



General Instructions:

GI-1-3

Revised: 06/2020

ADHESION TESTING PROCEDURE FOR GACOFLEX™ COATING SYSTEMS

This instruction set presents a standardized method for evaluating the adhesion of GacoFlex™ coatings to eligible substrates. Please consult Gaco Product Data Sheets, Application Specifications, and supplemental technical documentation available at www.gaco.com for information on specific products, systems, and warranty requirements.

General: Adhesion tests the coating applicator are strongly recommended prior to bidding. The number of adhesion tests should be 1 for every 10,000 ft² with a minimum of two. Select the test areas based on factors that may affect adhesion. For example, on weathered roofs, choose areas that exhibit more pronounced degradation due to any combination of UV, exhaust fumes, or chemical and/or biological exposure. Wet adhesion tests (see below) should be conducted in areas that are prone to ponding water. The age of the existing membrane may also be relevant. On many relatively new substrates, adhesion may be better in areas of heavy sun exposure – while on aging substrates, this may be reversed.

The coating products used in the adhesion tests must match the proposed coating system. If the Gaco Application Specification requires a primer and/or GacoFlex A4271 BleedTrap™, these products must be incorporated into the tests. GacoFlex coatings that do not require a primer pending successful adhesion tests (e.g., GacoFlex S42 Series High Adhesion Silicone Coating) may be tested without primer. However, if the minimum adhesion requirements are not met, the tests must be repeated to include an appropriate primer. Consult GW-4-1 Primer Guide for specific primer recommendations.

Dry Adhesion Tests: Conduct Dry Adhesion tests using the following steps. Select test areas based on the guidelines above.

1. Clean an area at least 16" x 16". Using a stiff bristle broom or brush, remove loose roofing granules, dirt, dust, and other foreign materials.
 - a. For single-ply, metal panel, and concrete roofing systems, as well as previously coated membranes (including coated Spray Polyurethane Foam roofs): Apply a solution of 9 parts water to one part GacoWash™ Concentrated Cleaner to the test area. After a thorough rinse, allow the cleaned area to dry completely.
 - b. For all asphalt roofing substrates, including APP, SBS, Smooth BUR, and Mineral Surface Cap Sheets: **DO NOT WET THE ROOF SURFACE.** If oils or chemical or biological contaminants are present, **DO NOT PROCEED.** Contact Technical Services for assistance.

IT IS CRITICAL THAT TEST AREAS ARE CLEAN, FREE OF LOOSE MATERIALS, AND COMPLETELY DRY PRIOR TO ADHESION TESTING.

NOTE: For asphalt roofing substrates, if GacoFlex A4271 BleedTrap Base Coat will be included in the coating system, apply it first at a rate of 1.0 gallon per 100 ft² (3.8 L per 9.3 m²) to yield 16 wet mils. Allow A4271 BleedTrap to cure at least 4 hours before applying the GacoFlex coating. Consult the appropriate Gaco Application Specification for BleedTrap requirements. Apply A4271 BleedTrap Base Coat prior to applying a primer.

GI-1-3: Adhesion Testing Procedure

Page 2

2. Brush apply the GacoFlex coating over an area approximately 8" x 12" at a rate of 1 gallon per 100 ft² (3.8 L per 9.3 m²) to yield 16 wet mils.
3. While the GacoFlex coating is still wet, embed a strip of 4" x 24" GacoFlex 66S Polyester Flashing Tape into the test patch. Leave a 12" dry section of the polyester fabric tape extending beyond the test patch.
4. Apply additional GacoFlex coating to completely cover and encapsulate the polyester fabric tape and allow the test patches to cure for a minimum of 4 days.
5. Once the GacoFlex coating has cured, attach the exposed end of the polyester fabric tape to the end of an appropriate scale.¹ Pull the polyester fabric tape at a 90° angle (perpendicular) to the roof surface. Pull steadily and evenly, gradually increasing force until the polyester fabric tape begins to dislodge from the coating. Record this measurement. Resume pulling until 50% of the embedded polyester fabric tape has peeled from the coating and record this measurement. Resume pulling until the fabric has been completely removed from the coating.
6. Testing results are gauged in two ways:
 - a. A minimum of ten pounds of pull resistance must be achieved before the polyester fabric tape is able to be removed from the coating. If the minimum pull resistance is not achieved, repeat the test but first prime the substrate (or A4271 BleedTrap) with an appropriate GacoFlex primer (see GW-4-1 Primer Guide) and let the primer cure before applying GacoFlex coating and 66S Polyester Flashing Tape (consult Gaco Product Data Sheet for primer application instructions and recommended cure time).
 - b. In addition to achieving the minimum desired pull resistance, a test is deemed successful when the base layer of coating remains attached to the surface after the polyester fabric tape has been completely removed (cohesive failure). It is acceptable for the coating to be thinner in some areas, but there should be no bare spots where the original surface is visible.

***NOTE:** No work shall be performed until the test results indicate that adhesion to the substrate is adequate. For warranted applications, the test results must be recorded and sent to Gaco with the Pre-Installation Notice.²*

Wet Adhesion Tests: In roof areas that are subject to ponding water, Wet Adhesion tests should be performed alongside the Dry Adhesion tests as follows:

1. Complete steps 1-4 above. When the test patch has cured, wet the test area. If water does not immediately pond, lay water-soaked rags over the test patch(es) and cover with an empty upside-down bucket. Allow the area(s) to sit for 24 hours.
2. Conduct pull tests as per step 5 above and record the results. If the minimum pull resistance (10 Lbs.) is not achieved or if the coating does not fail cohesively, repeat the test but first prime the roof surface (or A4271 BleedTrap) and allow it to cure prior to applying the test patch (consult Gaco Product Data Sheet for primer application instructions and recommended cure time).

1. A Pull scale or Fish scale can be found at most sporting goods stores.
2. If the adhesion test fails, contact Technical Services for assistance.