

Kodak 'PLUS-X' PAN Sheet Film

This is a medium-speed panchromatic film of very fine grain and high acutance, permitting a considerable degree of enlargement. It is of moderate contrast with a long exposure scale and great exposure latitude. The colour sensitivity is evenly balanced throughout the visible spectrum and is free from exaggerated red-sensitivity. The uses of this material include: technical record and scientific photography; clinical photography; industrial and commercial work. New, improved retouching characteristics make it ideally suitable for portraiture.

METER SETTINGS	ASA	B.S.		DIN	Weston		Values for minimum practical exposure by daylight and tungsten light.
	125/5°	Arith. 125	Log. 32°	22	I, II 100	III 125	

Note: Speed figures for 'Plus-X' Pan Sheet Film have been revised; no changes have been made to the film.

HANDLING: Preferably handle in TOTAL DARKNESS. When the film is held with the notch at the right-hand end of the top edge, the emulsion side is towards the holder. If darkroom safelighting is required, use a safelamp fitted with a 'Kodak' Safelight Filter, 'Wratten' Series 3 (dark green) and a 25-watt bulb. Illumination must be indirect from a reflecting surface at least 7 feet from the bench top. Keep the film shaded, especially when dry. When development is half-complete, the film may be examined briefly by direct safelighting at a distance of not less than 4 feet. Use a safelamp fitted with the filter and bulb specified above.

DAYLIGHT EXPOSURES FOR AVERAGE SUBJECTS

Aperture for 1/100—1/125 sec	BRIGHT or HAZY SUN (Distinct shadows)	WEAK HAZY SUN (Soft shadows)	CLOUDY BRIGHT (No shadows)	CLOUDY DULL or OPEN SHADE
	f/16	f/11	f/8	f/5-6
Exposure value	15	14	13	12

For dark subjects (foliage, dark clothes, etc.) give 1 stop more exposure. Side- and back-lighting for nearby subjects, under bright or hazy sun, give 1-2 stops more exposure.

Within 2 hours after sunrise or before sunset give 1 stop more exposure. In winter, without snow, increase all exposures by 1 stop. Expose for winter snow scenes as in the table.

Combine factors as appropriate.

FILTER FACTORS

	No. 8 (K2) Cloud (Yellow)	No. 15 (G) Deep Yellow	No. 11 (XI) Green	25 Red	No. 47B	No. 58
Daylight	2	2½	4	8	8	6
Tungsten	1½	1½	4	5	14	6

GUIDE NUMBERS FOR AVERAGE SUBJECTS IN AVERAGE ROOMS (For distances in feet)

FLASHBULB used as sole light source

Speed and sync. diaphragm shutters Reflector diam.	PF 1		PF 5	PF 60	PF 100	Focal-plane shutters	
	No. 1	AG 1	No. 5	No. 22	(M Sync.)	PF 24	PF 45
Open flash	X	140	180	220	400	500	1/50—1/60 sec
Up to 1/30 sec							200
1/100—1/125	M	110	140	180	320	—	1/100—1/125 sec
1/200—1/250	M	90	110	140	250	—	100 140

TWO PHOTOFLOODS,
beams superimposed
Shutter 1/25—1/30 sec

No. 1*	No. 2*	500-W Refl. type
25	275-W Refl. type	50
* In suitable reflectors		

In large or dark interiors, outdoors at night and for dark subjects . . . increase exposure by at least 1 stop. In small or light interiors and for light subjects . . . decrease exposure by 1 stop.

With flash, modify exposure by means of aperture only.

PROCESSING: Follow the development recommendations in the table. 'Kodak' D-76 Developer gives fine grain; DK-50 Developer, medium grain and has a long tank life; DPC is a concentrated, liquid, general-purpose developer. 'Microdol-X' Developer will give the finest grain with a slight loss in film speed. Developers containing silver-halide solvents (thiocyanate, thiosulphate) may cause dichroic fog and should not be used.

Development times given will produce a contrast level suitable for printing in cold-cathode and other diffuse-light-source enlargers. If necessary, increase development time to produce higher contrast and decrease time to produce lower contrast. In known cases of under-exposure, particularly of low-contrast subjects, extended development may be given.

DEVELOPMENT TIMES IN MINUTES FOR MODERATE CONTRAST

'Kodak' Developer	15°	18°	20°C	21°	24°	15°	18°	20°C	21°	24°
	60°	64°	68°F	70°	75°	60°	64°	68°F	70°	75°
	Deep tank development					Dish development				
D-76 (undiluted)	11½	9½	8	7½	6	8½	7	6	5½	4½
DK-50 (diluted 1+1)	7½	6½	6	5½	5	5½	5	4½	4½	4
DPC (1+9)	—	—	—	—	—	9½	7	5½	4½	3½
'Microdol-X'	15	11½	10	8	7	11	9	8	7½	6
Agitation:—	Brief but vigorous every minute					Continuous				

Rinse in a stop bath prepared from 'Kodak' Liquid Stop Bath with Indicator or in running water for 30 seconds at 18-25°C (64-77°F).

Fix at 18-25°C (64-77°F), with frequent agitation, for double the clearing time, in 'Kodafix' Solution or 'Kodak' AM-33 Rapid Liquid Fixer with AM-33H Hardening Additive (rapid fixers) or in a solution prepared from Kodak 'Unifix' Powder or according to 'Kodak' Formula F-5.

Wash the film in running water for 20-30 minutes (or for 5 minutes in each of 6 changes of still water), preferably at 18-25°C (64-77°F).

'Kodak' Hypo Clearing Agent can be used after fixing to reduce washing times and conserve water. First remove excess fixer by rinsing the film in water for 30 seconds. Then bathe the film in the solution of 'Kodak' Hypo Clearing Agent 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.

Kodak 'Photo-Flo' Solution added to the final rinse will obviate the risk of drying marks and hasten drying. Dry in a dust-free atmosphere.

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