

WET FILM THICKNESS PROCEDURE

This gauge complies with ASTM D4414-84.

A square or rectangular thin rigid metal gage with notched sides, having tabs of varying lengths, is pushed perpendicularly into the film. After removed from the film, the gauge is examined and the film thickness is determined to lie between the clearance of the shortest tab wet by the film and the clearance of the next shorter tab not wetted by the film.

Wet film thickness measurements of coating applied on articles can be very helpful in controlling the thickness of the final dry coating. With producing a high quality product we must use the wet mill gauge continually to help keep the quality standards high.

There is a direct relationship between dry film thickness and wet film thickness. The wet film/dry film ratio is determined by the volume of solids in the coating (i.e.: If 10 mils of paint are applied and the mil thickness after the coating has been cured is 5 mils dry, then the volume of solids would be 50%. Our current volume of solids on 9:1 charcoal is 35.4).

Measurement of wet film thickness at the time of application is the most suitable time because it allows the painter to make corrections and adjustments of the film at the time of application.

Procedure

Apply the coating to a substrate and test with the gauge immediately. The gauge must be used immediately after the paint has been applied.

1. Locate an area large enough to permit both ends tabs of the gauge to rest on the substrate on the same flat surface.
2. Push the gauge perpendicular into the wet film so that the two end tabs rest firmly on the substrate at the same time.
3. Remove the gauge from the film and examine the tabs. The film thickness is determined as being between the clearance of the shortest tab wetted and the clearance of the next shorter tab not wetted by the film.
4. Clean the gauge immediately after each reading by wiping it off on a dry cloth so that the following readings are not affected. Do not use a metal object to clean this can wear down the tabs and give an inaccurate reading. Use a solvent and a brush.

Note: If the gauge slips when taking a reading, ignore the reading and take another.

5. Remember to touch up the area where you used the mil gauge.