DATA SHEET

SPUR

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The revolution in fine grain photography: SPUR Omega X

SPUR Omega X is a new revolutionary finest-grained sharpness developer that sets new standards in every respect. Compared to our previous fine grain process SPUR HRX, we have been able to significantly improve the following parameters:

1) Despite the immense increase in fine grain, **sharpness** was greatly improved in almost all emulsions. This is due to the high detail contrast achieved with a fine grain developer, which was previously considered impossible.

2) The density graph could be improved for most emulsions, resulting in wonderful tonal values.

3) The **real revolution**, however, lies in the **absolute increase in fine grain**, which achieves a homogeneity of surfaces of the same density (e.g. imaging the sky) that was previously considered impossible for a sharpness developer, without compromising edge sharpness and detail contrast (see point 1).The quality of normal black and white films is therefore raised to a previously unattainable level with this developer.

4.) It is also very interesting that the quality improvement achieved with **SPUR Omega X is much more significant with the cheaper conventional emulsions than with the expensive T-crystal emulsions.** This results in a leveling of quality, which means that with some cheaper films you can achieve a quality that was previously only possible with T-crystal films.

5) A **further sensation** is that **with SPUR Omega X** it is possible **to push by one f-stop** while retaining the tonal values completely and the other quality characteristics such as low graininess and high sharpness very well. More details on page 3 of the data sheet.

IMPORTANT: **SPUR Omega X**, like SPUR HRX, has been designed as a 2-component developer, therefore there are two different parts, namely **SPUR Omega X Part A** and **SPUR Omega X Part B.** Both parts are mixed in equal parts to form the working solution, as is the case with SPUR HRX and SPUR SD 2525.

For processing information, please refer to the attached development chart. The parameters given are valid for inversion development of KB and roll films in the developing tank, all other methods (tray or rotation development) must be tested by the user.

Shelf life:

SPUR Omega X Part A has a shelf life of at least 2 years in unopened original bottles. This requires relatively cool storage (but not in the refrigerator). **SPUR Omega X Part A** is supplied in a gas-tight PET bottle. **SPUR Omega X Part B**, on the other hand, has an almost unlimited shelf life and therefore is delivered in a HDPE bottle.

Prepared working solutions are not very durable and should be used within the next hours after preparation!

Developing Chart SPUR Omega X

The values indicated in the chart refer to a developing temperature of 20° C for negatives with a normal contrast N or a contrast N + 1 with the Ferrania P 30. Agitate by tank inversion. At the beginning, immediately after filling, agitate twice, then use the inversion tact specified in the development table! If using a condenser developing time should be reduced by 10 to 15 %. At exposure you must comply with the ISO figures as indicated in this developing chart, and **NOT** with the requirements of film manufacturers.

The dilution indicated in the developing chart is the overall dilution for Parts A and B. E. g., 260 ml of working solution at an overall dilution 1 + 12: 260 divided by 13 = 20 ml of developing concentrate, i. e. 10 ml Part A + 10 ml Part B per 260 ml of working solution.

In all tests, the developer was prepared with distilled/deionized water, all tests were carried out with 35 mm material. Roll films may use other emulsions (e.g. Kentmere 100), which may require a separate test.

Manufacturer/Film	Film Speed ISO	Overall Dilution	Developing Time (min)	Inversion Tact
ADOX CHS 100 II	80/20°	1 + 13	13,5	2x je min; twice each min
ADOX Silvermax	80/20°	1 + 15	13,5	1x je min; once each min
ADOX HR 50 Speed Boost	50/18°	1 + 18	12	1x je min; once each min
Agfaphoto APX 100 New	100/21°	1 + 18	12	1x je min; once each min
Agfaphoto APX 400 New	400/27°	1 + 10	15	2x je min; twice each min
Ferrania P 30	25/15°	1 + 18	12	1x je min; once each min
Ferrania P 33	160/23°	1 + 15	15	1x je min; once each min
Fomapan 100	80/20°	1 + 18	12,5	1x je min; once each min
Fomapan 200	160/23°	1 + 15	13	1x je min; once each min
Fomapan 400	320/26°	1 + 10	15	2x je min; twice each min
FOTOIMPEX CHM 100	100/21°	1 + 18	12	1x je min; once each min
FOTOIMPEX CHM 400	400/27°	1 + 10	15	2x je min; twice each min
Fuji Acros 100 II	100/21°	1 + 17	13	1x je min; once each min
Ilford Pan F +	40/17°	1 + 20	12	1x je min; once each min
Ilford FP4 +	125/22°	1 + 19	13	1x je min; once each min
Ilford HP5 +	400/27°	1 + 14	15	1x je min; once each min
Ilford Delta 100	100/21°	1 + 20	12	1x je min; once each min
Ilford Delta 400	400/27°	1 + 13	15	1x je min; once each min
Ilford Ortho Plus	125/22°	1 + 16	13	1x je min; once each min
Kentmere 100	100/21°	1 + 18	12	1x je min; once each min
Kentmere 400	400/27°	1 + 10	15	2x je min; twice each min
Kodak Tmax 100	100/21°	1 + 15	14	1x je min; once each min
Kodak Tmax 400	400/27°	1 + 16	14,5	1x je min; once each min
Kodak Tri X	400/27°	1 + 12	15	1x je min; once each min
Kodak Double X	400/27°	1 + 12	14,5	1x je min; once each min
Orwo UN 54	100/21°	1 + 16	13.5	1x je min; once each min
Orwo NP 100	100/21°	1 + 13	14	1x je min; once each min
Rollei RPX 25	25/15°	1 + 20	11	1x je min; once each min
Rollei RPX 100	100/21°	1 + 14	10.5	1x je min; once each min
Rollei RPX 400	400/27°	1 + 10	15	2x je min; twice each min
Rollei Retro 80 S	40/17°	1 + 18	10,5	1x je min; once each min
Rollei Superpan 200	80/20°	1 + 10	10.5	1x je min; once each min
Rollei Infrared	80/20°	1 + 10	10.5	1x je min; once each min
Rollei Ortho 25 Plus	125/22°	1 + 15	13	1x je min; once each min

Pushing with SPUR Omega X

With SPUR Omega X, it is possible to push by one f-stop while retaining the tonal values completely and the other quality characteristics such as low graininess and high sharpness very well. With a few exceptions (e.g. Ferrania P 30, which has too steep highlights even with normal development), the density graph corresponds to that at nominal speed with the exception of shadow details, which are naturally somewhat reduced with most emulsions. Good shadow detail can be found with some emulsions such as Ferrania P 33, Fomapan 100, Ilford FP4+ and Ilford Delta 400. Satisfactory shadow detail can still be found with Ilford Delta 100, Ilford Ortho Plus, ADOX CHS 100 II and Agfaphoto APX 100 (Kentmere 100).

The Fomapan 400 is difficult to push, with a sensitivity gain of only one DIN (one third f-stop), while the Fomapan 200 and Fomapan 100 have a full f-stop gain. Pushing is carried out at a higher developer filling temperature, normally 25° C, and for most emulsions the other development parameters such as dilution and development time are maintained. Deviations from this are listed in the push table.

Important: All temperature specifications in the push table represent the filling temperature of the working solution. It is not necessary to keep this temperature constant (e.g. in a warm water bath) during development; on the contrary, it would falsify the results. It is only necessary to ensure that development takes place in a room with a normal room temperature of approx. 20° to 21° C.

If development takes place in summer at higher room temperatures, the development time must be reduced accordingly. It should be noted that the higher the room temperature and the higher the filling temperature, the longer the development time needs to be reduced.

Pushing Table

Manufacturer/Film	Film Speed ISO	Dilution Overall	Developing temp. Fill in	Developing Time (min)	Inversion Tact
ADOX CHS 100 II	160/23°	1 + 13	25° C	13,5	2x je min; twice each min
ADOX Silvermax	160/23°	1 + 15	25° C	13,5	1x je min; once each min
ADOX HR 50 Speed Boost	100/21°	1 + 18	25° C	12	1x je min; once each min
Agfaphoto APX 100	200/24°	1 + 18	25° C	12	1x je min; once each min
Agfaphoto APX 400	800/30°	1 + 10	25° C	15	2x je min; twice each min
Ferrania P 30	50/18°	1 + 18	25° C	12	1x je min; once each min
Ferrania P 33	320/26°	1 + 15	25° C	15	1x je min; once each min
Fomapan 100	160/23°	1 + 18	25° C	12	1x je min; once each min
Fomapan 200	320/26°	1 + 15	25° C	13	1x je min; once each min
Fomapan 400	400/27°	1 + 10	25° C	15	2x je min; twice each min
FOTOIMPEX CHM 100	200/24°	1 + 18	25° C	12	1x je min; once each min
FOTOIMPEX CHM 400	800/30°	1 + 10	25° C	15	2x je min; twice each min
Fuji Acros 100 II	200/24°	1 + 16	26° C	14	2x je min; once each min
Ilford Pan F +	80/20°	1 + 20	25° C	13	1x je min; once each min
Ilford FP4 +	250/25°	1 + 19	25° C	13	1x je min; once each min
Ilford HP5 +	800/30°	1 + 14	25° C	15	1x je min; once each min
Ilford Delta 100	200/24°	1 + 20	25° C	12,5	1x je min; once each min
Ilford Delta 400	800/30°	1 + 13	25° C	15	1x je min; once each min
Ilford Ortho Plus	250/25°	1 + 16	25° C	14	1x je min; once each min
Kentmere 100	200/24°	1 + 18	25° C	12	1x je min; once each min
Kentmere 400	800/30°	1 + 10	25° C	15	2x je min; twice each min
Kodak Tmax 100	160/23°	1 + 15	24° C	13	1x je min; once each min
Kodak Tmax 400	800/30°	1 + 16	25° C	14,5	1x je min; once each min
Kodak Tri X	800/30°	1 + 12	25° C	15	1x je min; once each min
Kodak Double X	800/30°	1 + 12	25° C	14,5	1x je min; once each min
Lomography Potsdam 100	160/23°	1 + 16	25° C	13	1x je min; once each min
Orwo UN 54	160/23°	1 + 16	25° C	13.5	1x je min; once each min
Orwo NP 100	200/24°	1 + 13	25° C	14	1x je min; once each min
Rollei RPX 25	50/18°	1 + 20	25° C	11	1x je min; once each min
Rollei RPX 100	200/24°	1 + 14	25° C	10.5	1x je min; once each min
Rollei RPX 400	800/30°	1 + 10	25° C	15	2x je min; twice each min
Rollei Retro 80 S	80/20°	1 + 18	25° C	10,5	1x je min; once each min
Rollei Superpan 200	160/23°	1 + 10	25° C	10.5	1x je min; once each min
Rollei Infrared	160/23°	1 + 10	25° C	10.5	1x je min; once each min
Rollei Ortho 25 Plus	250/25°	1 + 15	25° C	13	1x je min; once each min