

## TECHNICAL INFORMATION

# KENTMERE MONOBATH FILM DEVELOPER

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SINGLE STEP DEVELOPER & FIXER SOLUTION FOR BLACK AND WHITE FILM PROCESSING

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**Overview**

KENTMERE MONOBATH FILM DEVELOPER is a high-quality, affordable, single step film developer that incorporates a fixer too. Using a monobath developer greatly simplifies the traditional three step Develop/Stop/Fix process.

KENTMERE MONOBATH FILM DEVELOPER is already pre-diluted and is therefore used 'as-is' and can be reused up to the maximum capacity of at least 16, 135-36exp rolls.

Although performance of the monobath developer can be adjusted somewhat by changing the temperature and the agitation method. Best results are obtained by choosing a film stock well suited to Monobath processing and a room temperature processing regime. We have deliberately narrowed the recommended films and processing methods to enable the simplest method and best results.

**Handling instructions**

Note Photographic chemicals are not hazardous when used correctly. It is recommended that gloves, eye protection and an apron or overall are worn when handling and mixing all chemicals. Always follow the specific health and safety recommendations on the chemical packaging.

Photochemical material safety data sheets containing full details for the safe handling, disposal and transportation of Kentmere and Ilford chemicals are available from Ilford agents or directly from the ILFORD Photo web site at: [www.ilmordphoto.com](http://www.ilmordphoto.com)

**RECOMMENDED FILMS**

KENTMERE PAN 100 / 200 / 400  
ILFORD PANF / FP4 / HP5 / SFX200

Other films can be developed using the Monobath, however longer process times are needed for e.g. Delta Professional films, due to the higher fixing load. Using the recommended films and processing methods will give the best results.

# Kentmere Monobath Film Developer

## PROCESSING

There are various ways to adjust the processing method (temperature and agitation) and thereby the speed and contrast of the processed negatives, however best results are obtained using the method in this document. The simplicity of a monobath system is its chief advantage, therefore we have tried to keep processing variations to a minimum.

### Manual processing – Spiral Tanks

The following agitation is recommended for spiral tank processing with Kentmere Monobath chemicals; Invert the tank four times during the first 10 seconds then invert twice for each subsequent minute of development. At the end of the processing sequence, tap the tank firmly on the work bench to dislodge any air bubbles.

Drain off the monobath and return to the stock solution for re-use. Wash and dry the film as normal using a rinse aid if desired.

## DEVELOPMENT TIMES

The table of development times shown below gives an appropriate starting point for Kentmere film developer being developed in spiral tanks with intermittent agitation.

The development times are for films rated at box speed and they should produce negatives of normal contrast. However, they are only a guide and may need to be adjusted to suit individual processing systems, working practices and preferences.

For recommended films the development time is fixed at 6 min 15sec

Changing the temperature +/- 2°C will give a speed change of approximately +/- 1/3 stop.  
+/- 3°C ½ stop, and a +/-6°C change approx. 1 stop.

## RECOMMENDED FILMS

KENTMERE 100 / 200 / 400

ILFORD PANF / FP4 / HP5 / SFX200

Film	Processing Time (MM:SS)	Temperature °C/°F		
		<b>19/65</b>	<b>21/70</b>	<b>23/75</b>
<b>Kentmere PAN 100</b>	6:15	80	<b>100</b>	125
<b>Kentmere PAN 200</b>	6:15	160	<b>200</b>	250
<b>Kentmere PAN 400</b>	6:15	320	<b>400</b>	500
<b>ILFORD PANF+</b>	6:15	40	<b>50</b>	64
<b>ILFORD FP4+</b>	6:15	100	<b>125</b>	160
<b>ILFORD HP5+</b>	6:15	320	<b>400</b>	500
<b>ILFORD SFX200</b>	6:15	80	<b>200</b>	250

- Agitation: Gentle agitation, initial 4 turns (10 sec) then 2 turns or 5sec per minute.
- A total of at least 16 films can be processed from a single bottle.
- **Do not over agitate** – Over agitation will increase the fixing rate and reduce the apparent film speed.

## REUSING DEVELOPER

Return the used developer to the stock bottle and reuse up to the stated capacity.

When reusing add 15 sec for each film processed.

<b>First Film (MM:SS)</b>	<b>Second Film (MM:SS)</b>	<b>Third Film (MM:SS)</b>	<b>Subsequent films</b>	<b>Max 16<sup>th</sup> Film (MM:SS)</b>
6:15	6:30	6:45	+15 Seconds	10:00

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## WORKING SOLUTION LIFE

Tightly stoppered used stock solution can be kept for 2 months.

## Wash

Wash the films in running water for 5–10 minutes at a temperature within 5°C (9°F) of the process temperature. Or see note below for greater economy when using spiral tanks.

**Note:** For spiral tank use, the following method of washing is recommended. This method of washing is faster, uses less water yet still gives negatives suitable for long term storage.

After fixing, fill the spiral tank with water at the same temperature,  $\pm 5^{\circ}\text{C}$  (9°F), as the processing solutions and invert it five times. Drain the water away and refill. Invert the tank ten times. Once more drain the water away and refill. Finally, invert the tank twenty times and drain the water away.

## Rinse

For best results a final rinse of ILFORD ILFOTOL wetting agent can be added to water, it helps the film to dry rapidly and evenly.

## Drying

To avoid drying marks, use a clean squeegee or chamois cloth to wipe the film before hanging it to dry. Dry at 30–40°C/86–104°F in a drying cabinet or at room temperature in a clean dust-free area.

## STORAGE

Always store chemicals in their original containers and away from unsupervised children and pets. In cool, dry conditions, 4–20°C (44–68°F) Kentmere developer concentrate should keep in good condition for:

12 months unopened from new.

2 months used stock in tightly capped bottle

## AVAILABILITY AND CAPACITY

Kentmere monobath developer is available in 1 litre bottles ready to use. No dilution required.

<b>Film Type</b>	<b>Approx Capacity</b>
135 – 36exp	16 Rolls
135 – 24exp	23 Rolls
120 Roll Film	16 Rolls

A wide range of technical information is available which describes and gives guidance on using ILFORD and KENTMERE PHOTO products. Some products in this data sheet might not be available in your country.

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