

How to Use a Wet Film Comb

There are two main methods of measuring wet film thickness in the field, wet film wheels and wet film combs.

There are a wide range of combs to choose from, available in a variety of scales to match different film thickness needs, and they all work in the same way.

Each comb is made up of teeth of stepped lengths. As the outside teeth are pushed down onto the substrate, the coating depth is measured by which of the graduated teeth are covered.

When dipping the comb into a wet film, it should be placed down evenly; and at a 90 degree angle to the surface. You then remove the comb and examine the teeth.

Depending on the standard you're using, the wet film thickness of the coating is either the last coated tooth, or between the last tooth that's coated and the first tooth that isn't.

For example, here our thickness either 225 microns; or somewhere between 225 and 250 microns, depending on the standard being used. We typically suggest half way between the two.

This wet film thickness can be recorded and used to predict the dry film thickness once the coating has cured. To calculate the dry film thickness you need to know the 'solids to liquids' ratio, also known as the volume solids content.

If this ratio is 50:50, or 50%, then a wet film thickness of 100 microns will mean that the dry film thickness is 50 microns, once the liquids have evaporated.

Most wet film combs can be reused so simply wipe or wash the comb after use, making sure that any solvent-based coatings or cleaners are disposed of responsibly.

For more information and training about wet film combs, or other Elcometer products, visit Elcometer.com