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TREBLA a CPAC Company

Trepan 2000 B&W Paper Developer

for Black & White Paper Process

Product Description

Trepan 2000 B&W Paper Developer is Trebla's black and white print chemistry. It is packaged as a concentrate and diluted with water to make a working tank solution. Mix instructions are located on the box and individual bottles. This developer is formulated for variable contrast paper for processing in small tanks, large tanks and trays. It also produces bright whites and deep, sharp blacks.

Trepan Rapid Fixer for B&W Paper stops the development action, fixes the paper by removing the unexposed silver halide from the paper emulsion. It is packaged as a concentrate and diluted with water to make a working tank solution. Mix instructions are located on the box and individual bottles.

Agitation

Proper agitation produces consistent and uniform results. Agitation affects the rate of development/density in the paper. Change the direction of the solution flow when agitating the paper in the tray or tank. This will produce uniform density throughout the paper. We suggest the following types of applications:

Tray Processing

- Start the timer.
- Gently slide the sheet of paper into the developer. Immerse the paper completely and as quickly as possible.
- Alternate raising and lowering the right and left corners of the tray to agitate the developer solution. Use intermittent agitation throughout the development and fix process. Wash prints with continuous flow of fresh water.
- If processing more than one sheet of paper, slip the sheets in the solution face down, one at a time into the tray. Pull the bottom sheet and place it on top of the remaining sheets in the tray. Continue rotating the sheets from bottom to top until the processing step is completed.
- If you are processing a large number of prints, it may be better to reduce the exposure slightly and increase the development time to maintain consistent prints.

Mix Instructions

The developer and fixer concentrates are diluted with the proper amount of water to create a "one shot" working tank solution. The tank solution is discarded after its initial use. This helps to maintain consistent processing results in developing and fixing the paper.

Product	To Make	Concentrate	Water
Trepan 2000 PaperDevelbper	1 Liter	200 ml	800 ml
Trepan Rapid Fixer	1 Liter	200 ml	800 ml

Always start with the correct amount of water. Add the concentrate(s) to the water and mix until uniform, about 3 - 4 minutes. Wear safety goggles, gloves and apron when mixing chemistry.

Process Description- Developer

The developer converts the exposed silver halide crystal (latent image) to metallic silver (visible image). The quantity of silver formed is dependent upon the exposure that the paper receives and the activity of the developer.

The amount of exposure is controlled by the printing time and intensity of the light source (f-stop). The developer activity is controlled by time in developer, temperature of the developer, the amount of agitation created in the processing tray and the strength of the developer working tank solution.

The chart below provides starting points for black and white paper processing. The density of a print is affected by the time, temperature and agitation of the developer. Density in the print increases if the developer time or temperature is increased, or if excessive agitation is created in the tank/tray.

Conversely, to create less density, shorten the developer time, lower the temperature, or decrease the agitation.

Every 500 ml of Black and White Developer for Paper working tank solution will process 14 sheets of 8 x 10 paper.

Process Description- Fixer

The fixer stops the development of the print and fixes the paper by removing the unexposed silver halide from the paper emulsion. The capacity of the fixer is limited by the amount of silver in the fixer bath. A silver concentration of 4 to 6 g/L in the fixer is safe for all commercial use with resin-coated papers.

Do not use Trepan Rapid Fixer for B&W Paper with a hardener, as it will reduce washing efficiency of the paper. Excessive fixing time can result in loss of print quality due to image etching.

Every 500 ml of Black and White Fixer for Paper will process 14 sheets of 8 x 10 paper. These guidelines will help to ensure maximum stability for long-term storage of the print.

Process Description- Wash

The wash removes the fixer from the print. Wash the print vigorously in fresh running water for 30 to 120 seconds. Prolonged immersion in water can cause edge penetration and print curl with resin-coated papers. Avoid wet time longer than 15 minutes.

TREPAN 2000 B&W Paper Process

Process Step	Time	Temperature
Developer	20 - 80 seconds	20°C/68°F
Fixer	30 - 60 seconds	18° - 24°C 64° - 75°F
Wash Water	120 seconds	18° - 24°C 64° - 75°F

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TREBLA a CPAC Company

Trepan 1200T Film Developer

for Black & White Film Process

Product Description

Trepan 1200T Film Developer is a general purpose black and white developer. It can be used to process all types of black and white films in small tanks, large tanks and trays. Each bottle contains enough concentrate to make 5 liters of working tank solution. Each liter of working tank solution will process 25 rolls of film.

Trepan Rapid Fixer with Hardener stops development action, fixes the film and hardens the emulsion to resist scratching when printing. Each bottle contains enough concentrate to make 5 liters of working tank solution. Each liter of working tank solution will process 25 rolls of film.

Agitation

Proper agitation produces consistent and uniform results. Agitation affects the rate of development/density in the film. Changing the direction of the solution flow when agitating the film in the tray or tank will produce uniform density throughout the film.

Tank Processing

- Fill the tank containing film with Trepan 1200T Developer solution.
- Start the timer.
- Firmly tap the bottom of the tank for 5 seconds to dislodge any air bubbles from the film emulsion.
- For an invertible processing tank, rotate the tank upside down and upright 5 times within 5 seconds for initial agitation.
- If your tank has a handle for rotating the reel, turn the handle back and forth at the rate of one cycle per second.
- After the initial agitation, allow the tank to sit for the remainder of the first 30 seconds.
- After the initial 30 seconds, agitate the tank for 5 seconds, every 30 seconds during the suggested development time.

Tray Processing

- Start the timer.
- Slide the sheet of film into the developer. Immerse the film as quickly as possible.
- Alternate raising and lowering the right and left corners of the tray to agitate the developer. Agitate throughout the development time.

Mixing Instructions

The developer and fixer concentrates are diluted with the proper amount of water to create a “one shot” working tank solution. The tank solution is discarded after it’s initial use. This helps to maintain consistent processing results in developing and fixing the film.

The bottle labeled *Trepan Rapid Fixer Hardener* is used only with the Trepan Rapid Fixer.

Product	To Make	Concentrate	Water
Trepan 1200T Film Developer	1 Liter	200 ml	800 ml
Trepan Rapid Fix w/Hardener	1 Liter	200 ml Conc. 25 ml Hardener	775 ml

Always start with the correct amount of water. Add the concentrate(s) to the water and mix until uniform, about 3 - 4 minutes. Wear safety goggles, gloves and apron when mixing chemistry.

Development Times

The following charts are starting points for development times. If your film is too low in contrast, increase the development time by 10 to 15%. If your film has too much contrast, decrease the devlopment time by 10 to 15%. Ensure the developer working tank solution is maintained at the recommended temperature.

TREPAN 1200T FILM DEVELOPER - Roll Film
Development Time in Minutes

	Small Tank					Large Tank				
Black & White Roll Film	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)
T-MAX 100 Professional	10 1/2	9	8	7	6	11 1/2	10	9	8	6 1/2
T-MAX 200 Professional	9	8	7	6 1/2	5 1/2	10	9	8	7 1/2	6 1/2
Verichrome Pan	8	7	5 1/2	5	4 1/2	9	8	7	6	5
Plus-X Pan PX	6 1/2	5 1/2	5	4 1/2	3 3/4	7 1/2	6 1/2	6	5 1/2	4 1/2
Plus-X Pan Professional PXP	6 1/2	5 1/2	5	4 1/2	3 3/4	7 1/2	6 1/2	6	5 1/2	4 1/2
Tri-X Pan	9	8	7 1/2	6 1/2	5 1/2	10	9	8	7	6
Tri-X Pan Professional	9	8	7 1/2	7	6	10	9	8 1/2	8	7
High Speed Infrared	9 1/2	8 1/2	7 1/2	7	6	10	9	8	7 1/2	6 1/2

TREPAN 1200T FILM DEVELOPER - Sheet Film
Development Time in Minutes

	Small Tank					Large Tank				
Black & White Sheet Film	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)	65°F (18°C)	68°F (20°C)	70°F (21°C)	72°F (22°C)	75°F (24°C)
T-MAX 100 Professional	9 1/2	7	6 1/2	5 1/2	5	11 1/2	9 1/2	8 1/2	7 1/2	7
T-MAX 400 Professional	9 1/2	7	6 1/2	6	5 1/2	11	10	9	8	7
Plus-X Pan Professional PXP	7	6	5 1/2	5	4 1/2	9	8	7 1/2	7	6
Tri-X Pan Professional	6	5 1/2	5	5	4 1/2	7 1/2	7	6 1/2	6	5 1/2
Ektapan	9	8	7	6 1/2	5 1/2	11	10	9	8 1/2	7 1/2
High Speed Infrared	11	9 1/2	8 1/2	7 1/2	6 1/2	10	9	8	7 1/2	6 1/2

Developement Times (cont'd.)

TREPAN 1200T FILM DEVELOPER
Rotary-Tube Processing
Development Time in Minutes

Black & White Roll Film	Film Exposure	65°F (18°C)	68°F (20°C)	70°F (21C°)	72°F (22°C)	75°F (24°C)
T-MAX 100 Professional	100/200	/	6 1/2	6	5 1/2	5
	400	/	9	8 1/2	8	7
	800	NR	NR	NR	NR	NR
T-MAX 400 Professional	400	/	6 1/2	6 1/2	6	5 1/2
	800	/	7	6 1/2	6	5 1/2
	1600	/	9	8 1/2	8	7
	3200	NR	NR	NR	NR	NR
T-MAX P3200 Professional	400	/	8	7 1/2	7 1/4	6 1/2
	800	/	8 1/2	8	7 3/4	7
	1600	/	9	8 1/2	8	7 1/2
	3200	/	11 1/2	11	10 1/2	9 1/2
	6400	/	13 1/2	13	12	11
Tri-X Pan	400/800	7 1/2	7	6	5	4
	1600	/	/	9	8	7
	3200	/	/	11	10	9 1/2
Tri-X Pan	320	/	7 1/2	7	6 1/2	5 1/2
Plus-X Pan-PX	125	5 1/2	5	4	3 1/2	3
Tri-X Pan Professional PXP	125	7	6	5	4 1/2	4 1/2

TREPAN 1200T FILM DEVELOPER
Push Processing
Development Time in Minutes

	Normal Processing				2-Stop Push Processing		
Black & White Roll Film	68°F (20°C)		75°F (24°C)		68°F (18°C)		75°F (24°C)
T-MAX 100 Professional	9		6		11		7 1/2
T-MAX 400 Professional	8		5 1/2		10 1/2		7
Tri-X Pan	8		5 1/2		13		10

If the film is exposed at a speed of 1 stop faster, process under normal processing parameters.