KODAK VERICHROME Pan Film

—NOTICE—

This film has been discontinued. As a recommended alternative, we suggest KODAK PROFESSIONAL T-MAX 100 Film / 100TMX or KODAK PROFESSIONAL PLUS-X 125 Film / 125PX. For more information, see KODAK Publications F-4016, *KODAK PROFESSIONAL T-MAX Films*, and F-4018, *KODAK PROFESSIONAL PLUS-X 125 Film,* available from **www.kodak.com/go/bwfilms**

KODAK VERICHROME Pan Film is a medium-speed (EI 125) panchromatic film that features extremely fine grain. Its excellent gradation and wide exposure latitude make it a good choice for general-purpose applications. This film has characteristics similar to those of KODAK PLUS-X Pan Professional Film, but does not have retouching surfaces.

FEATURES	BENEFITS
• Extremely fine grain	• Excellent for producing high-quality images
• Wide exposure latitude	• Rich tonality maintained with overexposure and underexposure
• Very high sharpness	• Excellent for applications that require a high degree of enlargement
• High resolving power	• Good rendition of detail

SIZES AVAILABLE

Sizes and catalog numbers may differ from country to country. See your dealer who supplies Kodak Professional products.

Roll	Base	Letter Code	CAT No.
120	3.6-mil acetate	VP	826 9532

For Cirkut Cameras (Daylight-Loading Rolls)

Size in. x ft	Base	Letter Code	CAT No.
8 x 5	3.6-mil acetate	VP	146 9493

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 75°F (24°C) 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

Daylight

Use the exposures in the table below for frontlighted subjects from 2 hours after sunrise to 2 hours before sunset.

Lighting Conditions	Shutter Speed (Second)	Lens Opening
Bright or Hazy Sun on Light Sand or Snow	1/125	*f*/22
Bright or Hazy Sun (Distinct Shadows)	1/125	*f*/16*
Weak, Hazy Sun (Soft Shadows)	1/125	*f*/11
Cloudy Bright (No Shadows)	1/125	*f*/8
Heavy Overcast or Open Shade†	1/125	*f*/5.6

* Use *f*/8 at 1/125 for backlighted close-up subjects.
† Subject shaded from the sun but lighted by a large area of clear sky.

Electronic Flash

Use the guide numbers in the table below as a starting point for your equipment. Select the unit output closest to the number given by your flash manufacturer. Then find the guide number for feet or metres. To determine the lens opening, divide the guide number by the flash-to-subject distance.

Unit Output BCPS*	Guide Number	
	For Distances in Feet	For Distances in Metres
350	45	14
500	55	17
700	65	20
1000	80	24
1400	95	29
2000	110	33
2800	130	40
4000	160	50
5600	190	60
8000	220	65

* BCPS=beam candlepower seconds.

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
1/100,000	+1 stop		Adjust aperture	+20%
1/10,000	+1½ stop		Adjust aperture	+15%
1/1,000	None		None	+10%
1/100	None		None	None
1/10	None		None	None
1	+1 stop		2	–10%
10	+2 stops		50	–20%
100	+3 stops		1,200	–30%

Filter Corrections

Multiply the normal exposure time by the filter factor.

KODAK WRATTEN Gelatin Filter	Daylight	Tungsten
	Multiply Exposure By (filter factor)	Multiply Exposure By (filter factor)
No. 8 (yellow)	2	1.5
No. 11 (yellowish green)	4	4
No. 15 (deep yellow)	2.5	1.5
No. 25 (red)	8	5
No. 47 (blue)	6	12
No. 58 (green)	6	6
Polarizing Filter	2.5	2.5

DARKROOM RECOMMENDATIONS

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

Using a safelight *will* affect your results. *If absolutely necessary,* after development is half complete, you can use a safelight equipped with a KODAK 3 Safelight Filter (dark green) with a 15-watt bulb for a few seconds. Keep the safelight at least 4 feet (1.2 metres) 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

Handle unprocessed film in total darkness.

These starting-point recommendations are intended to produce a contrast index of 0.60. Make tests to determine the best development time for your application.

Small-Tank Processing

Agitate at 30-second intervals.

KODAK Developer	Development Time in Minutes				
	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)
T-MAX	—	6	5½	5	4
T-MAX RS	—	4	4	3½	3½
XTOL	7½	6	5¼	4¾	4
D-76	8	7	5½	5	4½
D-76 (1:1)	11	9	8	7	6
MICRODOL-X	10	9	8	7	6
MICRODOL-X (1:3)	15	14	13	12	11
HC-110 (B)	6	5	4½	4	—

Note: Development times shorter than 5 minutes may produce unsatisfactory uniformity.

Large-Tank Processing

Agitate once per minute.

KODAK Developer	Development Time in Minutes				
	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)
T-MAX RS	—	5½	5	5	4
D-76	9	8	7	6	5
D-76 (1:1)	12½	10	9	8	7
MICRODOL-X	11	10	9	8	7
MICRODOL-X (1:3)	20	15	14	13	12
HC-110 (B)	8	6½	6	5½	4½

Note: Development times shorter than 5 minutes may produce unsatisfactory uniformity.

Tray Processing Film for Cirkut Cameras

Provide continuous agitation.

KODAK Developer	Development Time in Minutes				
	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)
T-MAX RS	5	4½	4	3½	3
D-76	7	6	5	4½	4
D-76 (1:1)	10	8	7	6	5
MICRODOL-X	9	8	7	6	5
MICRODOL-X (1:3)	14	13	12	11	10
HC-110 (B)	5	4½	4	3½	3

Note: Development times shorter than 5 minutes may produce unsatisfactory uniformity.

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 Fixer	5:00 to 10:00
KODAK Rapid Fixer	2:00 to 4:00
KODAFIX Solution	2:00 to 4:00
Wash—in running water:	
—	20:00 to 30:00
KODAK PHOTO-FLO Solution	0:30
OR	
Rinse with water	0:30
KODAK Hypo Clearing Agent	1:00 to 2:00
Wash	5:00
Dry-—in a clean, dust-free environment.	

IMAGE-STRUCTURE CHARACTERISTICS

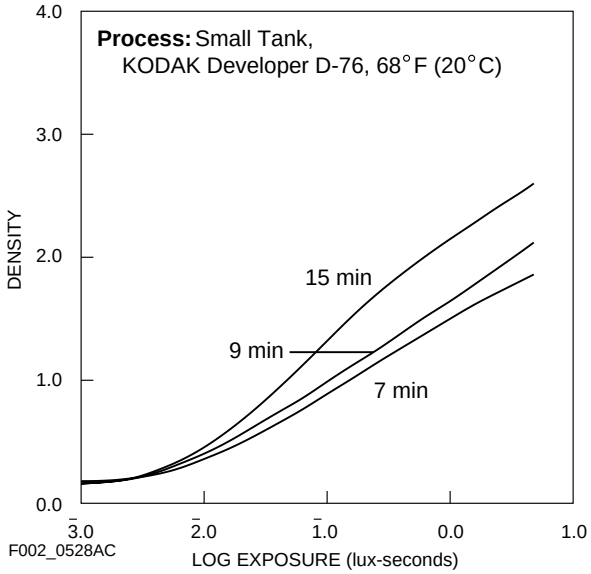
The data in this section is based on development at 68°F (20°C) in KODAK Developer D-76 (1:1) for 9 minutes in a small tank. Contrast Index = 0.60.

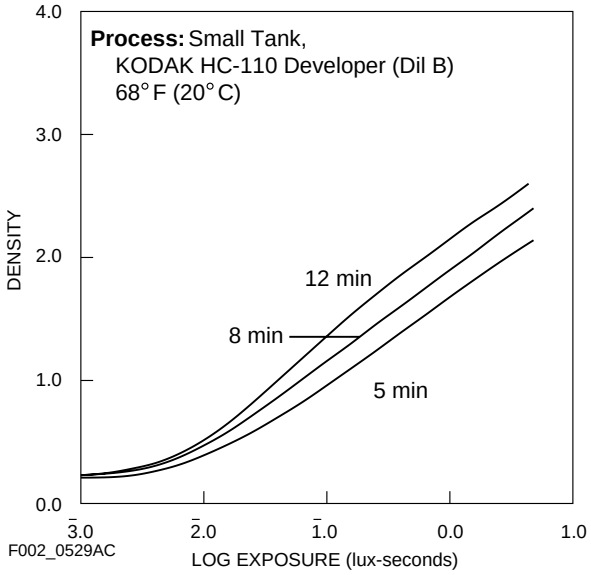
Diffuse rms Granularity* 9 Extremely Fine

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

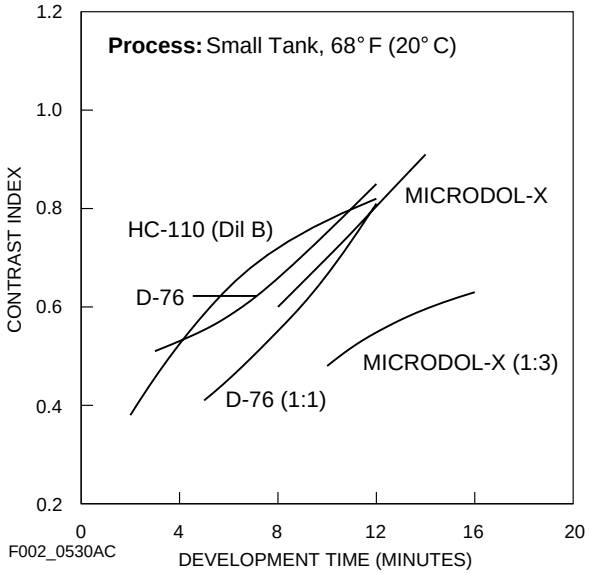
Note: The sensitometric curves and data in this publication represent product tested under the conditions of exposure and processing specified. They are representative of production coatings, and therefore do not apply directly to a particular box or roll of photographic material. They do not represent 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.

Characteristic Curves





Contrast-Index Curves



MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products, equipment, and materials.
The following publications are available from Kodak Customer Service, 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—Before and After Processing*
F-2	*Pathways to Black and White*
J-24	*KODAK HC-110 Developer*
J-78	*KODAK Developer D-76*
J-86	*KODAK T-MAX Developers*
J-107	*KODAK XTOL Developer for Small Tank and Tray Processing*
K-4	*How Safe Is Your Safelight?*

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

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)

Note: The Kodak materials described in this publication for use with KODAK VERICHROME Pan 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

KODAK VERICHROME Pan Film
KODAK Publication No. **F-7**
CAT 166 0687

Minor Revision 12-02
Printed in U.S.A.