



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. Over-application 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...
 - Starvation will result in adhesion problems!

What is the target range?

- For all of the primers listed above...
 - Dilute 1 part primer with 1 part water.
 - Apply 1 wet pound per ream (1.6 wet gram per square meter) of the primer mix to a web.
 - 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 g/m²) of primer mix.
 - 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 lines per inch	Cell shape	Volume billion cubic microns	Estimated Delivery 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.