposed) in a cool, dry place. To avoid moisture condensation on film that has been refrigerated, allow the film to warm up to room temperature before opening the package. 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 duplicates, see KODAK Publication No. E-30, *Storage and Care of Photographic Materials—Before and After Processing*.

EXPOSURE

You can use tungsten, fluorescent, or tungsten-halogen light sources to expose this film. Make a series of test exposures under your conditions. Start with a trial exposure of 40 seconds if you use a tungsten light source that provides 5 footcandles (54 lux) at the exposure plane. More exposure produces lower densities in the duplicate; less exposure produces higher densities.

DARKROOM RECOMMENDATIONS

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

Note: In most exposure and processing systems, this film will require $\frac{2}{3}$ to 1 stop more exposure than KODAK PROFESSIONAL B/W Duplicating Film SO-339.

MANUAL PROCESSING

The development times in the tables below are starting-point recommendations. To produce the required contrast in the duplicate, you can vary the development time. Likewise, you may need to adjust the exposure time to make the best duplicate.

Tray Processing

Provide continuous agitation.

KODAK Developer	Contrast	Development Time (minutes) at 68°F (21°C)
DEKTOL (1:1)	High	2
DK-50	High	4 to 6
D-76 (1:1)	Normal	10
XTOL	Normal	5
XTOL (1:2)*	Normal	12

* Allows more contrast adjustment with a change in development time.

Large-Tank Processing

Agitate once per minute.

KODAK Developer	Contrast	Development Time (minutes) at 68°F (21°C)
DEKTOL (1:1)	High	4 to 6
DK-50	High	4 to 6
D-76 (1:1)	Normal	10
XTOL	Normal	5
XTOL (1:2)*	Normal	12

* Allows more contrast adjustment with a change in development time.

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

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

MACHINE PROCESSING

You can process this film in roller-transport processors, such as the KODAK VERSAMAT Film Processor, Model 5, 11, or 411, with KODAK DURAFLO RT Developer Replenisher, KODAK DURAFLO Developer Starter, and KODAK Rapid Fixer.

The recommended machine speeds for processing this film at 80°F (26.5°C) are as follows:

KODAK VERSAMAT Film Processor	Machine Speed (ft/minute)
Models 5 and 411	4.25
Model 11	9

TONING

For long-term keeping, you can treat duplicates produced on this film with KODAK Rapid Selenium Toner (diluted 1:29) or KODAK Brown Toner (diluted 1:32).

The capacity of either of these toners, without replenishment, is 150 sheets of 8 x 10-inch film (600 sheets of 4 x 5-inch film) per gallon of working solution.

Process the film as described in the Processing sections above. If the film has dried, presoak it before toning for several minutes in 65 to 75°F (18 to 24°C) water.

Steps at 68°F (20°C) unless otherwise noted	Time (min)	
	Selenium Toner (1:29)	Brown Toner (1:32)
Treat the film in KODAK Hypo Clearing Agent (working strength)	--	2
Rinse in running water	--	1 to 2
Tone the wet film, with frequent agitation	3	1
Wash in 65 to 75°F (18 to 24°C) running water	20 to 30	--
Rinse in dilute Hypo Clearing Agent (1:14 using working strength solution or 1:72 using the stock solution)*	--	1 to 2
Treat in normal working strength Hypo Clearing Agent	--	2
Wash in 65 to 75°F (18 to 24°C) running water	--	5
Treat in KODAK PHOTO-FLO Solution	1/2	1/2
Dry in a dust-free place†	as needed	

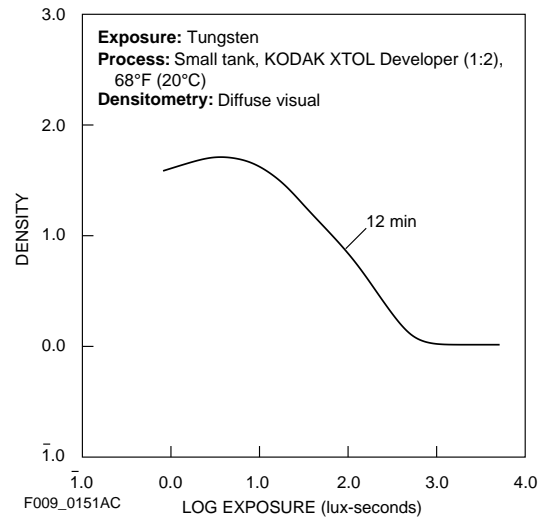
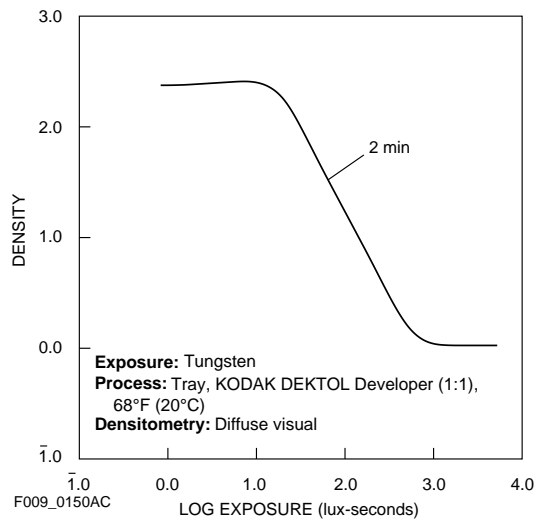
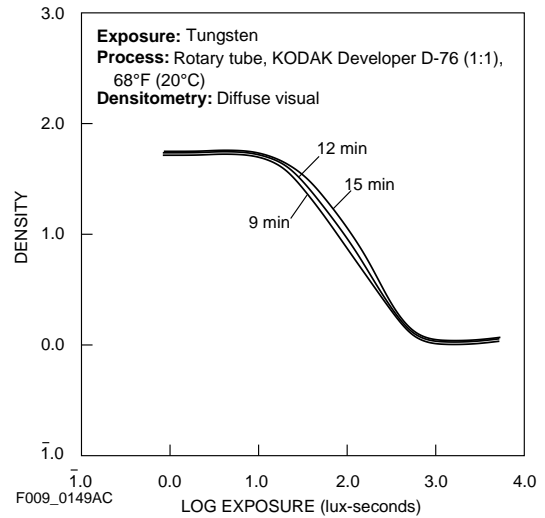
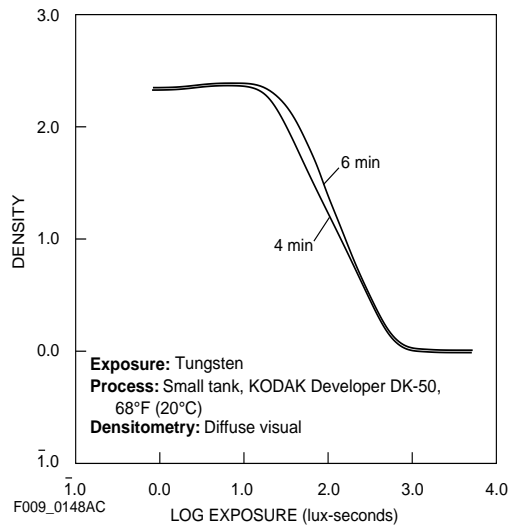
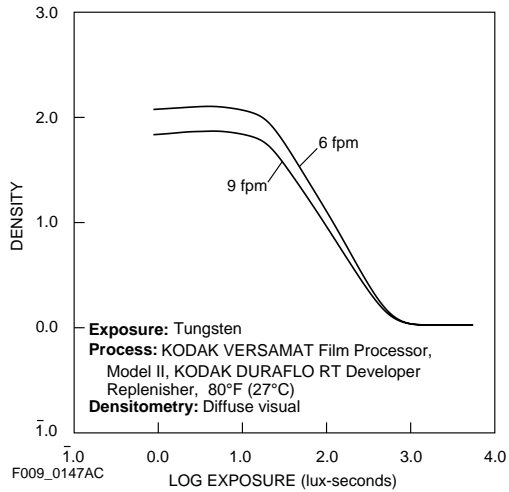
* Or you can use water, but a precipitate may form.

† You can use heated, forced air to reduce the drying time.

IMAGE-STRUCTURE CHARACTERISTICS

The data in this section is based on development in a KODAK VERSAMAT Film Processor, Model 5, at 80°F (26.5°C) in KODAK DURAFLO RT Developer Replenisher with two developer racks at 4.25 ft/min.

Characteristic Curves



Note: If you want to make prints at 5X or greater magnification from the duplicate negatives, first make a test duplicate negative and enlargement to be sure the image quality will be satisfactory for your application.

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.

Additional information is available on the Kodak website and through the U.S.A. and Canada faxback system.

The following publications are available from Kodak Customer Service and from dealers who sell Kodak products, or you can contact Kodak in your country for more information.

- E-30 *Storage and Care of KODAK Photographic Materials*
- G-23 *Toning KODAK Black-and-White Materials*
- K-4 *How Safe Is Your Safelight?*

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In Canada:

*1-800-465-6325, Monday – Friday
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*Or contact Kodak on-line at:
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