

CHEMICALS FOR KODAK PROFESSIONAL BLACK-AND-WHITE FILMS

KODAK PROFESSIONAL Film

KODAK PROFESSIONAL Chemicals	KODAK PROFESSIONAL Film	CONTINUOUS-TONE—	T-MAX 100 / 100TMAX	T-MAX 400 / 400TMY	T-MAX P3200 / P3200TMZ	PLUS-X 125 / 125FX	Technical Pan / TP	TRI-X 400 / 400TX	TRI-X 320 / 320TXP	HIGH CONTRAST—	Contrast Process Orfino	SPECIAL PURPOSE—	EASTMAN Fine Grain Positive 5302	High-Speed Infrared	Rapid Process Copy	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	
																						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	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*	
															1:1					NA	24 hours/NR	8/2	8/2		
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			●	small or large tank, tray, rotary tube	6 months	24 hours/2 months	19/5	19/5		
															1:1										
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)	20/5 (A)	40/10 (A)*		
															from stock solution					—	12 hours/2 weeks (B)	10/2.5 (B)	20/5 (B)*		
MICRODOL-X Developer			✓	✓		✓	✓	✓	✓						full strength			●	small or large tank, tray	6 months	24 hours/1 month	16/4	16/4*		
															1:3					NR	NR	8/2	8/2		
Developer DK-50								✓	✓					✓	full strength		●	small or large tank, tray	6 months	24 hours/1 month	20/5	40/10*			
														✓	1:1				12 hours/2 weeks	10/2	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			
EKTAFO Stop Bath			✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	1:31		●								
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		
POLYMAX T or 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
TECHNIDOL Liquid Developer	<ul style="list-style-type: none"> Produces exceptionally fine grain For use with KODAK PROFESSIONAL Technical Pan Film Yields a high degree of sharpness, and images with enhanced edge effect
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
EKTAFLO Stop Bath	<ul style="list-style-type: none"> A liquid concentrate with built-in color indicator to signal exhaustion Dilute 1 part concentrate with 31 parts water Also for use with paper
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
POLYMAX T Fixer or 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 and KODAK PROFESSIONAL Technical Pan 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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