

PROTOCOL

This test method covers a field procedure for determining the strength and characteristics of the bond of a liquid-applied coating/roof system, for use on low-slope roofs. CertainTeed recommends an adhesion test be conducted prior to the application of any SMARTCOAT Coating and requires such testing where specified for SMARTCOAT Limited Warranties.

A minimum of two adhesion tests should be conducted in the field, one every 10,000 sq. ft. Additional tests should be conducted over extensively degraded substrates with cracked surfaces, any change in substrate material and any areas with indication of ponding water.

TOOLS & MATERIALS

You need the following materials to conduct an adhesion test:

- SMARTCOAT 100 Roof Wash if roof wash is to be utilized on the project
- Rag(s)
- SMARTFAB 500 Series Reinforcement cut into 1" x 12" strips (longer strips can be used if desired/easier to manage)
- SMARTCOAT 200 Series Bleed Blocker/Universal Primer (appropriate to substrate) if product may be utilized on the project
- SMARTCOAT 400 Series Coating (as specified for the project) if product may be directly applied to the existing roof/substrate
- Fish Scale
- Knife/Blade
- Wet Mil Thickness Gauge (Optional)

INSTRUCTIONS

1. Clean the roof surface where the adhesion test will be conducted. Use any of the following as appropriate to adequately remove all dirt, rust, grease, debris or anything that could interfere with adhesion: SMARTCOAT 100 Roof Wash, rinsed to ensure all detergent is removed, pressure washer, broom or brush. A rag should scrub up clean when the roof surface is properly prepared.
- 2a. If a Bleed Blocker or Primer May Be Used
In this case, the bond between the Bleed Blocker/Primer and the substrate is the interface we shall test. Apply the Bleed Blocker/Primer at a rate of approximately 1.5-gallons (1.5 G/24 wet mils) per 100 sq. ft. While the Bleed Blocker/Primer is wet, embed SMARTFAB 500 Series reinforcement strips, 1" x 12" (or longer), allowing at least 4" of the strip to extend beyond the Bleed Blocker/Primer. After the reinforcement is embedded, apply a second coat of Bleed Blocker/Primer at approximately 1.5-gallon (1.5 G/24 wet mils) per 100 sq. ft; ensure at least 4" of the reinforcement strip remains free of Bleed Blocker/Primer. Lightly brush/roll to ensure all air is removed and reinforcement is fully encapsulated.
- 2b. If the Coating May Be Direct-Bonded without Primer/Bleed Blocker
In this case, the bond between the Coating and the substrate is the interface we shall test. Apply the Coating at a rate of at approximately 1.5-gallon (1.5 G/24 wet mils) per 100 sq. ft. While the Coating is wet, embed SMARTFAB 500 Series reinforcement strips, 1" x 12" (or longer), allowing at least 4" of the strip to extend beyond the Coating. After the reinforcement is embedded, apply a second coat of Coating at approximately 1.5-gallon (1.5 G/24 wet mils) per 100 sq. ft; ensure at least 4" of the reinforcement strip remains free of Coating. Lightly brush/roll to ensure all air is removed and reinforcement is fully encapsulated.

THE BLEED BLOCKER/PRIMER/COATING MUST BE FULLY CURED ABOVE PUBLISHED MINIMUM APPLICATION TEMPERATURE BEFORE AN ADHESION TEST IS CONDUCTED.

Allow SMARTCOAT 200/210 Bleed Blocker/Primer a minimum of one week (7 days) to cure.

Allow SMARTCOAT 400/401/405 Acrylic Coating a minimum of one week (7 days) to cure.

Allow SMARTCOAT 450 High Solids Silicone Coating a minimum 72 hours to cure.

3. Lightly score the entire 12" length of the reinforcement strip on both sides to ensure you are measuring the adhesive bond to the roof substrate and not the force required to tear the membrane. Tie a knot at the end of the 4" dry reinforcement strip such that the hook end of the fish scale can be attached. Place the fish scale to facilitate a 90° peel, pulling the reinforcement up and back through the Coating. Pull the reinforcement slowly, approximately 2"/min.

The reinforcement shall require a minimum 2 lbs. per lineal inch of force to peel. Ideally, the peel shall indicate cohesive failure, leaving some coating adhered to the roof substrate and some coating adhered to the back side of the reinforcement. The adhesion test is considered a fail if the coating is pulled off the existing roof substrate with less than 2 lbs. per lineal inch of force.

SUBMISSION FORM

PROJECT INFORMATION

Information shall match SMARTCOAT LIMITED WARRANTY APPLICATION.

Roofing Contractor: _____ Phone: _____ Address: _____

Name/use of building: _____ Address: _____

Sq. ft. of total roof area: _____ Sq. ft. of total liquid-applied roof area: _____

CertainTeed SMARTCOAT roof system specification number: _____

ADHESION TEST INFORMATION

Total Number of Test Areas: _____ Date of Application: _____ Date of Peel Test: _____

Pressure Required to Peel Specimen(s) (lbs./sq. ft.)

If no primer was trialed, denote with "n/a".

	No Primer	Primer		No Primer	Primer
Test Area 1			Test Area 16		
Test Area 2			Test Area 17		
Test Area 3			Test Area 18		
Test Area 4			Test Area 19		
Test Area 5			Test Area 20		
Test Area 6			Test Area 21		
Test Area 7			Test Area 22		
Test Area 8			Test Area 23		
Test Area 9			Test Area 24		
Test Area 10			Test Area 25		
Test Area 11			Test Area 26		
Test Area 12			Test Area 27		
Test Area 13			Test Area 28		
Test Area 14			Test Area 29		
Test Area 15			Test Area 30		

Submit completed form to rpg@saint-gobain.com.