

DATA SHEET



Speed **P**hotography
+
Ultrahigh **R**esolution

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SPUR Push-Master

Push-Additive for SPUR SLD

Due to its relatively soft mode of action and despite its very high speed utilisation, there are various soft emulsions which are not suitable for being pushed with SPUR SLD. To achieve very high push speeds when using SLD even with those films, we have conceived and brought on the market the new **SPUR Push-Master**.

Its application is very simple: **SPUR Push-Master** is always added to the working solution at a dilution of 1 + 7. Here is an example: to achieve a speed of ISO 800/30° with Ilford HP5+, a developer dilution of 1 + 17 and the application of **SPUR Push-Master** are prescribed. So when preparing 500 ml working solution, the prescription is as follows: 28 ml developer concentrate + 62.5 ml Push-Master + 410 ml water = 500 ml working solution.

As you can see from the following push developing chart for SPUR SLD, **SPUR Push-Master** is only required with certain emulsions and speeds, and involving its own specific inversion tact. If the Push-Master is not required, there is a different inversion tact each time depending on the emulsion and the speed achievable. In the push developing chart, this is indicated by colour markings as follows:

Red: With Push-Master 1+7, inversion tact: continuous the first 30 sec, then one minute stand development, continuous the next minute, then another minute stand development, then continuous the next minute again, etc.

Black: Without Push-Master, inversion tact: continuous the first 30 sec, then 2 inversions per minute.

Blue: Without Push-Master, inversion tact: continuous the first 30 sec, then 2 inversions every 30 sec.

The developing parameters indicated in the push developing chart refer to a developing temperature of 24° C (filling temperature). It is not necessary to uphold that temperature throughout the development process; it is sufficient to develop at normal room temperature.

As compared to the speeds indicated in the normal developing chart, the ISO speeds indicated in the push developing chart are push speeds subject to the following definition: skin tones (Zone VI according to the Zone System) must have an equivalent density as in an N development for box speed, i.e. a density of just under $D=1$ (at least 0.9). This complies with the definition of Karl Neumeier: <http://www.fotografie-in-schwarz-weiss.de/sw-fotografie/wissen/86-pushentwickler.html>.

The new **SPUR Push-Master** for SPUR SLD does not contain any developer substances and therefore is stable for a more or less unlimited period.

Films not listed in the SLD Push Developing Chart are not suitable for pushing with SPUR SLD. More parameters for the listed films will be added later.



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Push Developing Chart SPUR SLD

Developing temperature (filling temperature): 24° C

Manufacturer/Film	Film Speed ISO	Dilution	Developing Time (min)	Contrast
ADOX CHS 100 II	400/27°	1 + 7	15,5	Normal (N)
ADOX Silvermax	200/24°	1 + 9	13	Slightly increased (N + 0,5)
Agfaphoto APX 100 New	400/27°	1 + 7	14	Slightly increased (N + 0,5)
Agfaphoto APX 400 New	800/30°	1 + 7	12	Normal (N)
Bergger BRF 400 plus	800/30°	1 + 7	12	Normal (N)
Fomapan 100	250/25°	1 + 9	13	Normal (N)
Fuji Acros 100	200/24°	1 + 20	10	Moderately high (N + 1)
	400/27°	1 + 17	13	Moderately high (N + 1)
Fuji Neopan 400	800/30°	1 + 11	12	Normal (N)
Ilford Delta 100	320/26°	1 + 14	15	Moderately high (N + 1)
Ilford Delta 400	800/30°	1 + 12	15	Slightly increased (N + 0,5)
Ilford Delta 400	2000/34°	1 + 9	12	Moderately high (N + 1)
Ilford Delta 3200	1600/33°	1 + 7	15	Normal (N)
Ilford Pan F +	80/20°	1 + 14	14	Moderately high (N + 1)
Ilford FP4 +	400/27°	1 + 14	14	Moderately high (N + 1)
Ilford HP5 +	800/30°	1 + 17	13	Slightly increased (N + 0,5)
	1600/33°	1 + 7	14	Slightly increased (N + 0,5)
Ilford SFX 200	320/26°	1 + 9	17	Normal (N)
Kentmere 100	400/27°	1 + 7	14	Slightly increased (N + 0,5)
Kentmere 400	800/30°	1 + 7	12	Normal (N)
Kodak Tmax 100	250/25°	1 + 12	15,5	Normal (N)
Kodak Tmax 100	400/27°	1 + 9	17,5	Normal (N)
Kodak Tmax 400	800/30°	1 + 9	15	Moderately high (N + 1)
Kodak Tmax 400	1600/33°	1 + 7	15	Slightly increased (N + 1)
Kodak Tri X 400	800/30°	1 + 11	13	Normal (N)
Kodak Tri X 400	1250/32°	1 + 9	13	Slightly increased (N + 0,5)
Rollei RPX 25	100/21°	1 + 14	9	Moderately high (N + 1)
	200/24°	1 + 12	13	High (N + 1,5)
Rollei RPX 100	400/24°	1 + 14	11	Moderately high (N + 1)
Rollei RPX 400	800/30°	1 + 10	14	Normal (N)
Rollei Superpan 200	400/27°	1 + 14	12,5	Moderately high (N + 1)
Rollei Retro 80 S	100/21°	1 + 14	9	Moderately high (N + 1)
	200/24°	1 + 12	13	High (N + 1,5)
Rollei Retro 400 S	400/27°	1 + 14	12,5	Moderately high (N + 1)
Rollei IR 400 S	400/27°	1 + 14	12,5	Moderately high (N + 1)

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