



## Advanced Construction Testing

Your Trusted Partners in Lab and Field Testing

### The ACT Advantage

- Independent and unbiased, third-party testing.
- Nearly 40 years of expertise.
- Our team includes FGIA-certified fenestration masters, engineers, and architects.
- Customized solutions for every project.
- Trusted nationwide for glazing and façade testing.
- Reliable results with fast turnarounds.
- Tailored testing services for unique project needs.
- State-of-the-art equipment

### Ready to Partner With ACT?

Build confidence in your brand by showcasing rigorously tested and certified products.

We're here to help your glazing systems meet the highest industry standards.

### Contact Us Today!



[info@actesting.com](mailto:info@actesting.com)  
800.704.1859  
[actesting.com](http://actesting.com)



## Lab and Field Testing Services

Ensure Your Glazing Projects Meet the Highest Standard

**Accredited and non-accredited field tests for curtain walls, glazing, waterproofing, and more.**

**Comprehensive product and mock-up testing in a state-of-the-art facility.**

# Field Testing: Expertise at Your Job Site

## When to Consider Field Testing

Does your project involve

- High-rise buildings
- Data centers, biotech, or chip plants
- Commercial or residential buildings
- Government facilities

If so, ACT's field testing services can help you ensure compliance, reduce risks, and showcase excellence.

## ACT is FGIA/AAMA Accredited

We are certified to perform the following accredited tests:

- AAMA 501.2
- AAMA 502
- AAMA 503



Our protocols include **ASTM E783** air infiltration and **ASTM E1105** water penetration testing.

## Why Field Testing is Essential

**Identify Flaws Early:** Detect potential issues before they become costly problems.

**Verify Compliance:** Ensure your assemblies meets manufacturer's standards and specified standards.

**Reduce Risk:** Mitigate uncertainties and avoid costly rework.

**Demonstrate Excellence:** Showcase your commitment to quality and performance.



# ASTM E283



ASTM E283 Air Infiltration Testing measures air leakage through windows, doors, and building envelope components. This test is vital for ensuring energy efficiency, verifying compliance with energy codes, and enhancing occupant comfort. By identifying air leaks, you can help clients reduce heating and cooling costs while providing confidence in the quality and efficiency of your products.

# ASTM E330



ASTM E330 Uniform Wind Loading tests windows, doors, and curtain walls to ensure they can withstand wind pressure. This is critical for meeting safety codes and protecting buildings in high-wind areas. It gives clients confidence in the durability, water tightness and strength of your products.

# Lab Testing: Ensuring Product Excellence

## Why Choose Lab Testing at ACT

**Indoor Mock-Up Facility:** Only laboratory in the country offering full scale mockup capability, up to 40' tall and over 100' wide. State of the Art conditioned space for building mockups, with viewing rooms, private offices and conference rooms available for clients use during mock-up construction and testing.

**Prevent Costly Failures:** By identifying issues like water infiltration, air leakage, thermal movement or structural weaknesses early, you can avoid expensive rework, warranty claims, or legal disputes.

**Meet Regulatory Requirements:** Our testing ensures compliance with ASTM, FGIA, NAFS, and Dade County standards, critical for projects in hurricane zones or energy-efficient buildings.

## Who Benefits from Lab Testing?

**Manufacturers:** Test your products to meet industry standards and certification program requirements.

**Architects & Engineers:** Test design assumptions to meet performance requirements.

**Contractors & Developers:** Evaluate the performance of materials and components, and workmanship of construction by testing a performance mockup.

Anyone involved in the construction, ownership, or management of buildings with fenestration systems should consider these tests to ensure the safety, durability, and energy efficiency of their structures.

## Key Lab Testing Standards

**NAFS AAMA 101/I.S.2/A440:** Window Specification

**ASTM E283/E330/E331/E547:** Air, water, and wind load tests.

**ASTM E1996 & E1886:** Hurricane resistance and missile impact.

**TAS 201/203:** Dade County specifications for extreme weather.



## Product Testing

- NAFS – FGIA, NAMI, Keystone, WDMA
- Air Leakage
- Water Penetration
- Wind Load Structural
- Forced Entry Resistance
- Operating Force
- Auxiliary Testing
- Miami-Dade County
- Texas Department of Insurance
- Hurricane Missile Impact
- Wind Pressure Cycles
- FEMA / NSSA
- Tornado Impact

## Mock-Up Testing

- AAMA 501 Series
- Air Leakage
- Static Water Penetration
- Dynamic Water Penetration
- Wind Load Structural
- Inter-story Drift
- Thermal Cycles

# ASTM E1105



ASTM E1105 is a comprehensive test used to evaluate the water resistance of installed windows, doors, skylights, and curtain walls, by simulating heavy rain conditions. This test helps ensure the durability and performance of these assemblies.

# ASTM E783



ASTM E783 applies to both residential and commercial buildings with exterior windows, doors, or curtain walls. However, it is more commonly used in commercial buildings and large multi-unit residential projects, where stricter energy efficiency and airtightness standards are required. In this test, a custom chamber is built and attached to a window. Then, a vacuum is pulled on the chamber to test for air leakage.

# FGIA/AAMA 501.2

The FGIA/AAMA 501.2 Test is used by isolating parts of the glazing system for diagnosing leaks and general performance.



# FGIA/AAMA 503

The FGIA/AAMA 503 Test is primarily focused on commercial buildings. This includes high-rise buildings, office complexes, retail stores, and other commercial structures that utilize large-scale fenestration systems and demonstrates the quality and performance to building owners, architects and contractors.



# FGIA/AAMA 502

The FGIA/AAMA 502 Test is primarily focused on residential and multi-family applications, this test focuses on windows and sliding glass doors, assessing their performance for air infiltration, water penetration, and structural integrity after installation.



# ASTM E576

ASTM E576 is a test used to measure the frost or dew point inside sealed insulating glass units (IGU). IGU's are hermetically sealed to prevent air and moisture from entering the sealed cavity. Desiccants are placed inside the IGU to remove incidental moisture trapped during fabrication. This test verifies if moisture has penetrated the IGU and overwhelmed the desiccants, causing premature failure.

