



# FAÇADE ANCHORING AND THE AIR BARRIER SYSTEM

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The use of air barriers within exterior wall assemblies has become widespread in the construction industry as an essential practice for protecting the building envelope and reducing energy consumption from heat and cooling.

There are a variety of tests recognized in the air barrier industry for the evaluation of the effect of façade anchoring on air and water leakage performance post air barrier membrane installation. This testing is critical to ensuring proper performance.

On a 10,000-square-foot project, a façade anchor can penetrate the air barrier membrane 5,625 times. That's more than 5,000 reasons why we need to understand how anchoring through an installed membrane affects performance. Unlike a below-grade waterproofing membrane installation, where penetrations post membrane installation are avoided, air barrier membranes are penetrated intentionally and often. The façade anchoring mechanisms for facades like stucco, metal panels, stone panels and brick walls penetrate the membrane post installation and are done with a variety of widths of threaded self-tapping screws.

## ASTM D1970

ASTM D1970, Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as a Steep Roofing Underlayment for Ice Dam Protection – Section 8.9 Nail Sealability, is a test that can be used to indicate performance of penetrations through applied air barrier membranes. Nail Sealability is often discussed, and terms like “self-sealing” and “self-gasketing” are used to describe membrane performance. Air Barrier membranes do not self-seal, but instead self-gasket around the penetrating item. In order to understand your projects' performance, modifications to this test method need to be made.

## ADDITIONAL PERFORMANCE EVALUATIONS

ASTM D1970, Section 8.9 (Nail Sealability) - Evaluates a variety of façade anchors as well as project-specific needs.

Not only should a system be evaluated according to this test method, but also include modifications to the actual panel and a variety of façade anchors and insulation fasteners to ensure performance. Project-specific testing should also be conducted for any modifications to existing tested anchors and fasteners.

**ASTM E2357 (Air Leakage)**

Systems should also be evaluated according to this test method and include modifications made to wall assemblies with a variety of connections, façade anchors and insulation fasteners to ensure performance. Project-specific testing should also be available for any modifications to existing tested wall assemblies in order to meet the specific project requirements and wall design for your project. Look for a manufacturer who provides testing or will help facilitate third-party testing in order to validate the results.

**ASTM E331 (Water Penetration)**

Assembly test performed after the air leakage at an increase to 2 hours and 300 Pa with your project-specific wall assembly. This test should be applied according to the test method, and done so after the ASTM E2357 assembly air leakage testing.

Look for a system with a variety of existing wall assemblies that have been evaluated according to this test method. Project-specific testing should also be available, and witnessing and involvement by the project team should be encouraged.

This test is also modified to increase the standard 15 minutes of exposure at 137 Pa to 2 hours at 300 Pa. The increase of time and pressure allows for true peace of mind that there is not a leak. It has been found that 15 mins at 137 Pa may not be enough time and pressure in order for a leak to be detected.

**PRODUCT INFORMATION**  
See [securockexoair.com](http://securockexoair.com) for the most up-to-date product information.

**NOTICE**  
We shall not be liable for incidental and consequential damages, directly or indirectly sustained, not for any loss caused by application of these goods not in accordance with current printed instructions or for other than the extended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from the date it was or reasonably should have been discovered.

**SAFETY FIRST!**  
Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protection equipment.  
  
Read SDS and literature before specification and installation.