

## PARVOFIN TABS

### PARVOFIN TABS

10 tablets Part A and Part B Art. No. 105500

For a maximum of 3 litres black and white negative developer. Capacity: max. 20 films 135-36

PARVOFIN TABS is a fine-grain compensation developer in tablet form for all black and white negative films: for classic emulsions as well as for modern T-grain films. PARVOFIN TABS go back to a legendary powdered Parvofin formula, which was already launched by Tetenal in the 1950s – the relaunch of the brand is based on the adaptation of the formula to the film emulsions available today, taking into account current legal requirements for the chemical ingredients of photochemicals. Parvofin contains no boron compounds.

The PARVOFIN TABS formula stands for a natural, wide-ranging tonal reproduction with an optimal balance of sharpness and fine grain. The factory film speed is fully exploited.

The extraordinarily long shelf life of the PARVOFIN TABS of at least 4 years allows a particularly high economic efficiency, especially if only sporadic work is carried out over longer periods of time. A very special advantage of the PARVOFIN TABS is the temperature-independent storage in a very wide range from - 40°C to + 40°C ambient temperature.

### Mixing

The approach is done by dissolving PARVOFIN TABS in hot water. Ideal is hot water of about 50 - 60 °C – higher temperatures are possible, but lower temperatures slow down the dissolution of the tablets.

The portioning "**per 1 tablet A and B for 150 ml**" as a **normal dilution** allows a particularly simple and at the same time very variable handling: Depending on the filling quantity of the development tank used, the required number of tablets is dissolved in water, in example: 2 x A and 2 x B for 300 ml or 3 x A and 3 x B for 450 ml and so on.

Optionally, you can work with an **economy dilution**. Then the portioning is "**1 tablet each A and B for 300 ml**". Likewise, a multiple of 300 ml can be applied in steps of 300 ml each: i.e. each 2 x A and 2 x B for 600 ml, 3 x A and 3 x B for 900 ml and so on.

**Whether the normal dilution or the economy dilution is applied is an individual decision of the user – both options allow an equally high quality development.** The economical dilution requires longer development times, but it also stands for lower costs.

Recommended for the mixing is the use of a sufficiently large mixing vessel made of plastic as well as a mixing rod. Pour hot water into the mixing vessel until the requested volume is reached and wait briefly until the air bubbles have disappeared. Then carefully add the tablets A and B - simultaneously or one after the other. Wait a few minutes until a first dissolving is recognizable, then crush the tablets with the mixing rod more and more and stir the developer solution until the tablets are completely dissolved.

After cooling to 20°C respectively to the desired temperature, the developer is immediately ready to use.

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## Temperature

The development of B&W films in development tanks usually takes place at room temperature of approx. 20 °C. In principle, it is possible to work with lower temperatures and longer times, and vice versa, with higher temperatures and shorter times. Approximately, the following factors can be used for a shortening or for an extension.

### Shortening and lengthening factors for different temperatures

18°C	x 1,2	22°C	x 0,85	26°C	x 0,6
20°C	x 1,0	24°C	x 0,75		

Higher temperatures than 24°C can have an unfavourable effect on the graininess. However, if for special reasons, e.g. design, a coarse graininess is desired, it can also be developed at higher temperatures than 26 °C.

## Agitation

Development in tanks requires regular agitation. The development tank has to be tilted alternately by 180°. The tank is turned upside down and then immediately returned to the starting position. During the first 30 seconds of the development time, the tank has to be constantly tilted and then once every 30 seconds.

## Time

The tables indicate different development times for different beta values. The beta value is a measure of the steepness of the gradation.

Beta 0,55	lower gradation
<b>Beta 0,65</b>	<b>normal gradation</b>
Beta 0,70	higher gradationm

**The bolded development times for a mean beta of 0.65 are to be regarded and to be used as standard.** The development times for other Tetenal developers were also determined sensitometrical for this beta value. Individual reasons may require a flatter or a steeper gradation: cases: beta 0.55 or beta 0.70.

Examples: If the motif contrast, i.e. if the metering ratio from the darkest to the lightest area is significantly lower than the standard value of 1:30, then development to a steeper gradation is recommended. This is almost always the case in cloudy weather with cloudy skies. Conversely, particularly high motif contrasts can be better managed with a flatter negative gradation than with the standard beta of 0.65.

The development times given in the tables are rounded, sensitometrical determined values. The development time ends after the developer has been poured out.

If development is done in rotation, e.g. with a Jobo processor, the development times in the tables can be reduced by approx. 15 %.

All times are guide values that can be individually adjusted upwards or downwards depending on the emulsion, developing conditions and desired gradation.

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## Capacity

A maximum of 2 films 135-36 per 300 ml can be developed in the economy dilution, the normal dilution allows the development of max. 4 films 135-36 in 300 ml. Even though it would be possible to use the working solution several times - by applying extension factors – for quality reasons we recommend using it only once. Possible savings would be out of proportion to the much higher costs for the film material, not to mention the ideal value of the developed films.

Used Parvofin working solution should be disposed of after each run. The consistent one-time application ("1-shot") enables the greatest consistency and highest processing reliability from development to development.

## Storage and shelf life

PARVOFIN TABS have a shelf life of 4 years and longer. Storage in the original packaging in a dry place can take place in a wide temperature range from - 40 °C to + 40 °C, thus almost regardless of the ambient temperature. Storage temperatures of 5 - 25°C are ideal. Freshly prepared PARVOFIN TABS working solution that is not used immediately after the mixing should be stored in full bottles. The shelf life is approx. 6 months. If a protective gas - such as Tetenal Protectan Art. No. 105193 - is used, partially filled bottles can alternatively be used for storing freshly mixed PARVOFIN TABS developer. The shelf life is then also approx. 6 months.

## 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 (PPE) should include safety goggles or face shield, protective gloves and a lab coat or apron.

## Disposal

Photochemicals - concentrates or working solutions - must be disposed of in compliance with all local and national regulations.

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### Development times • Entwicklungszeiten • Temps de développement • Czesy wywoływania

	Normal dilution Normale Verdünnung Dilution normale Normalne rozcieńczenie			Economy dilution Sparverdünnung Dilution économique Rozcieńczenia ekonomicznego		
	Beta 0,55 Min.	Beta 0,65 Min.	Beta 0,70 Min.	Beta 0,55 Min.	Beta 0,65 Min.	Beta 0,70 Min.
Agfa APX 100	4:30	<b>5:15</b>	6:00	7:00	<b>8:30</b>	9:30
Agfa APX 400	7:30	<b>9:15</b>	10:15	10:00	<b>12:00</b>	13:30
Adox Silvermax 100	4:45	<b>6:15</b>	7:15	8:30	<b>10:30</b>	12:00
Adox CHS 100 II	5:15	<b>7:00</b>	8:00	7:00	<b>10:15</b>	12:15
Bergger Panchro 400	9:15	<b>11:30</b>	13:15	12:45	<b>14:45</b>	15:45
CFP Double-X 200	5:15	<b>6:45</b>	7:45	8:15	<b>10:15</b>	11:30
Fomapan 100 Classic	4:15	<b>5:30</b>	6:00	7:00	<b>8:30</b>	9:30
Fuji Neopan Acros 100 II	4:30	<b>5:15</b>	5:45	7:15	<b>8:45</b>	10:00
Ilford Delta 100 Prof.	3:30	<b>4:15</b>	5:00	6:00	<b>7:30</b>	8:30
Ilford Delta 400 Prof.	6:15	<b>8:00</b>	9:00	9:30	<b>12:00</b>	13:15
Ilford Delta 3200 Prof.	7:15	<b>8:45</b>	9:45	11:45	<b>14:15</b>	15:45
Ilford Pan F Plus	3:15	<b>4:00</b>	4:30	5:00	<b>6:15</b>	7:00
Ilford FP4 Plus	4:30	<b>5:30</b>	6:15	6:15	<b>7:30</b>	8:15
Ilford HP5 Plus	6:00	<b>7:30</b>	8:15	8:15	<b>10:30</b>	12:00
Ilford SFX 200	4:30	<b>5:00</b>	5:45	7:15	<b>9:00</b>	10:00
JCH Street Pan 400	4:30	<b>5:15</b>	6:15	7:00	<b>8:45</b>	9:30
Kentmere Pan 100	4:30	<b>5:15</b>	6:00	7:00	<b>8:30</b>	9:30
Kentmere Pan 400	7:30	<b>9:15</b>	10:15	10:00	<b>12:00</b>	13:30
Kodak T-Max 100	6:00	<b>6:45</b>	7:15	8:30	<b>9:45</b>	10:15
Kodak T-Max 400	6:30	<b>7:30</b>	8:00	9:30	<b>11:00</b>	12:00
Kodak T-Max 3200	9:00	<b>10:30</b>	11:00	13:00	<b>14:30</b>	15:15
Kodak Tri-X 400	6:30	<b>8:00</b>	9:00	9:30	<b>11:45</b>	13:00
Rollei Blackbird 64	4:15	<b>5:00</b>	5:30	6:00	<b>7:30</b>	9:00
Rollei RPX 100	4:30	<b>5:15</b>	6:00	7:00	<b>8:30</b>	9:30
Rollei RPX 400	7:30	<b>9:15</b>	10:15	10:00	<b>12:00</b>	13:30
Rollei Superpan 200	4:15	<b>5:00</b>	5:30	5:45	<b>7:15</b>	8:15
Rollei Retro 400 S	4:00	<b>4:45</b>	5:15	5:30	<b>7:15</b>	08:00