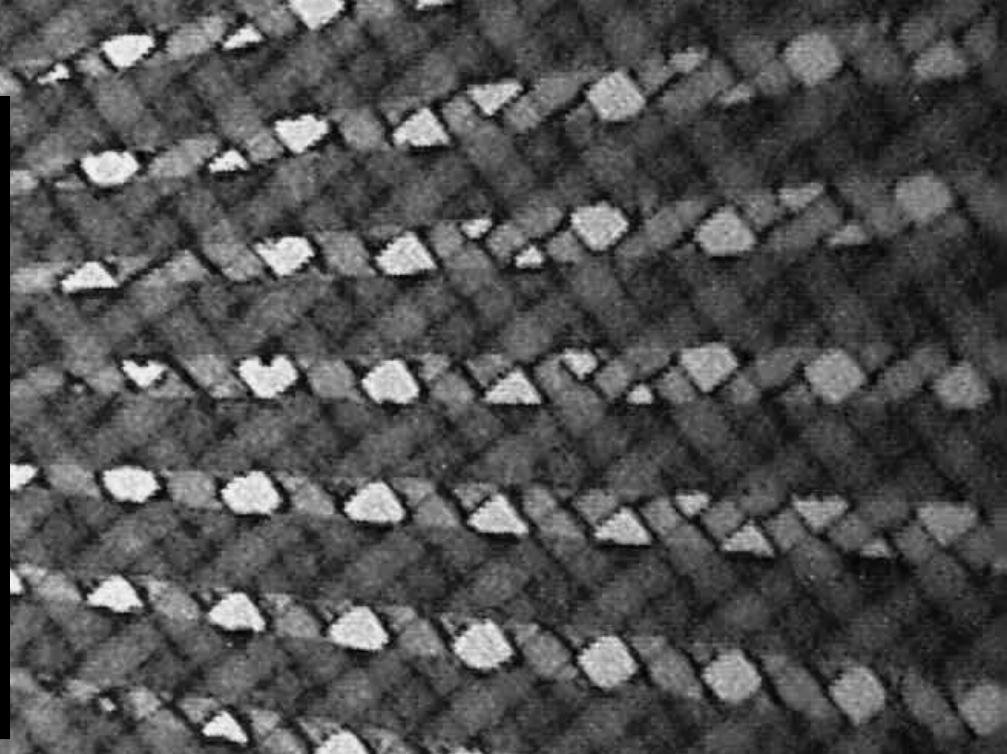


SAATI 21 STEP GUIDE



Overview

This all-purpose precision exposure guide can be used on all stencil types to estimate and standardize proper exposure accurately and quickly.

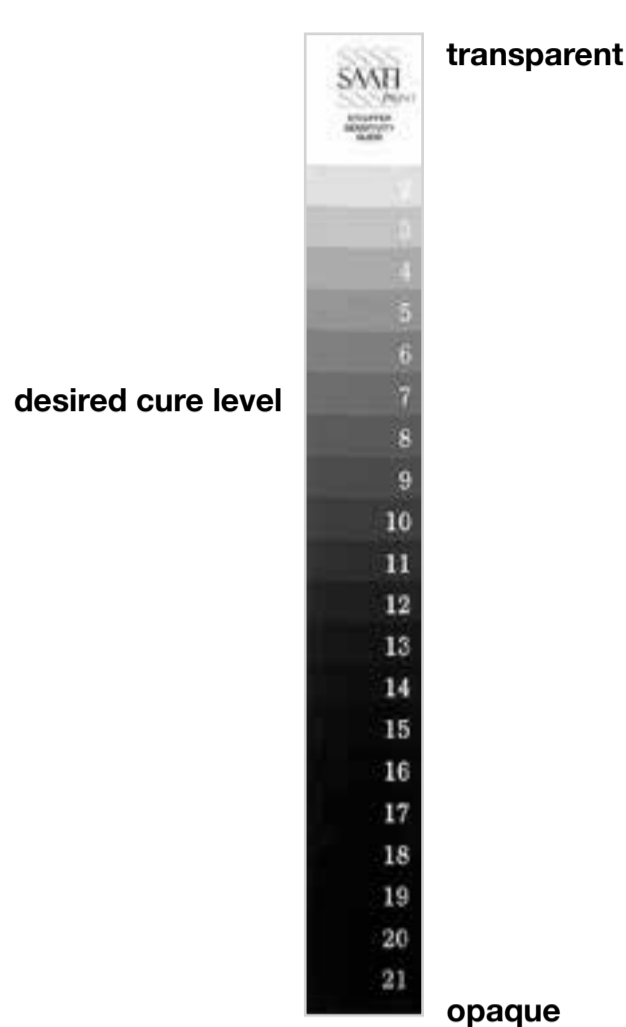
The exposure guide is made of twenty-one increasingly dark swatches of continuous tone, filtering the quantity of light that penetrates it.

Light passes through the guide and begins to expose the emulsion underneath.

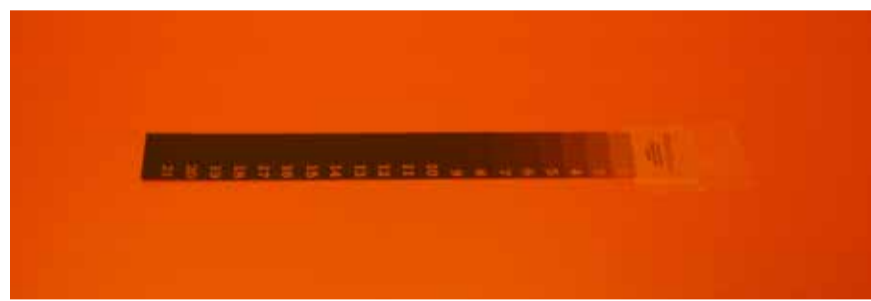
If enough light hits the guide, the emulsion under the darker swatches begins to cure enough that it will adhere at washout.

If seven steps of emulsion adhere during development, this means that the unfiltered portion of the emulsion has received 5.6 times more light. For many emulsion products, this level of curing is sufficient to reduce the occurrence of pinholes, but also will not cause loss of detail due to overexposure.

If you expose and do not achieve seven steps, there is a simple chart below that you can follow to get the correct result, even without performing the test for a second time.



Directions



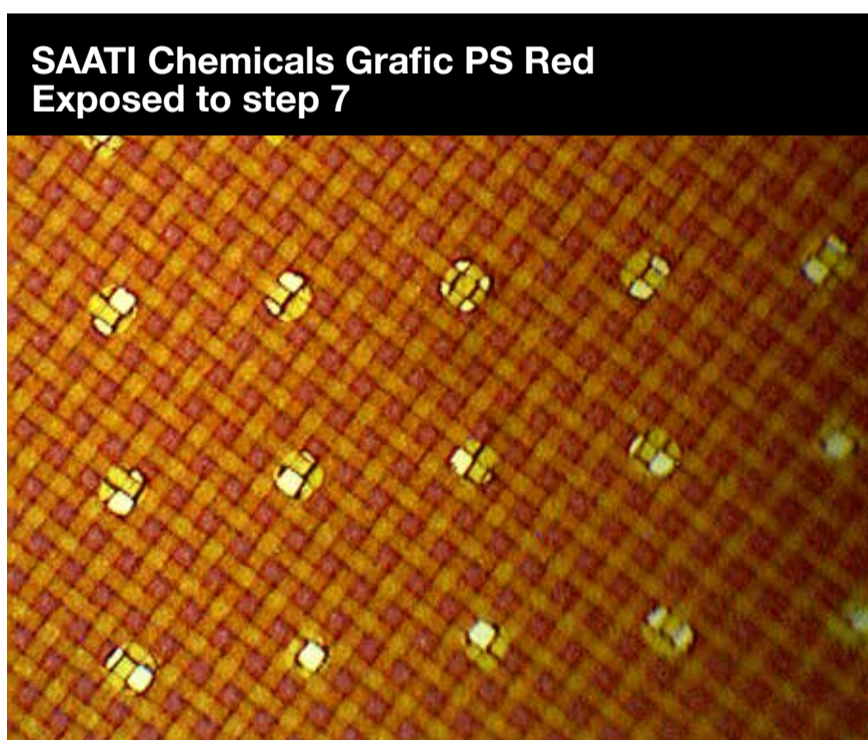
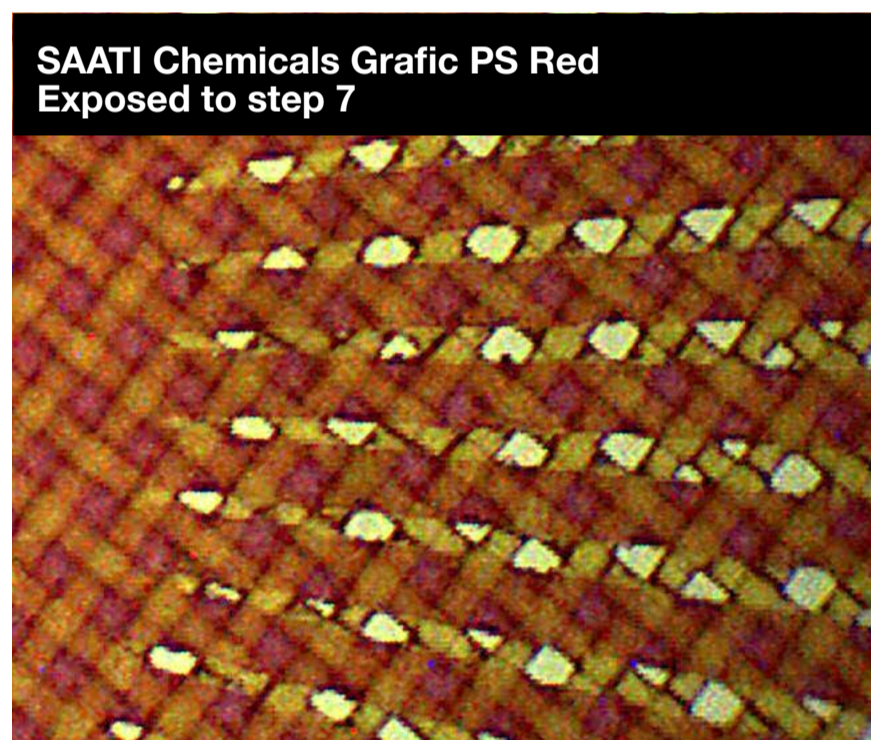
1. **Tape** 21-step pattern to unexposed emulsion and place in vacuum frame or self-contained exposure unit



2. **Expose As Usual**

3. Develop screen. If correctly exposed, 7 steps stick and **the rest falls off**

More steps = overexposure
Fewer steps = underexposure



Exposure Correction Table

To Increase Step Guide by 1 Step by	Multiply Original Exposure Time by
1 step	1.4
2 steps	2.0
3 steps	2.8
4 steps	4.0

To Decrease Step Guide by 1 Step by	Multiply Original Exposure Time by
1 step	.7
2 steps	.5
3 steps	.35
4 steps	.25

Example Result



- Step 9** - 60 seconds
Over-exposed.
multiply exposure time by .5
 $60 \times 0.5 = 30$ seconds



- Step 4** - 10 seconds
Slightly under exposed.
multiply exposure time by 2.8
 $10 \times 2.8 = 28$ seconds



- Step 7** - 30 seconds
Just about correctly exposed.
This time appears to be in the range to reach step 7.

All results depict SaatiChem Grafic PS Red exposed with 6kW exposure lamp

Conclusion

Any of these step results would suggest an exposure time of about 30 seconds will expose the stencil to a perfect step 7 result.

Advanced Uses

When you record the correct exposure times for each of your products at different coating thicknesses, you will have a valuable tool that will save your time, product and money.

If you expose several stencils for the same amount of time but find some overexposed or details falling out, this can suggest an inconsistencies with your coating thicknesses.

You may find that a different step result produces better prints for a particular product you are using. The 21 step guide is useful in that you can determine the optimum result taking into account different cure levels.

You can pick any value on the step guide, but for most products, 7 steps is the preferred cure level.

Contact SAATI

If you have further questions or are interested in products, reach out to SAATI!

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