

## PRODUCT INFORMATION

### Optofix Rapid B&W Fixer




Optofix Rapid is a highly concentrated, non hardening fixer for Black & White films and photo papers. Universal use in trays, small processing tanks and machines.

**Optofix Rapid 2 x 5 L conc. for 2 x 25 L REF 13850**

A ready-to-use fixer working solution is prepared by mixing Optofix Rapid concentrate with water. The standard dilution is 1+4. For manual fixation of RC/PE paper and baryta paper in trays, the concentrate can alternatively be diluted 1+9.

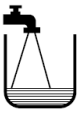


Always start with water first, then add the concentrate. Warm water (> 20 °C) favours a quick and good mixing. Mixing time is approx. 1 minute.

#### MIXING WITH STANDARD DILUTION: 1+4

Water > 20 °C	Optofix Rapid conc.	Working solution
	+ 	= 
<b>800 ml</b>	<b>200 ml</b>	<b>1 L</b>
4 L	1 L	5 L
8 L	2 L	10 L
20 L	5 L	25 L

For fixing in machines working solution and replenisher are identical.

#### MIXING WITH ALTERNATIVE DILUTION: 1+9

Water > 20 °C	Optofix Rapid conc.	Working solution
	+ 	= 
<b>900 ml</b>	<b>100 ml</b>	<b>1 L</b>
4,5 L	500 ml	5 L
9 L	1 L	10 L

Fixing of RC/PE - and Baryta Papers in trays by applying prolonged fixing times.

## PROCESSING PARAMETERS

The times for fixation of films and papers are different - they mainly depend on emulsion type, silver content, dilution of fixer, temperature, agitation and degree of bath utilisation.

High speed films and emulsions with T-Grain technology require significantly longer fixing times than low speed films and traditional emulsions.

Baryta papers (with higher silver content) require longer times than resin-coated RC/PE papers. Low temperatures slow down the fixation process, while higher temperatures accelerate. When fixing manually, it is essential to regularly agitate the developing tank resp. to move the paper in the tray.

## FIXING IN MACHINES

	DILUTION	TIME	TEMPERATURE	REPLENISHMENT
FILMS	1 + 4	3-5 min	20-26°	900 ml/m <sup>2</sup>
RC/PE PAPER	1 + 4	20 s	40°C	250 ml/m <sup>2</sup>
RC/PE PAPER	1 + 4	30 s	30°C	250 ml/m <sup>2</sup>
RC/PE PAPER	1 + 4	60 s	20°C	250 ml/m <sup>2</sup>
BARYTA PAPER	1 + 4	60 s	20-26 °C	500 ml/m <sup>2</sup>

## FIXING IN TRAYS

	DILUTION	TIME	CAPACITY
RC/PE PAPER	1 + 4	30 s	ca. 4 m <sup>2</sup>
RC/PE PAPER	1 + 9	60 s	ca. 2 m <sup>2</sup>
BARYTA PAPER	1 + 4	60 s	ca. 2 m <sup>2</sup>
BARYTA PAPER	1 + 9	120 s	ca. 1 m <sup>2</sup>

RC: resin coated  
PE: polyethylene  
Temperature: ca. 20 –22 C°

## FIXING IN TANKS

	DILUTION	TIME	CAPACITY
TRADITIONAL FILMS	1 + 4	3-5 min	24 x 135-36
T-GRAIN FILMS	1 + 4	4-6 min	24 x 135-36

Capacity: per litre working solution  
Temperature: ca. 20 –22 C°

**Traditional films:** Agfa APX, Ilford PAN F, FP4, HP5, etc.

**T-Grain Emulsions:** Ilford Delta, Kodak T-Max, etc.

## CONTROL

A simple and quick check of silver content and pH value can be carried out using test strips, e.g. from Macherey Nagel. Optofix Rapid working solutions have a pH value of approx. 5-6. The silver content increases with increasing utilisation of the fixer working solution. The following contents of silver should not be exceeded with manual fixing in Optofix Rapid 1+4:

Films: 6 g/litre      RC/PE paper: 4 g/litre      Baryta Paper: 2 g/litre

The fixing time for films can be determined individually by checking the clearing time. Clearing time is the time required from the moment a film is immersed in a fixer until the milky cloudiness disappears. The fixing time is twice the clearing time.

If the clearing time for a film in a used fixer working solution has doubled compared to the initial clearing time in a fresh fixer, then the bath is exhausted and should be replaced. In the interest of a high level of processing reliability, it is recommended to replace the fixer working solution before double the time is reached.

## OCCUPATIONAL SAFETY

Handling of photographic chemicals is safe, if used properly and protective measures are followed. Hazard and precautionary information can be found on the label (H and P phrases, hazard symbol) and in the safety data sheet. Personal protective equipment should include safety goggles or face shield, protective gloves and a lab coat or apron. Additional information on occupational safety is to be found in the material safety data sheet.

## STORAGE

Optofix Rapid concentrate should be stored in a dry, frost-free place out of reach of children. The maximum temperature range is between 5°C and 25 °C. Ideal storage temperatures are between 10°C and 20°C.

Crystallisation may occur at low temperatures, while prolonged exposure to high temperatures causes premature oxidation with the precipitation of sulphur. Oxidised fixer solutions are cloudy, usually with a yellow precipitate of sulphur accompanied by a characteristic smell for rotten eggs. Such solutions must no longer be used and should be disposed of.

## SHELF LIFE

Optoprint Rapid concentrate in unopened, originally sealed bottles and canisters has a shelf life of approx. 2 years.

## DISPOSAL

Photographic chemicals - concentrates or used baths - must not be discharged into the public sewer system. These chemicals must be discarded by commercial waste treatment companies, who properly treat and dispose of in accordance with legal regulations. Further information can be found in the safety data sheet.