

X-TENDA COAT™

Peel Adhesion Test Kit Procedure

Carlisle SynTec Systems recommends peel adhesion testing prior to the bidding and application of a roof coating system. Performing these tests can ensure the adhesion of coating or the need for primer to enhance adhesion on specific substrates and areas of the roof. Keep in mind that substrate conditions can vary significantly.

1. Roof surfaces must be cleaned and free of any dirt, debris, and contaminants. Roof surfaces must be dry and free of moisture. Tests should be conducted in several roof areas, especially in suspect areas or areas under unique conditions. Clean three separate areas to test on any roof up to 10,000 square feet in size. Roofs over 10,000 square feet will require additional tests be performed.
2. When preparing to perform a test with the adhesion test kit, please have the following items on hand:
 - » Digital fish or luggage scale
 - » Towel, rags, and wipes
 - » Gloves, razor knife, and safety goggles
 - » Spray bottles and scouring pad (if manually cleaning)
 - » Camera or cell phone to record peel values
3. When the test areas are ready to be cleaned, power wash in the direction of the highest point of the roof and then back down again toward the bottom of the roof to remove any dirt or contaminants. If unable to power wash, use a scouring pad to clean the surface prior to rinsing. If the substrate is excessively dirty or a single-ply roof, first clean the area with X-Tenda Coat Membrane Cleaner. Allow the cleaner to sit for 10 minutes before thoroughly rinsing the area with water.
4. Allow the entire test area to dry completely before applying any coatings or primers. A minimum of two tests should be done at each test area. One test should receive an application of substrate-appropriate X-Tenda Coat primer. The other test should be done without a primer. It is important to allow any primer applied to fully cure before the application of any coatings. Review Carlisle specifications and details or consult a member of the technical team for cleaning and priming requirements by substrate.

5. Once the test sites are dry and any primer that was applied has cured, apply 15 wet mils of coating to make approximately an 8" x 4" test site.



6. Next, embed six inches of a 9"-long by 1"-wide cloth strip into the coating. Lightly tap the fabric into the coating with your finger or the end of the paint brush. This process is referred to as "wetting out" the fabric. Leave a sufficient amount of the test strip out of the coating, as it will be needed for attachment of the scale.



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7. After placement of the cloth, apply an additional 15 wet mils of coating to the entire 8" x 4" test site. Be sure to bury the strip so that there are no sharp edges along the length of it. Brushing the coating in one direction will help to ensure that there are no bubbles or fish mouths in the fabric. Leave the exposed portion of the fabric uncoated. Allow test areas to cure for 24 hours or longer depending on coating type and ambient substrate temperatures.

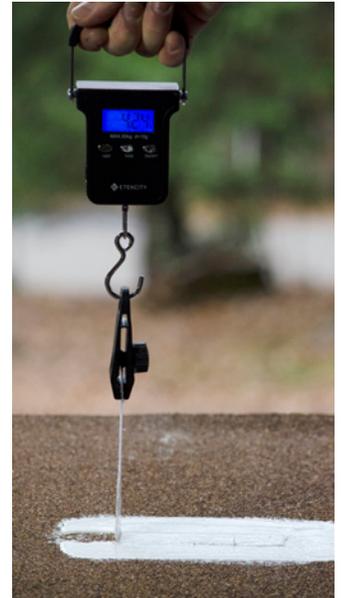


8. Before performing the test pull, lightly score along the edges of the fabric. This will allow you to isolate the strip from the rest of the test site during the pull. Be careful not to cut too deeply so that the substrate is not cut or damaged.



9. Now it is time to check adhesion. Attach a small tarp clip or roll a nail into last 1" of fabric to act as a frame for the fish scale to pull against. This avoids any unwanted tearing or stretching of the test strip, ensuring a more accurate reading.

10. The final step is to pull the fabric from the coating. This is done at a 90 degree angle. Be careful not to pull in an abrupt manner. Be slow and consistent when pulling the entire length of the fabric strip from the test site. Check the readings on the scale throughout the pull and calculate an average. If achieving two pounds per linear inch (pli) or greater, the test has successfully passed. If the reading is less than two pli, then it is a fail. If the test results in a failure without primer and a pass with primer, then the primer is required for the project.



11. Adhesion pull tests are done to calculate the point at which coating will no longer be sufficiently adhered to the surface of the substrate. If the fabric strip is separating from the coating, leaving much of the coating on the substrate, this is referred to as cohesive failure. This is the preferred result. If both the coating and the fabric strip completely separate from the substrate, it is referred to as adhesive failure. Always document and record all of the readings and results.

Peel adhesion failure



Cohesive failure

