



**Tech Talk From**

**Prisco®**

*Tech Talk #C13*

## COATING FILM WEIGHT TEST

This procedure covers the steps necessary to perform an accurate coating film weight test on a sheetfed press. A wet film weight of 0.8-1.2 lbs per thousand square feet of stock is recommended.

### **Materials:**

- Blank stock
  - Aluminum foil
  - Scotch tape
  - Razor blade
  - Ruler
  - Gram scale sensitive to at least 3 decimal places
  - Calculator
1. Obtain a piece of aluminum foil that is at least 12" x 16". Fold the piece of aluminum foil in half.
  2. On a blank sheet of stock that is being used for the printed work, securely fasten the folded aluminum foil to the stock using the scotch tape. Be sure the foil and the tape are as flat and smooth as possible. It is also important to be sure the foil is fastened to an area of the stock that will be completely coated.
  3. Multiple pieces of foil may be fastened to the same sheet of stock. If the size of the stock allows, repeat steps 1 & 2, each time placing the foil in a different area to be measured. Example: a) gripper operator side b) operator side tail c) gripper guide side d) guide side tail. Measuring different areas tests for coating uniformity across the sheet.
  4. Place the stock with the foil in the feeder about 25-30 sheets down in the pile.
  5. Lift the impression off all of the inking units.
  6. Start the press and run the stock through until the foiled sheet appears in the delivery.
  7. Remove the foiled sheet.
  8. Using the ruler and razor blade cut a 4" x 6" rectangle out of the foil. Be sure to cut through both layers of foil. Separate the layers and keep a record of which sheet contains the coating. The top layer is coated and the bottom layer is uncoated.
  9. Place the uncoated layer on the gram scale and zero the weight of the foil. (Be sure the gram scale is accurate to at least 3 decimal places.)

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10. Remove the uncoated layer and place the coated layer onto the scale. Record the weight of the coated foil. This weight is the net weight of the coating in grams.

### **Wet pounds per thousand square feet**

1. Divide the net weight of the coating by the square inches of the foil to obtain grams per square inch.

Example: A 4x6" piece of foil is 24 square inches.

The net coating wet is .023 grams.

.023 divided by 24 = .0009583 grams per square inch.

2. Multiply grams per square inch by 144 to obtain the gram weight per square foot.

3. Divide grams per square foot by 454 to obtain pounds per square foot.

Example: .1379952 divided by 454 = .0003038 pounds per square foot.

4. Multiply pounds per square foot by 1000 to obtain dry pounds per 1000 square feet.

Example: .0003038 x 1000 = .3038 dry pounds per 1000 square feet.

5. Multiply dry pounds per 1000 square feet by 2.5 to obtain wet pounds per 1000 square feet. The factor of 2.5 is based on coating solids of 40%.

Example: .3038 x 2.5 = .7595 wet pounds per 1000 square feet.

In this example the wet coating film is thin. A wet weight of .8 to 1.2 lbs per 1000 square feet is recommended.

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