

## Field Adhesion Testing - Roof Coating

Items needed for test:

- Reinforcing fabric cut into strips 1" wide by 12-18" long. Minimum of 3 test strips.
- Cleaning tools and supplies for roof substrate
- Paint brush (disposable chip brush)
- Fish or luggage scale with readings that begin at 1 pound, and with marker for maximum weight

Instructions:

1. The substrate in the test area should be clean, dry, structurally sound, and free of loose particles, dirt, dust, rust, oil, frost, mildew or other contaminants. Prepare 3 areas of the roof for testing, choosing spots that receive different amounts of sun exposure, wind, rain and foot traffic.
2. Cut reinforcing fabric into strips that are 1 inch wide by 12-18 inches long. (Note that wider fabric may be used. See below for minimum pull resistance if fabric is wider than 1"). Tie a knot in the last 6" of the fabric to hook onto when testing.
3. Apply a coat of product to each test area, approximately 4" wide by 6" long, to a thickness of 12 wet mils.
4. Press strip of fabric into the wet coating and smooth the surface so there are no voids or fish mouths. Extend the knotted fabric end 8-12" beyond the area of wet coating, so you will have an uncoated tab to use later.
5. Apply a second coat at 12 wet mils over the top of the fabric so it is fully embedded in coating. Allow the test area to cure for a minimum of 24 hours.

Note: This test is of the adhesion of the coating to the substrate. If the coating peels cleanly off the substrate with little or no coating left on the substrate, there is adhesive failure. Cohesive failure is when some coating is left on the substrate and the coating itself pulls apart. To pass the test, there must be at least 2 pounds of upward pull to remove each 1" wide test strip, and the failure must be cohesive, meaning there will be some coating on both the substrate and the reinforcing fabric strip.

6. Put the scale hook through the loop in the end of the fabric, or loop it around the hook and secure it with tape. Pull up from the roof surface at a 45° angle back from the slope of the roof. Use steady pressure and pull until the test strip releases from the roof. Record the pounds of pull that were required.

To pass, the coating must bond to the surface well enough that it takes 2 pounds of upward pull, per 1" of fabric width. If the fabric is 2" wide, then a minimum of 4 pounds. For 4" wide fabric, 8 pounds minimum.

Examples of pounds resistance at different fabric widths

Width of fabric	1" wide	2" wide	4" wide
Required pounds	2 pounds	4 pounds	8 pounds

7. Repeat for each test strip. Record the pull resistance (in pounds) for each test strip. Take photos of each test area and test strip, showing the substrate and the bottom of the fabric to be able to show whether the failure was adhesive or cohesive.
8. Save the photos, pull resistance record and test strips with the job packet to be able to later submit them to Lapolla if needed.

