


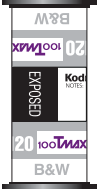


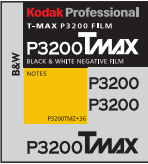

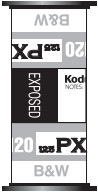
Processing KODAK PROFESSIONAL Black-And-White Films


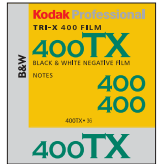
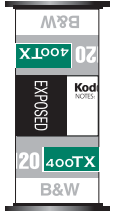


The following are starting-point recommendations for processing KODAK PROFESSIONAL Black-and-White Films with KODAK Chemicals. For best results, make tests to determine the best development time for your application.




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

Small Tank Film Processing (Intermittent Agitation for Tanks That Can Be Inverted)

ROLL FILMS									
KODAK PROFESSIONAL Film			Film Code	Development Time (Minutes)				Reference Publication	
				20°C (68°F)			24°C (75°F)		
				KODAK PROFESSIONAL XTOL Developer	KODAK PROFESSIONAL D-76 Developer	KODAK PROFESSIONAL HC-110 Developer (Dilution B)	KODAK PROFESSIONAL T-MAX Developer (1:4)		
T-MAX 100				100TMX	7 1/2	6 1/2	6	6 1/4	F-4016
T-MAX 400				400TMY	6 1/2	7 1/2	5 1/2	6 3/4	F-4043
T-MAX P3200	EI 400		—	P3200TMZ	9 1/2	10 1/2	7 1/2	6 1/2	F-4016
	EI 800				10 1/2	11 1/2	8 1/2	7 1/2	
	EI 1600				11 1/2	12 1/2	9 1/4	8	
	EI 3200				13 1/2	14	10 1/2	9 1/2	
	EI 6400				15 1/4	15 1/2	12	11	
	EI 12,500				17 1/4	—	—	12	
	EI 25,000				19	—	—	13 1/2	
PLUS-X 125				125PX	(135) 5 1/2 (120) 6	5 1/2	3 1/2	4 1/4	F-4018

ROLL FILMS								
KODAK PROFESSIONAL Film			Film Code	Development Time (Minutes)				Reference Publication
				20°C (68°F)			24°C (75°F)	
				KODAK PROFESSIONAL XTOL Developer	KODAK PROFESSIONAL D-76 Developer	KODAK PROFESSIONAL HC-110 Developer (Dilution B)	KODAK PROFESSIONAL T-MAX Developer (1:4)	
TRI-X 320	—		320TXP	7 ¾	9	4 ¾	5 ¼	F-4017
TRI-X 400			400TX	7	6 ¾	3 ¾	4 ¾	F-4017

Tray Processing

SHEET FILMS						
KODAK PROFESSIONAL Film	Film Code	Development Time (Minutes)				Reference Publication
		20°C (68°F)			24°C (75°F)	
		KODAK PROFESSIONAL XTOL Developer	KODAK PROFESSIONAL D-76 Developer	KODAK PROFESSIONAL HC-110 Developer (Dilution B)	KODAK PROFESSIONAL T-MAX RS Developer and Replenisher (1:4)	
T-MAX 100 	100TMX	6 ¾	5 ¾	5½	5 ¾	F-4016
T-MAX 400 	400TMY	6	6 ¾	5 ¼	4	F-4043
TRI-X 320 	320TXP	6 ¾	6	3 ¼	NR	F-4017

Final Steps in Processing Black-and-White Film

Step/Solution	Time (min:sec)	Temperature	Comments
Rinse/stop bath	0:30	18 to 24°C (65 to 75°F)	Agitate continuously. Rinse with a stop bath such as: • KODAK PROFESSIONAL Indicator Stop Bath (1:63) • KODAK PROFESSIONAL EKTA-FLO Stop Bath (1:31)
Fix	2:00 to 4:00* with a liquid-concentrate (L) fixer -OR- 5:00 to 10:00* with a powder (P) fixer		Agitate continuously for the first 30 seconds and at 30-second intervals after that with a hardening fixer such as: • KODAK PROFESSIONAL Rapid Fixer (liquid) • KODAFIX Solution (liquid) • KODAK PROFESSIONAL POLYMAX Fixer (liquid) • KODAK PROFESSIONAL Fixer (powder) Fix for twice as long as it takes the film to clear (lose its milky appearance). See instructions for the specific fixer. IMPORTANT: With KODAK PROFESSIONAL T-MAX Films, fixer will be exhausted more rapidly than with other films. If negatives show a magenta (pink) stain after fixing, fixer may be near exhaustion, or fixing time is too short. If the stain is pronounced and irregular, refix the film in fresh fixer.
Rinse	0:30		Rinse the film in the tank under running water.
Wash aid	1:00 to 2:00		Treat with KODAK PROFESSIONAL Hypo Clearing Agent. Agitate continuously for the first 30 seconds and then at 30-second intervals.
Wash	5:00		Run the wash water at least fast enough to provide a complete change of water in the container in 5 minutes. For rapid washing in a small tank, fill the tank to overflowing with fresh water and then dump it all out. Repeat this cycle 10 times.
Final rinse/wetting agent	0:30		To minimize drying marks, treat the film with KODAK PROFESSIONAL PHOTO-FLO Solution after washing. Provide gentle agitation for 5 seconds of the total time.
Dry	—		Hang the film to dry film in a dust-free place. You may wipe the surfaces carefully with a soft viscose sponge to remove excess liquid. Store dry negatives in sleeves or envelopes away from dust and extreme temperature and humidity.

* Times are approximate. Refer to the film or developer instructions.

Processing KODAK PROFESSIONAL Black-And-White Films

MORE INFORMATION

Kodak has many publications to assist you with information on Kodak products.

Complete information on KODAK PROFESSIONAL Black-and-White Films, Chemicals, and Papers is available on the Kodak website.

- E103BF *KODAK PROFESSIONAL Back-and-White Films*
- E103BP *KODAK PROFESSIONAL Black-and-White Papers*
- E103CF *Chemicals for KODAK PROFESSIONAL Black-and-White Films*
- E103CP *Chemicals for KODAK PROFESSIONAL Black-and-White Papers*
- F-2 *Pathways to Black and White*
- F-13 *KODAK PROFESSIONAL High-Speed Infrared Film*
- F-4016 *KODAK PROFESSIONAL T-MAX Films*
- F-4017 *KODAK PROFESSIONAL TRI-X Films*
- F-4018 *KODAK PROFESSIONAL PLUS-X 125 Film*

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

If you have questions about KODAK PROFESSIONAL Products, call Kodak.

In the U.S.A.:

1-800-242-2424, Ext. 19, Monday–Friday
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9 a.m.–7 p.m. (Eastern time)

In Canada:

1-800-465-6325, Monday–Friday

8 a.m.–5 p.m. (Eastern time)



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