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PRIMER INTELLIGENCE

WHAT GRAVURE CYLINDER DO I USE?

Don't over-apply. Don't under-apply. How do we select the best cylinder for delivering the appropriate amount of primer? Before making a recommendation, let's consider ranges.

- Too much primer...
 - High coat weights of an EAA primer, such as MICA A-251-A, MICA D-709, MICA G-680, MICA G-1092 and MICA M-1164, are not a problem. In fact, heavy laydown will result in higher bond strengths and enhanced chemical resistance.
 - More is not always better, though. There can be too much of a good thing. Overapplication of MICA A-131-X will lead to cohesive failure and chemical resistance problems. Too much MICA A-291-C will result in discoloration and foil corrosion.
- Too little primer...
 - o Starvation will result in adhesion problems!

What is the target range?

- For all of the primers listed above...
 - o Dilute 1 part primer with 1 part water.
 - o Apply 1 wet pound per ream (1.6 wet gram per square meter) of the primer mix to a web.
 - O Generally speaking, acceptable ranges are -50% to +100% of this weight. This translates to application of 0.5 2 wet pounds per ream $(0.8 3.2 \text{ g/m}^2)$ of primer mix.
 - o Solids may be adjusted by varying the dilution recipe.

What cylinder material works best?

• Chrome is the best material for a gravure cylinder that will be used with our primers. Ceramic rolls tend to clog. If you must use ceramic, ask the cylinder supplier to engrave it deeper (about 20 – 30% more volume), to allow for the inevitable filling. Frequent cleaning will be necessary.

Finally, what gravure cylinder specifications do we recommend?

 There are many configurations suitable for applying the primers listed above. As a starting point, here are a few chrome cylinder specifications we have found to work well with both open-pan applicators and enclosed doctor blade systems.

Screen	Cell shape	Volume	Estimated Delivery
lines per inch		billion cubic microns	wet lbs/ream (g/m ²)
400	Pyramidal	2.8	0.8 (1.3)
360	Quadrangular	3.7	1.0 (1.6)
300	Quadrangular	4.5	1.2 (1.9)

There are many ways to apply our primers. Do you use a different configuration? Call, fax or email us. We'd be pleased to review your applicator system with you.

Next issue: Tips for using smooth roll applicators.

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