

1. Introduction

This information contains specifications describing processing of Black and White Negative and Positive Films in continuous machines with solid chemical kits.

Kit chemicals make it easier to prepare the processing solutions. Mixing is simpler. The mixing time is lower. You produce most constant quality and reduce faults and your production costs. Calbe Chemie GmbH guarantee that the kits are meeting our required Quality Control

Specifications.

2. Chemicals and general information for the handling

2.1 Assortment

Negative-Process

Ref. Number	Product	Mixing size for (l)	Con-tents (l)	Description	Weight per unit (kg)
19710	A 17 R B/W Developer Replenisher	1 x 100	A: 0,4 kg B 8,58 kg	for replenisher, powder, 2 parts	9,4
19715	A 17 B/W Developer	1 x 100	A: 0,3 kg B 8,18 kg	for tank solution (working solution), powder, 2 parts	8,5
19730	A 600 Fixer and Replenisher	1 x 100	16.45 kg	fixer, tank solution and replenisher, powder, 1 part	16,8

Positive-Prozess

Ref. Number	Product	Mixing size for (l)	Con-tents (l)	Description	Weight per unit (kg)
19720	A 27 R B/W Developer Replenisher	1 x 100	A: 1,17 kg B 9,55 kg	for replenisher, powder, 2 parts	11,2
19725	A 27 B/W Developer	1 x 100	A: 0,35 kg B 6,58 kg	for tank solution (working solution), powder, 2 parts	7,3
19730	A 600 Fixer and Replenisher	1 x 100	16.45 kg	fixer, tank solution and replenisher, powder, 1 part	16,8

2.2 General safe handling

All photographic processing solution can exert harmful effects when brought into contact with human tissue to a greater or lesser extent depending on the nature of the solution and its concentration. All user of such solution should exercise the greatest care to avoid the chemicals contacting the skin, eyes or other parts of body.

Always wear solution resistant gloves and effective eye protection. In case of accidental contact with processing solutions wash the affected part with plenty of clean cold running water. Consult a medical doctor. Some photographic solutions produce irritating vapours therefore thorough ventilation is essential. Do not inhale air processing solution.

Always read the hazard information on the packs of solution concentrate or the safety data sheets (SDS) before attempting to handle the solution.

2.3 Storage of chemicals and ready to use solutions

Store the chemicals in cool, dry conditions in well sealed containers.

Protect the kits from heat, direct sunlight and frost.

Store ready to use solution at normal room temperature of 21 to 24°C. Storage temperature higher than 24°C will decrease the storage life of the solutions. Storage below 16°C can cause some solution constituents to precipitate.

For the storage life of the solution see the following table.

Ready to use solution	Open tank	Floating cover
Developer	1 week	2 weeks
Fixer	4 weeks	8 weeks

3. Processing Specification

3.1 Negative

Process step	Temperature °C	Time min	Replenishment per 30,5 m of 35 mm Film	Recirculation (R); Agitation (A) Filtration (F)
Developer	21,0 ± 1,0	4 ... 8 *)	1200 ml	R, A, F
Wash **)	20 ... 24	3		
Fixer	20 ... 24	at least 7	900 ml	R
Wash	20 ... 24	at last 8		

*) Will vary with film sort and conditions of processing machines

**) or Stop bath

3.2 Positiv

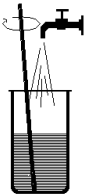
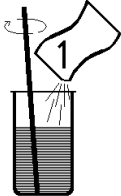
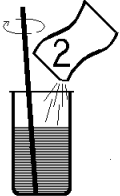
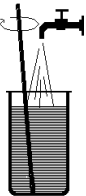
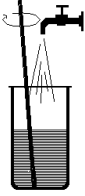
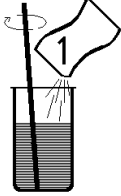
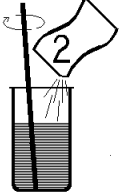
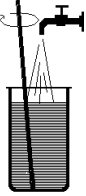
Process step	Temperature °C	Time min	Replenishment per 30,5 m of 35 mm Film	Recirculation (R); Agitation (A) Filtration (F)
Developer	21,0 ± 1,0	4 ... 8 *)	650 ml	U, F & T
Wash **)	20 ... 24	3		
Fixer	20 ... 24	at least 6	600 ml	U
Wash	20 ... 24	at least 8		

*) Will vary with film sort and conditions of processing machines

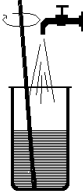
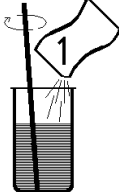
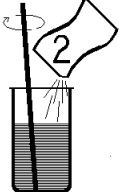
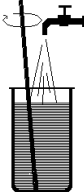
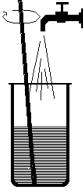
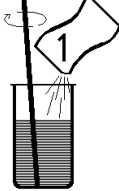
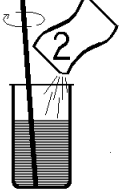
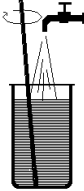
**) or Stop bath

3.3 Mix instructions

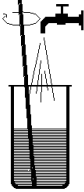
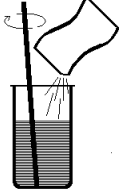
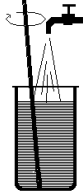
3.3.1 Negative Developers

Bath	Water	A 17 Part 1	A 17 Part 2	Water to make
<u>Tank Solution</u> (<u>Working</u> <u>Solution</u>)	 90 l Temperature 20-30 °C	 mixing time: 10 min	 mixing time: 10 min	 100 l mixing time: 5 min
	Water	A 17 R Teil 1	A 17 R Teil 2	Water to make
<u>Replenisher</u>	 90 l Temperature 20-30 °C	 mixing time: 10 min	 mixing time: 10 min	 100 l mixing time: 5 min

3.3.2 Positive developer

Bath	Water	A 27 Part 1	A 27 Part 2	Water to make
<u>Tank Solution</u> <u>(Working Solution)</u>	 90 l Temperature 20-30 °C	 mixing time: 10 min	 mixing time: 10 min	 100 l mixing time: 5 min
	Water	A 27 R Teil 1	A 27 R Teil 2	Water to make
<u>Replenisher</u>	 90 l Temperature 20-30 °C	 mixing time: 10 min	 mixing time: 10 min	 100 l mixing time: 5 min

3.3.3 Fixer

Bath	Water	A 600	Water to make
<u>Tank Solution</u> <u>(Working Solution) =</u> <u>Replenisher</u>	 85 l Temperature 20-30 °C	 mixing time: 10 min	 100 l mixing time: 5 min