

Print Dry Down

What is Dry Down

Dry down is the phenomenon responsible for many fibre prints being confined to the wastebasket. The wet print looks bright and glows, but the following morning the highlights in the dried print are dull and the image lacks the contrast and bite of the previous evening. This is the demon dry down at work. Drydown has a significant effect on fibre papers and because all papers dry differently it is advisable to carry out the following simple test on each paper you use to determine the correct factor.

How to calculate the dry down factor

Select a negative with a good range of tones and make a straight print with no burning and dodging which, when wet, shows the tonality you wish to see in the final dried print. Make sure that the highlights are bright but showing detail. Make a second identical print and using a soft pencil, identify by numbering them 1 and 2 and also record the exposure time on the back. Calculate 8,9,10,11, and 12% of the original base exposure and make 5 prints using each base exposure time MINUS the calculated percentages. For example to calculate 10% dry down, if the original base exposure with no dry down taken into account is 20 seconds, 10% of 20 seconds is 2 seconds therefore the adjusted exposure will be 18 seconds. Be sure to record the adjusted exposure and percentage on the back of all 5 prints. Develop, fix and wash the prints as normal and dry all but the print marked number 1, which should be left in a holding tray of fresh water. I use a microwave in the kitchen to speed up the drying process.

Assessing the results

Compare the dried prints with the print left in the holding tray. Comparison of the wet number 1 with the dry number 2 will illustrate the full extent of the dry down. The dry down factor for the paper tested is the percentage shown on the back of the dried print that matches the wet print number 1 left in the holding tray. Thereafter when using this paper apply the dry down factor ONLY when making the exposure for the final print, all decisions relating to exposure, burning and dodging are made using the wet test strips as a reference.

A few tips

It is not necessary to make large prints for this test for the dry down factor does not change with paper size, I cut a 10 x 8 sheet of paper into 4 and make small prints. In the 25 years that I've been making prints I have found that the dry down factor is likely to fall between 8 and 12%. I test all papers I use every 12 months as paper characteristics can change. Remember that the final wet print will look lighter than the test strip. It will dry down to the chosen density so don't be tempted to make a second, slightly darker, print. My final prints have no tone at all in the highlights when wet but they always dry down to the tonality that I visualised when I made the print. I use a StopClock Professional Enlarger Timer <http://www.rhdesigns.co.uk> that has a built in Dry Down Compensating feature that makes the application of the dry down very simple. For those who do not have this facility I have reproduced here the Dry Down Table that I used for many years until I started to use the StopClock Timer.

Have faith and print well. A correctly exposed and processed black and white print should glow with clean delicate highlights and rich luminous shadows which show just a hint of separation in the darkest part.

Les McLean

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DRY DOWN FACTORS

EXPOSURE WET TEST STRIP	EXP 8% D/D	EXP 9% D/D	EXP 10% D/D	EXP 11% D/D	EXP 12% D/D
5	4.6	4.6	4.5	4.4	4.3
6	5.5	5.4	5.4	5.3	5.2
7	6.4	6.4	6.3	6.2	6.1
8	7.4	7.3	7.2	7.1	7.0
9	8.3	8.2	8.1	8.0	7.9
10	9.2	9.1	9.0	8.9	8.8
11	10.1	10.0	9.9	9.8	9.7
12	11.1	10.9	10.8	10.7	10.6
13	12.0	11.6	11.7	11.6	11.4
14	12.9	12.3	12.6	12.5	12.3

15	13.8	13.6	13.5	13.3	13.2
16	14.7	14.6	14.4	14.2	14.0
17	15.6	15.5	15.3	15.1	14.9
18	16.5	16.4	16.2	16.0	15.8
19	17.5	17.3	17.1	16.9	16.7
20	18.4	18.2	18.0	17.8	17.6
21	19.3	19.1	18.9	18.7	18.5
22	20.2	20.0	19.8	19.6	19.4
23	21.1	20.8	20.7	20.5	20.0
24	22.1	21.8	21.6	21.3	21.0
25	23.0	22.7	22.5	22.3	22.0
26	23.9	23.7	23.4	23.1	22.8
27	24.8	24.6	24.3	24.0	23.7
28	25.7	25.5	25.2	24.9	24.6
29	26.7	26.4	26.1	25.8	25.5
30	27.6	27.3	27.0	26.7	26.4

ALL TIMES ARE IN SECONDS.

TO ADJUST FOR DRY DOWN, REDUCE THE FINAL PRINT EXPOSURE TO THE TIME SHOWN IN THE COLUMN OPPOSITE THE WET TEST STRIP TIME AT THE DRY DOWN FACTOR FOR THE PAPER THAT YOU ARE USING.

**Les McLean
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