

CHEMICALS FOR KODAK PROFESSIONAL BLACK-AND-WHITE FILMS

KODAK PROFESSIONAL Chemicals	KODAK PROFESSIONAL FILM							Typical Dilution (stock or concentrate: water)	Solution Temperature/ Time Range	Packaged Powder	Packaged Liquid Concentrate	Replenisher Available	For Use In	Keeping Properties Without Use		Useful Capacity		
	T-MAX 100 / 100TMX	T-MAX 400 / 400TMY	T-MAX P3200 / P3200TMZ	PLUS-X 125 / 125PX	TRI-X 400 / 400TX	TRI-X 320 / 320TXP	EASTMAN Fine Grain Positive 5302							Stock or Concentrate Solution in Closed Container (Full)	Working Solution in Tray/Tank	8 x 10 Sheets per Gal/L in a Tray	Tank	
														65 to 75°F (18 to 24°C) See instructions packaged with product	65 to 70°F (18 to 21°C) 30 seconds	65 to 70°F (18 to 21°C) 30 seconds	65 to 70°F (18 to 21°C) 30 seconds	65 to 70°F (18 to 21°C) 30 seconds
DEVELOPER																		
Developer D-76	✓	✓	✓	✓	✓	✓	✓	full strength 1:1	65 to 75°F (18 to 24°C) See instructions packaged with product	✓		✓	small or large tank, tray, rotary-tube, rack-and-tank	6 months NA	24 hours/1 month 24 hours/NR	16/4	16/4*	
T-MAX Developer	✓	✓	✓	✓	✓	✓		1:4			✓		small or large tank, rotary-tube	6 months	NR/1 month	8/2	8/2	
T-MAX RS Developer and Replenisher	✓	✓	✓	✓	✓	✓		stock (working strength)				✓	✓	small or large tank, tray, rotary-tube, rack-and-tank	Indefinite (conc) 6 months (working tank sol)	24 hours/1 month	NR	16/4*
XTOL Developer	✓	✓	✓	✓	✓	✓		full strength 1:1		✓		✓	small or large tank, tray, rotary-tube	6 months	24 hours/2 months	19/5	19/5	
HC-110 Developer Dilution A Dilution B	✓	✓	✓	✓	✓	✓		1:3 (A) 1:7 (B) from stock solution			✓	✓	small or large tank, tray, rotary-tube, rack-and-tank	6 months (stock)	24 hrs/1 month (A) 12 hrs/2weeks (B)	20/5 (A) 10/2.5 (B)	40/10 (A)* 20/5 (B)*	
Developer D-19								full strength		✓			large tank, tray	6 months	24 hours/1 month	45/12	60/16*	
DURAFLO RT Developer Replenisher	✓	✓	✓	✓	✓	✓		See instructions packaged with Part B	80 ±0.5°F (26.5 ±0.3C)		✓	✓	roller transport	6 weeks (replenisher tank with cover)	6 weeks for replenisher in tank	NA	NA	
STOP BATH																		
Indicator Stop Bath	✓	✓	✓	✓	✓	✓	✓	1:63	65 to 70°F (18 to 21C) 30 seconds		✓		small or large tank, tray, rotary-tube	Indefinite	3 days/1 month	discard when color changes to purplish/blue		
FIXERS																		
Rapid Fixer	✓	✓	✓	✓	✓	✓	✓	1:3 plus Part B (hardener)	65 to 70°F (18 to 21°C)		✓		tanks, tray, machine	Indefinite	1 week/1 month	120/32	120/32	
Fixer	✓	✓	✓	✓	✓	✓	✓	working strength see package	2 to 10 minutes depending on film and fixer combination	✓			small or large tank, tray, rotary-tube	2 months	1 week/1 month	100/26	100/26	
KODAFIX Solution	✓	✓	✓	✓	✓	✓	✓	1:3			✓		small or large tank, tray, rotary-tube	Indefinite	1 week/1 month	120/32	120/32	
WASHING AID																		
Hypo Clearing Agent	✓	✓	✓	✓	✓	✓	✓	1:4 from stock solution	65 to 70°F (18 to 21C) 1 to 2 minutes	✓			small or large tank, tray, rotary-tube, rack-and-tank	3 months	24 hours/1 month	50-60 (12-15) without prerinse; 150-200 (35-50) with pre-rinse		
DRYING AID																		
PHOTO-FLO Solution 200	✓	✓	✓	✓	✓	✓	✓	1:200	65 to 70°F (18 to 21C) 30 seconds		✓		small or large tank, tray, rack-and-tank	Indefinite	Indefinite†	—	—	

* Useful capacity can be increased by replenishment.

† Keeping properties will vary depending on conditions of use.

NA = Not applicable

NR = Not recommended

KODAK PROFESSIONAL Chemical	Description
DEVELOPERS	
Developer D-76†	<ul style="list-style-type: none"> For general use Yields full emulsion speed and good shadow detail with normal contrast Moderately fine grain, excellent development latitude Replenish with KODAK PROFESSIONAL Replenisher D-76R For normal or push processing
T-MAX Developer	<ul style="list-style-type: none"> Designed for non-replenished systems Produces enhanced shadow detail For use with roll films only For normal or push processing
T-MAX RS Developer and Replenisher*	<ul style="list-style-type: none"> Recommended for replenished systems Produces enhanced shadow detail For normal or push processing of roll and sheet films
XTOL Developer	<ul style="list-style-type: none"> Suitable for most professional black-and-white films Ascorbic acid developer Very high image quality at full emulsion speed Convenient, room-temperature mixing Stable performance through a range of temperatures, dilutions, and agitation methods Fine grain and high sharpness Provides more emulsion speed (shadow detail) than most developers for normal and push processing
HC-110 Developer	<ul style="list-style-type: none"> Extremely versatile Can be used in both replenished and nonreplenished systems Replenish with KODAK PROFESSIONAL HC-110 Developer Replenisher For normal or push processing

KODAK PROFESSIONAL Chemical	Description
Developer D-19	<ul style="list-style-type: none"> High capacity, clean working, fast acting Provides higher than normal contrast and speed, higher than average graininess
DURAFLO RT Developer Replenisher	<ul style="list-style-type: none"> Designed for roller-transport processors Replenished system Produces fine grain Long storage life Good sheet-film transport
STOP BATHS	
Indicator Stop Bath	<ul style="list-style-type: none"> Non-hardening, general-purpose stop bath for use with films and papers Contains an indicator to signal exhaustion Dilute 1 part concentrate with 63 parts water
FIXERS	
Rapid Fixer	<ul style="list-style-type: none"> A fast-acting hardening fixer For machine, tray, or tank processing Consists of two liquid concentrates: Solution A (the fixer concentrate) and Solution B (the hardener concentrate) For use with film and paper
Fixer	<ul style="list-style-type: none"> A general-purpose hardening fixer for films and papers Mixes to working strength
KODAFIX Solution	<ul style="list-style-type: none"> General-purpose, single-solution hardening fixer for films and papers Long life, high capacity Dilute 1 part concentrate to 3 parts water for use with film; 1 part concentrate to 7 parts water for use with paper

KODAK PROFESSIONAL Chemical	Description
WASHING AID	
Hypo Clearing Agent	<ul style="list-style-type: none"> Promotes removal of fixer from films and fiber-base papers to shorten wash times and make washing at lower wash-water temperatures practical Dilute 1 part stock solution to 4 parts water
DRYING AID	
PHOTO-FLO 200 Solution	<ul style="list-style-type: none"> Decreases water-surface tension Minimizes water marks and streaks on film Promotes faster, more uniform drying
DIRECT POSITIVE OUTFIT	
T-MAX 100 Direct Positive Film Developing Outfit	<ul style="list-style-type: none"> Produces positive black-and-white slides from KODAK PROFESSIONAL T-MAX 100 Film For use in small or large tanks and rotarytube processors

* Use the mixed solution as a working tank solution or a replenisher.
† For greater sharpness, you can use this developer diluted 1:1. Using the diluted developer requires longer development times, which may result in a slight increase in graininess.

Note: To obtain consistent results from Kodak powdered chemicals, mix the full volume marked on the package. Kodak supplies powdered photographic chemicals in a variety of sizes that make it easy to choose the volume you need. Therefore, we do not recommend mixing smaller-than-package-size amounts of powdered KODAK Processing Chemicals.

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