

UNDERSTANDING THE COVERAGE RATE FOR REDGARD LIQUID WATERPROOFING AND CRACK PREVENTION MEMBRANE

To simplify planning for and applying liquid waterproofing membranes, CUSTOM has updated its instructions for the application of RedGuard® Waterproofing and Crack Prevention Membrane to a coverage rate (square feet per gallon) rather than application to a given wet film thickness.

Challenges with Measuring Wet Film Thickness

Wet film thickness will vary on a jobsite depending on where the measurement is taken and how soon it is measured after the application of the waterproofing membrane. As soon as the product is applied, it begins to cure and lose water through evaporation. The longer the wait, the thinner the film gets, making it important to measure the wet film thickness immediately after the membrane is first applied. Wet film thickness ratings typically refer to the moment the membrane is applied.

In controlled laboratory conditions, an absolutely flat film can be metered out with no ridges, but in the field, there will be substrate irregularities and ridges from the application method with low and high points in the wet film. This creates questions about whether the low or high points should be measured, or if the results be can be averaged. Assessing coverage with more measurements will improve the chances that the proper amount of material is being applied.

Due to the prevalence of so many questions concerning correct measurement of the wet film thickness, the directions on CUSTOM's RedGuard Liquid Waterproofing and Crack Prevention Membrane now provide an easy-to-follow coverage rate based on square footage. When a given area is uniformly coated with a full gallon of RedGuard liquid membrane, the correct film thickness has been achieved. Since this is a mathematical absolute, there is no need to try to measure the wet film thickness.

This method can create a concern for an inspector of the installers' work if the inspector does not know how many gallons of membrane were used to cover an area. Then, the only recourse is to measure the dried film thickness of the waterproofing membrane with destructive testing.

Equating Coverage Rate to Film Thickness

To help with the inspector's evaluation this chart compares the coverage rate in square feet per gallon with both the wet and dry film thickness of the

membrane. A single measurement of dry film thickness may not be indicative of other areas in the installation.

Multiple areas should be measured and averaged to determine actual application rate. The chart below can be used to determine the actual coverage rate, if the dry film or wet film thickness is known. The highlighted rates and thickness are the correct coverage rates for RedGuard Liquid Waterproofing and Crack Prevention Membrane, depending on the need of the membrane.

RedGuard Liquid Waterproofing and Crack Prevention Membrane Relationship of Coverage Rate to Wet and Dry Film Thickness (mils)

Coverage Sq Ft per Gallon	Thickness Wet mils	Thickness Dry mils	Requirement
12.8	125	74	
15	107	63	
20	80	47	
25	64	38	Meet ANSI A118.12
30	53	31	
40	40	24	Meet ANSI A118.10
50	32	19	
55	29	17	General Waterproofing
60	27	16	
70	23	14	
80	20	12	
90	18	11	
100	16	10	General Crack Isolation
110	15	9	
150	11	7.0	
160	10	6.0	
170	9.4	5.5	
180	8.9	5.2	
190	8.4	5.0	
200	8.0	4.7	



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Using a Mil Gauge to Measure Wet Film Thickness

For installers who want to use a mil gauge to assess membrane coverage, CUSTOM provides the RedGard Thickness Gauge. Notched “teeth” representing mil depth appear on the face of the gauge, with microns on the reverse for use in metric measurement locations. Remove the blue coating and use as follows:

1. Hold the card at a 90 degree angle to the surface.
2. Press the teeth marked with the desired mil thickness into the fresh, wet RedGard.
3. Pull straight back to prevent adjacent product from clinging to the teeth.
4. Note the deepest tooth with RedGard on it as well as the next highest tooth that is not coated with RedGard.
5. The true RedGard mil thickness lies between these two readings.
6. Wipe the gauge with water after each use.
7. Readings should be repeated in different areas and averaged to achieve the most accurate measurement of the mil thickness and ensure proper coverage.
8. Ensure that no voids or pinholes are left in the dried membrane from the testing process.

Consult the Custom Building Products website for more information on the correct application of RedGard, or contact CUSTOM's Technical Services Department at **800.282.8786**.

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