Methods for Field Measuring Coating Thickness

Measuring Wet Film Thickness

Tools Required:

- wet film gauge
- metal coupon or flat roof flashing approx. 3" x 5"

For measuring coating thickness when coating is wet, use a wet film gauge with serrated edges that vary in depth by two-mil increments.

Uncoated   Wet Coated

1. Clean residual oils and contaminants from coupons with alcohol and fasten them to the surface to be painted at various locations throughout the spray area.

2. After coating application, and while the coating is still wet, firmly press the edge of the wet film gauge into the wet coating on one of the coupons you placed. Be sure gauge is perpendicular to the surface for a good reading
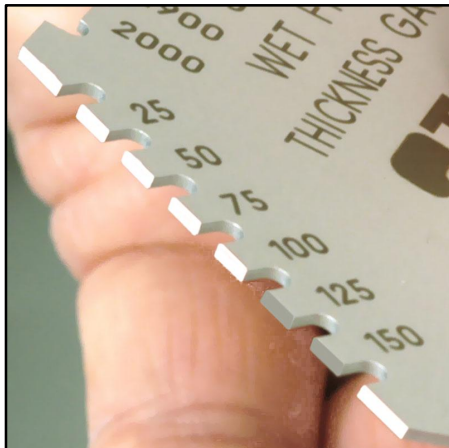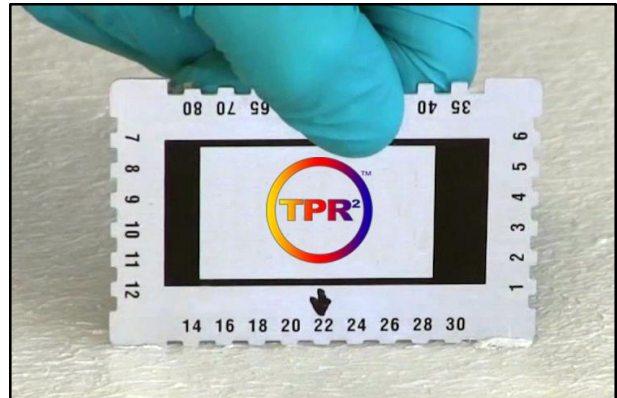
3. Remove the gauge and inspect the edge. If all teeth are coated, use another side of the gauge. Repeat this process until you see a transition point along the edge of the gauge between the coated and uncoated teeth. The number of last coated tooth indicates the wet film thickness of the coating.
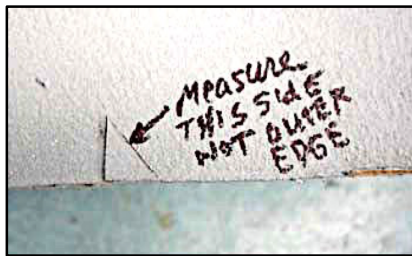
Measuring Dry Film Thickness – Coating Sample Method

Tools Required:

- caliper
- razor blade or sharp utility knife

For measuring coating thickness when coating is dry follow the steps below.


1. First, cut a small sample with a penknife or razor. A triangular piece works well. Measure thickness away from the outer most edge or wall corner

2. Carefully peel the sample away from the substrate. Ensure that the substrate material comes off onto the backside of the coating sample.

3. Use the knife or razor to scrape away the substrate until you see the coating coming through
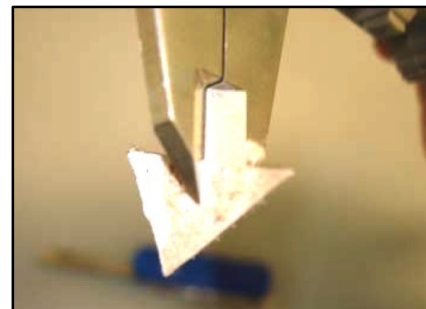
4. Measure the dried coating thickness with the tapered tip of the caliper. Be sure to measure only coating and not coating with substrate.

5. Read the caliper thickness. The caliper should only lightly touch the coating. The sample should almost fall out of the jaws by its own weight. Several samplings are

Measuring Dry Film Thickness – Coupon Comparison Method

Tools Required:

- caliper
- razor blade or sharp utility knife
- metal coupon or flat roof flashing approximately 3" x 5"

Uncoated

1. Clean residual oils and contaminants from coupons with alcohol and fasten them to the surface to be painted at various locations throughout the spray area.

Coated & Scraped

2. After coating application is complete and coating has fully cured scrape some coating away with your razor blade or knife

3. Measure the total thickness of your coated coupon using the flat side of the caliper. The caliper should only lightly touch the coating such that it does not leave any marks and so the coupon can almost fall out of the caliper jaws by its own weight. Take several measurements and average them for better accuracy.

4. Repeat this process and measure the scraped, uncoated area of the coupon and subtract the uncoated measurement from the coated measurement to determine your coating dry film thickness.