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Since 1926 – Manufacturer of Decorative and Protective Paints and Waterproofing Coatings

THE IMPORTANCE OF PAINT SPREADING RATES

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Most painters apply the thinnest possible coat of paint. You may be fortunate if they apply a wet film thickness of 4 mils (4/1000 of an inch or 101.6 micrometers or microns), which at 37.5% Volume Solids will yield only 1.5 mils (1.5/1000 of an inch or 38.1 microns or micrometers) paint film thickness when the paint dries, and all the liquid evaporates leaving only the solids on the painted surface. In order to compare one paint or waterproofing coating with another, you can do so only if you compare paints with the identical percentage of volume solids (remember, everything else evaporates). So you cannot compare a roof paint that has only 30% volume solids with a waterproofing coating that has over 50% volume solids.

The effectiveness of a paint/coating depends on how it is formulated and how it is applied. For example, a product with 50% volume solids can be applied at a spreading rate of 802 sq. ft. per one US gallon (3.785 L) to yield 2 mils wet film thickness (WFT) that will dry to 1 mil dry film thickness (DFT), which is thinner than a piece of typewriter paper. It might have an effective service life of a few months.

If the same product with 50% volume solids were applied at a spreading rate of 401 sq.ft./gal., it would yield 4 mils WFT and 2 mils DFT, which might have a service life as a paint of 2 or 3 years.

If the same product were applied at a spreading rate of 200 sq.ft./gal., it would yield 8 mils WFT and 4 mils DFT, which might have a service life as a paint of 5 or 6 years. SOMAY believes a total of 4 mils dry film thickness applied in 2 coats is the minimum for a good paint application.

However, if you want the same product to provide waterproofing, you can apply the coating at the rate of 80 sq.ft./gal., to yield 40 mils WFT, which will dry to 20 mils DFT, which should provide waterproofing when applied to an absolutely smooth, non-porous surface such as plate glass, and it could give a service life of 7 to 8 years.

Furthermore, if you want the same product to provide windproofing in order to "HURRICANE PROOF YOUR ROOF"®, you can apply the same coating product at the rate of 40 sq.ft./gal. to yield 80 mils WFT, which will dry and cure to 40 mils DFT on an absolutely smooth, non-porous surface, and it should give you a service life of 15 years! Independent laboratory testing showed NO degradation of SOMAY "ROOF MASTIC" after 15 years @ 40 mils DFT. Note: So that the coating will dry properly, it should be applied as two coats, each at 40 mils WFT = 20 mils DFT, to equal a total of 40 mils DFT for both coats.

This should help you to understand the number of factors that must be considered that have a very dramatic impact on which coating you want to use and how thickly you must apply it.

Have you ever looked at a dry paint film through a microscope? If you have, you would see that the paint film is not uniform, it will have thick and thin film thickness and will be full of microscopic holes, especially from the air whipped into the paint by shaking or stirring too vigorously, or by using a thick nap roller and rolling too fast when applying the paint. That's why we say there is no such thing as a good one coat paint job ... the minimum decent paint job is at least 2 coats ... and 2 thin coats are always better than one thick paint coat.

We believe it is essential to understand that the benefits from the use of any coating depends on applying the coating at the proper coverage or spreading rate to develop the necessary dry film thickness so that you get the results you want from your application.

Please note that spreading rates are based on the total volume solids (NOT weight solids) in the formulation and are based on using the product as it is supplied by the manufacturer. The paint or coating should NEVER be thinned, diluted or adulterated in any way with anything, as this will immediately change the formulation and have a very deleterious effect on the performance of the product. Additionally, the coverage or spreading rate on the label or Product Data Sheet is a theoretical calculation and assumes 100% Transfer Efficiency from the container to the surface being painted. One must assume there will be some wastage or material left in the can, or left in the paint brush or paint roller, or spilled on the ground or drop cloth. Professional painters always assume 10% wastage (only 90% Transfer Efficiency) for application by brush or roller and 20% wastage (80% Transfer Efficiency) when applied by airless spray systems. Be sure you figure this in your calculations, so you don't short yourself.