

EKTAPAN
Film 4162

Kodak

New breadwinner

Meet new KODAK EKTAPAN Film. The one black-and-white professional film you can put to use for *many* jobs. A versatile film you can almost *standardize* on.

New EKTAPAN Film is an extremely useful-speed film (ASA 100) with particularly fine grain and high acutance. Ideal for candid, industrial and commercial jobs, copying, and portraiture. And well suited for retouching.

Available in sheet sizes, 70mm, and 3½" long rolls. Processes in a range of Kodak developers or, mechanically, in any of the KODAK VERSAMAT Film Processors.



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EKTAPAN Film 4162

KODAK EKTAPAN Film 4162 (ESTAR THICK BASE)

(Sheet Film and Long Rolls)

This is a panchromatic, antihalation film of medium speed on .007-inch ESTAR Thick Base. Its characteristics make it particularly suitable for portraiture with electronic flash illumination. Because the speed of this film is similar to that of KODAK EKTACOLOR Film, Type S, the material is valuable in commercial, industrial, and scientific photography when both black-and-white and color negatives are desired from the same subject.

Both the base and emulsion sides of the film are suitable for retouching. KODAK ESTAR Base is a polyester plastic which provides excellent durability and resistance to tear, as well as rigidity and extremely good dimensional stability.

Forms Available: This film is available in sheet film sizes. When this film is supplied in sheet form, the code notch below will appear on each sheet of film. When the notch is at the right side of the top edge, the emulsion side of the film faces you.

This film is also available in wide widths in long rolls.

Safelight: Total darkness required. A KODAK Safelight Filter No. 3 (dark green) in a suitable safelight lamp with a 15-watt bulb can be used for a few seconds only, at 4 feet, after development is half completed.

Exposure

Speed: ASA 100

This number is for use with meters marked for "ASA" Speeds, in either daylight or artificial light. It will normally lead to approximately the minimum exposure required to produce negatives of highest quality.

If, with normal development, your negatives are consistently too thin, increase exposure by using a lower number; if too dense, reduce exposure by using a higher number.

Filter Factors: Multiply normal exposure by filter factor given below:

KODAK WRITTEN Filter	No. 6 (K1)	No. 8 (K2)	No. 15 (G)	No. 11 (X1)	No. 29 (F)	No. 25 (A)	No. 58 (B)	No. 47 (C5)	POLA-SCREEN
Daylight or Electronic Flash	1.5	2*	3	4	16	8	8	5	2.5
Photoflood or high-efficiency tungsten	1.5	1.5	2	3*	8	4	8	10	2.5

*For correct gray-tone rendering of colored objects.

Flash Exposure Guide Numbers: To get *f*-number, divide guide number by flash-to-subject distance in feet, taken to a point midway between nearest and farthest details of interest. In small white rooms, use one stop smaller.

Electronic Flash Guide Numbers: This table is intended as a starting point in determining the correct guide number. The table is for use with equipment rated in beam candlepower-seconds (BCPS) or effective candlepower-seconds (ECPS). Divide the proper guide number by the flash-to-subject distance in feet to determine the *f*-number for average subjects.

Output of Unit (BCPS or ECPS)	350	500	700	1000	1400	2000	2800	4000	5600	8000
Guide Number for Trial	40	50	60	70	85	100	120	140	170	200

Processing

The development times given in the following tables are based on an exposure time of 1/100 second. Changes in density and contrast, due to the reciprocity characteristics of the emulsion at exposure times longer than 1/10 second, can be compensated for by use of the **Reciprocity Compensation Table**.

NEW DATA

KODAK Packaged Developers	Developing Time (in Minutes) for Sheet Films									
	TRAY (Continuous Agitation)					TANK (Agitation at 1-Minute Intervals)				
	65 F	68 F	70 F	72 F	75 F	65 F	68 F	70 F	72 F	75 F
HC-110 (Dilution B)	6	5	4½	4¼	3¾	8	6½	6	5½	4½*
HC-110 (Dilution A)	3½	3	2¾	2½	2¼	4*	3¾*	3¼*	3*	2¾*
POLYDOL	10	8	7½	6½	5½	12	10	9	8	7¼
DK-50 (1:1)	4	4	3¾	3½	3¼	5½	5	4¾*	4½*	4*
D-76	8½	8	7½	7	6½	11	10	9	8½	7½
MICRODOL-X	12	10	9½	8½	7½	16	13	12	10	9

*Not Recommended (because development times of less than 5 minutes in a tank may produce poor uniformity).

NEW DATA

KODAK Packaged Developers	Developing Times (in Minutes) for Films in Long Rolls on Spiral Reels				
	65 F	68 F	70 F	72 F	75 F
HC-110 (Dilution B)	8	7	6½	6	5½
POLYDOL	13	11	10	9	7½

Agitation Procedure for Long Rolls: Secure the film with rubber band or water-proof tape to prevent the film from unwinding during processing. Then use the following agitation procedure:

1. Lower the reel into the developer, giving it a vigorous turning motion sufficient to cause the reel to rotate one-half to one revolution in the developer. Raise and lower the reel approximately one-half inch (keeping the reel in the solution) for the first 15 seconds of the development, tapping it against the bottom of the tank to release air bubbles from the film.

2. Agitate once each minute by lifting the reel out of the solution, tilting it 30 degrees to drain 5 to 10 seconds, and immersing it again with a vigorous turning motion sufficient to cause the reel to rotate one-half to one revolution in the developer. Alternate the direction of rotation each minute.

3. Agitate in the same manner in the stop bath and once per minute in the fixing bath.

Note: Too little agitation during development will cause mottle and uneven development. Too much pumping of the reel in and out of the developer can produce streaks across the film at the reel spokes. Too much turning of the reel in the solution can cause longitudinal streaks on the film. The agitation procedure just described provides a compromise which minimizes these undesirable effects.

NEW DATA

If Indicated Exposure Time (seconds) Is	Use		And, in Either Case, Use This Development Adjustment
	Either This Lens Aperture Adjustment	Or This Adjusted Exposure Time (seconds)	
1/1000	None	No Adjustment	None
1/100	None	No Adjustment	None
1/10	½ stop more	1/5	15% less
1/2	1 stop more	1	25% less
1	1 stop more	3	30% less
5	1½ stops more	20	35% less
10	2 stops more	55	35% less
15	2 stops more	85	35% less
50	2½ stops more	370	40% less
100	2½ stops more	870	40% less

Rinse in KODAK Indicator Stop Bath or KODAK Stop Bath SB-5 at 65 to 75 F about 30 seconds with agitation. A running-water rinse can be used if an acid rinse bath is not available.

Fix 5 to 10 minutes at 65 to 75 F with KODAK Fixer or KODAK Fixing Bath F-5, or 2 to 4 minutes with KODAK Rapid Fixer. Agitate films frequently during fixing.

Wash 20 to 30 minutes in running water, preferably at 65 to 75 F. To minimize drying marks, treat in KODAK PHOTO-FLO Solution after washing, or wipe surfaces carefully with a KODAK Photo Chamois or a soft viscose sponge.

KODAK Hypo Clearing Agent can be used after fixing to reduce washing time and conserve water. First, remove excess hypo by rinsing the film in water for 30 seconds. Then bathe the film in the KODAK Hypo Clearing Agent solution for 1 to 2 minutes, with moderate agitation, and wash it for 5 minutes, using a water flow sufficient to give at least one complete change of water in 5 minutes.

Note: For best results, keep temperatures of rinse, fix, and wash close to the developer temperature.

Dry in a dust-free place.