

UL'S WINDSTORM SERVICES - TESTING, CERTIFICATION AND VALIDATION

In order to protect from hurricane and tornado force winds, the building envelope must be designed to meet rigorous building code requirements. UL's windstorm testing, certification and validation solutions provide a comprehensive path for manufacturers to demonstrate product compliance with code requirements that are in place to protect from high velocity winds and windborne debris resulting from hurricanes and tornados.

State and local building codes such as Florida, Texas, Miami-Dade County and others require that building envelope construction products including exterior doors, windows, louvers, shutters, panel walls and roofing products, provide protection from high velocity winds and windborne debris. To demonstrate compliance to these regulations, products must be: tested to specific test standards; often must be manufactured under a quality assurance program; and may need to be validated by a 3rd party as compliant prior to gaining approval by local jurisdictions.

How Can UL Help?

UL's testing, certification and validation services provide all the necessary steps to demonstrate compliance:

- Testing UL conducts testing to all of the rigorous test standards including small and large missile impacts. Large missile impact testing is conducted with a compressed air cannon at speeds up to 55 mph to simulate hurricane airborne debris conditions and 100 mph to simulate tornado force debris impacts against various building products.
- Certification UL Certified windstorm rated building assemblies help provide
 assurance of ongoing compliance and identify the test standards and performance
 ratings to which the assemblies were evaluated. Additionally, UL's ongoing factory
 (quality control) inspection program provides assessment of a manufacturer's
 continued quality assurance for windstorm rated products as often as required by
 local codes and regulations.
- Validation UL is a Florida state recognized Validator and can provide confirmation that the documents and information submitted to the state for approval meet the requirements of the state approval process when UL has been used for testing and Certification.

Applicable Standards:

- ASTM E1886
- ASTM E1996
- ASTM E283
- ASTM E331
- ASTM E330
- TAS 201
- TAS 202
- TAS 203
- ICC 500
- FEMA 320
- FEMA 361
- AMCA 540
- AMCA 550

The UL Mark provides added value, enabling differentiation of products and assisting with acceptance in the markets you serve. Architects, contractors, building consultants and code authorities trust the UL Mark to provide them with confidence in products. UL Certified windstorm rated building assemblies can be found at UL PRODUCT SPEC™, and can be searched under the term "Windstorm".

UL Solutions to Address the Florida Building Commission:

The Florida Building Commission (FBC) approves building products through a three step process:

- 1. Demonstration of compliance with the Florida Building Code
- · A certification mark from an approved agency, such as UL
- A test report from an approved laboratory and approval from a Florida-licensed P.E.
- An evaluation report from an approved evaluation entity or Florida-licensed P.E. or R.A.
- 2. Establishment of a quality assurance program for each product:

UL can also act as a quality assurance provider for manufacturers and for products submitted to the FBC through any of the methods listed above. We can create a customized quality assurance program specifically designed to meet the needs of each manufacturer's products and control processes.

- 3. Submittal by the manufacturer to the FBC for product approval when testing is completed and quality assurance evidence provided:
 - Information regarding the submittal process can be found at the Florida Building Commission website. Validation of the product submittal is required by a state-recognized entity to confirm that the documents and information provided to the state meet the requirements of the approval process.