

PHOTOGRAPHERS' FORMULARY

FORMULARY WARM TONE PAPER DEVELOPER 106

Directions for mixing and using FORMULARY WARM TONE PAPER DEVELOPER 106: kit sizes, 1/2 liter (Catalog number 02-0050); 1 liter; (Catalog number 02-0060); and 2 liters (Catalog number 02-0061)

DEVELOPER 106, equivalent to Edwal 106, is a glycin-hydroquinone based developer that produces brown tones. FORMULARY DEVELOPER 106 is a specialty, not a general-purpose developer. A popular use for DEVELOPER 106 is the reproduction of old photos. A negative of the old photo is made using modern materials then printed on Ektalure paper using DEVELOPER 106. Such a reproduction often has tones that match the original photo.

The print results using DEVELOPER 106 depend both on the printing paper and the dilution used to make the working solution. Only the slower chlorobromide papers, such as Opal or Ektalure, are suitable. When a cold toned paper, such as Kodabromide, Ilforbrom, or Brovira, no warming of the print will be noticeable. When a chlorobromide paper is used, the print color will range from a warm black to an engraving brown depending upon the dilution of the stock solution.

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the chemical warnings on each package of chemical.

None of the chemicals used in mixing DEVELOPER 106 need special attention. However, IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISKS, PLEASE RETURN THE CHEMICALS FOR A FULL REFUND.

Please consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area.

MIXING THE STOCK SOLUTION

You will need one brown bottle of a 1/2-liter (1 liter or 2 liters) size for mixing and storage of the stock solution.

Kit Size

Chemical	1/2 liter	1 liter	2 liter
Distilled water (at 52°C/125°F)	375 ml	750 ml	1500 ml
Sodium sulfite	42.5 g	85g	170g
Sodium carbonate, monohydrate	85 g	170 g	340 g
Glycin	14 g	28 g	56 g
Hydroquinone	4.5 g	9 g	18 g
Potassium bromide	2 g	4 g	8 g
Distilled water to make	500 ml	1000 ml	2000 ml

Place the warm water in the container and add the solid sodium sulfite in one portion. Stir (or cap and shake the container) until the sulfite has dissolved. Be sure the entire solid has gone into solution before proceeding.

Add the sodium carbonate, and again mix the solution to dissolve the solid. As before, be sure the entire solid has gone into solution before adding the next chemical. The glycin is added next. After the glycin has dissolved, then add the hydroquinone. Hydroquinone often dissolves slowly so be sure all of it is in solution before adding the potassium bromide. The speed at which potassium bromide dissolves depends on its crystal size; the large crystals dissolve slower. If you wish, the solution can stand at this point until the potassium bromide dissolves. Finally add 125 ml (or 250 or 500 ml) of water. The temperature of this final portion of water is not important but be sure to shake (or stir) the mixture to obtain a homogenous stock solution.

LIFE OF THE SOLUTION

In a closed bottle, DEVELOPER 106 should last more than six weeks. Unlike other developers, the color of solution cannot be used to determine its activity. The development of a test strip is the only sure method to determine if the solution is still active.

USING THE DEVELOPER

FORMULARY DEVELOPER 106 is usually diluted 1:7 with water to make the working solution (125 ml of stock solution, 875 ml of water to make the working solution). Development times are 2-3 minutes at 20°C/68°F.

Greater dilution produces warmer tones. DEVELOPER 106 can be diluted 1:15 (60 ml of stock solution, 900 ml of, water to make 960 ml of working solution). With higher dilution, print exposure will have to be increased and longer development times (5-8 minutes) will be required at 20°C/68°F.