

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		
		KODAK PROFESSIONAL Film CONTINUOUS-TONE—	T-MAX 100 / 100TMAX	T-MAX 400 / 400TMY	T-MAX P3200 / P3200TMZ	PLUS-X 125 / 125PX	TRI-X 400 / 400TX	TRI-X 320 / 320TXP							SPECIAL PURPOSE— 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
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	24 hours/1 month	16/4	16/4*			
T-MAX Developer	✓	✓	✓	✓	✓	✓	✓	1:4		●	●	small or large tank, rotary-tube	6 months	NR/1 month	NR	16/4			
T-MAX RS Developer and Replenisher	✓	✓	✓	✓	✓	✓	✓	stock (working strength)		●	●	small or large tank, tray, rotary-tube, rack-and-tank	Indefinite (concentrate) 6 months (working strength solution)	24 hours/1 month	16/4	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 hours/1 month (A) 12 hours/2 weeks (B)	20/5 (A) 10/2.5 (B)	40/10 (A)* 20/5 (B)*			
MICRODOL-X Developer	✓	✓	✓	✓	✓	✓	✓	full strength 1:3		●	●	small or large tank, tray	6 months NR	24 hours/1 month NR	16/4 8/2	16/4* 8/2			
Developer DK-50						✓	✓	full strength 1:1		●	●	small or large tank, tray	6 months	24 hours/1 month 12 hours/2 weeks	20/5 10/2	40/10* 20/5			
TECHNIDOL Liquid Developer								working strength		●	●	small tank, tray	Indefinite	1 week in full closed container	12 4 x 5 sheets/qt	16 135-36 roll 8 120 roll			
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 ±0.3°C)	●	●	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 21°C) 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)	●	●	tank, tray, machine	Indefinite	1week/1month	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	1week/1month	100/26	100/26			
KODAFIX Solution	✓	✓	✓	✓	✓	✓	✓	1:3		●	●	small or large tank, tray, rotary-tube	Indefinite	1week/1month	120/32	120/32			
Washing Aid																			
Hypo Clearing Agent	✓	✓	✓	✓	✓	✓	✓	1:4 from stock solution	65 to 70°F (18 to 21°C) 1 to 2 minutes	●	●	small or large tank, tray, rotary-tube, rack-and-tank	3 months	24 hour/1 month	50–60 (12–15) without pre-rinse 150–200 (35–50) with pre-rinse				
Drying Aid																			
PHOTO-FLO Solutions (200, 600)	✓	✓	✓	✓	✓	✓	✓	1:200 1:600	65 to 70°F (18 to 21°C) 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

MORE INFORMATION

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 non-replenished systems Replenish with KODAK PROFESSIONAL HC-110 Developer Replenisher For normal or push processing
MICRODOL-X Developer‡§	<ul style="list-style-type: none"> Produces fine grain and a high degree of sharpness; maximum enlargement Produces a slightly brownish image tone For most roll and sheet films
Developer DK-50§	<ul style="list-style-type: none"> Moderately fast developer that can be used straight or diluted 1 part concentrate to 1 part water Provides normal contrast, average to slightly higher than average graininess

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 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 rotary-tube 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.

‡ For greater sharpness, you can use this developer diluted 1:3. Using the diluted developer requires longer development times which results in increases in graininess and film speed.

§ Replenisher has been discontinued.

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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