

ACID HARDENING FIXING BATH

(Formula F-5)

	Avoirdupois	Metric
Water, about 125° F. (52° C.).....	40 ounces	1200.0 cc.
Sodium Thiosulphate (Hypo).....	16 ounces	480.0 grams
Sodium Sulphite, desiccated (E. K. Co.)....	1 ounce	30.0 grams
*Acetic Acid, 28% pure (E. K. Co.).....	3 fluid oz.	96.0 cc.
**Boric Acid, crystals.....	1/2 ounce	15.0 grams
Potassium Alum (E. K. Co.).....	1 ounce	30.0 grams
Water to make.....	64 ounces	2.0 liters

*To make 28% acetic acid from glacial acetic acid, dilute 3 parts of glacial acetic acid with 8 parts of water.

**Crystalline boric acid should be used as specified; the powdered variety is difficult to dissolve and its use should be avoided.

Dissolve the hypo in the warm water; then add the remaining chemicals in the order named, dissolving each completely before adding the next; finally, add cold water to the volume required.

EASTMAN KODAK COMPANY,
Rochester, N. Y.

K P 22904 10-38
Printed in United States of America

KODAK SUPER-XX PANCHROMATIC ROLL FILM

DIRECTIONS

Important: Load and unload your camera in subdued light, never in direct sunlight nor in exceptionally strong artificial light.

Kodak Super-XX Panchromatic Film is the fastest Kodak film ever supplied for roll film use. It has about four times the speed of Kodak Panatomic Film and more than twice the speed of Kodak Super Sensitive Panchromatic Film in sunlight and artificial light. It represents, therefore, the finest film available for all types of amateur photography under difficult lighting conditions.

Kodak Super-XX Panchromatic Film has great exposure latitude, freedom from halation, and a balanced sensitivity to light of all colors.

*FILTER FACTORS

Kodak Super-XX Panchromatic Film

Filter	Sunlight	Tungsten (Photoflood)
K1	1.5	1.5
Kodak Color Filter	1.5	1.5
K2	2.0	1.5
G	2.5	2.0
A	4.0	2.0
X1	5.0	—
X2	—	5.0

*Individual lighting conditions vary considerably and the filter factors will vary accordingly. The values given, however, will serve as a guide.

DAYLIGHT EXPOSURE TABLE

These exposures apply when the film is processed in the manner recommended.

Lens apertures at 1/100 second				
	Brilliant Subjects	Bright Subjects	Average Subjects	Shaded Subjects
Bright Sun	f/22	f/16	f/11	f/8
Hazy Sun	f/16	f/11	f/8	f/5.6
Cloudy-Bright	f/11	f/8	f/5.6	f/4
Cloudy-Dull	f/8	f/5.6	f/4	f/2.8

Brilliant Subjects: Beach, marine, and snow scenes; distant landscapes and mountains without prominent dark objects in the foreground.

Bright Subjects: Nearby people in marine, beach or snow scenes; scenics with foreground objects.

Average Subjects: Nearby people, gardens, houses and scenes *not in the shade*. Use this classification if in doubt.

Shaded Subjects: People, gardens, and other subjects in the *open shade* (lighted by open sky—not under trees, porch, roof, etc.).

PHOTOFLOOD EXPOSURE TABLE

Lens apertures at 1/25 second—Two No. 1 Photoflood Lamps in Kodak Handy Reflectors for average subjects in average room with light-colored walls.

Lamp Distance:	3½'	5'	6'	7'	8'	10'	12'	14'
Super-XX	f/11	8-11	8	6.3	5.6	4.5	4	3.5

For two No. 2 Photoflood Lamps, one-half of the above exposures will suffice; e.g., if f/4 at 1/25 is called for in the above table, either 1/50 at f/4 or 1/25 at f/5.6 will be correct if the No. 2 Lamps are employed.

DEVELOPMENT

CAUTION: This film is extremely sensitive to light of all colors, and must be handled and developed only in *total darkness*. A Series 3 (dark green) Wratten Safelight may be used for a few seconds after development has been in progress for 10 minutes provided it is kept at least 3 feet from the film and a 10-watt bulb is used in the safelight lamp.

For those who prefer to do their own film developing, the following formula is recommended:

ELON-HYDROQUINONE-BORAX DEVELOPER (Formula D-76)

	Avoirdupois	Metric
Water, about 125° F. (52° C.)	24 ounces	750.0 cc.
Elon	29 grains	2.0 grams
Sodium Sulphite, desiccated (E. K. Co.)	3 oz. 145 grains	100.0 grams
Hydroquinone	73 grains	5.0 grams
Borax, granular (E. K. Co.)	29 grains	2.0 grams
Cold water to make	32 ounces	1.0 liter

Dissolve chemicals in the order given.

Use without dilution, and develop about 16 minutes in a tray, or 20 minutes in a tank at 65° F. (18° C.).

The Kodak Adjustable Roll Film Tank is recommended as a simple method of obtaining the best results with this film. Tank development for the recommended time and at the indicated temperature gives results free from markings and safelight fog.

A faster working developer can be obtained by increasing the borax in the developer. Maximum activity can be obtained by substituting Kodak for borax and using 290 grains of Kodak per 32 ounces of developer (20 grams per liter). With this concentration the contrast of a negative developed in 5 minutes at 65° F. (18° C.) will approximate that obtained in 20 minutes in D-76.

The effective emulsion speed may be increased about 50 per cent by developing about 3 minutes in a tray at 65° F. (18° C.) (not higher) in Kodak Formula D-82.

The Eastman Film and Plate Developer or the Eastman Universal Developer may also be used. Follow directions printed on the tube labels.

NOTE: D-76 Developer, in prepared powder form, is supplied in packages for making 1 quart, ½ gallon, and 1 gallon of developer.

For minimum grain, the Eastman Ultra Fine Grain Developer is recommended. This is supplied in prepared powder form in packages to make 16 ounces and 32 ounces of developer. Dissolve the contents of the can and develop as directed on the label.

FIXING

After developing, rinse the film thoroughly in water;* then immerse it in the acid hardening fixing bath. This may be prepared conveniently, using Kodak Acid Fixing Powders dissolved in water, or a fixing solution made according to the formula (F-5) printed on the following page.

*During hot weather, a chrome alum hardener rinse (Formula SB-3) may be substituted for the plain water rinse as follows: Water, 32 ounces (1 liter); potassium chrome alum (E. K. Co.), 1 ounce (30 grams). Agitate films when first immersed in this bath and allow to remain two or three minutes before placing in the fixing bath.

Fix film in the F-5 bath for twice the time required to clear it of all milkiness; then wash for at least 30 minutes with an adequate supply of running water, wipe the surface carefully with a soft sponge or chamois, and hang up to dry. The fixing bath may be saved by pouring into a bottle. It should be discarded as soon as the time of clearing becomes excessive [more than 10 minutes at 55° F. (18° C.)].