

TEXAS DEPARTMENT OF INSURANCE

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Submittal Requirements for Product Evaluation

The information and product requirements requested below will be used by the Texas Department of Insurance (TDI) to develop a product evaluation report for window, exterior door, garage door, skylight, impact protective systems, roof covering (except asphalt shingles), roof vent and exterior wall covering products for use in the designated catastrophe areas along the Texas Gulf Coast. The product evaluation report will identify the product, specify the maximum design pressure limitations, specify the wind zones where windborne debris resistant products may be used, specify the applicable component dimensions, describe the tested assembly, specify the applicable installation methods, and specify the fastener specifications used for the testing of the product to meet uniform static air pressure requirements and, at the option of the product manufacturer, windborne debris requirements. There is no fee for the evaluation of the product by the TDI. This evaluation is not intended to preclude a Texas licensed professional engineer from using testing information that has not been submitted to the TDI for certifying compliance with the building specifications adopted by the TDI.

1.0 Minimum Information Required for Evaluation

- 1.1 Full name and address of manufacturer.
- 1.2 Manufacturer's engineering or technical representative contact, including telephone number, fax number, and/or e-mail address.
- 1.3 Manufacturer's contact phone number for local sales information.
- 1.4 Substantiating information as specified in Section 5.0.
- 1.5 Please indicate if the submitted information is regarding a new product evaluation or the revision of an existing evaluation. If the information is for a revision, please indicate the existing evaluation number.
- 1.6 Electronic drawings (optional) that illustrate the construction and installation of the product(s), and are consistent with the submitted test data or evaluation information is requested from the manufacturer. Drawings will be included in the evaluation to provide guidance and to clarify the use of the product in the field. Contact the TDI for acceptable formats for submitting electronic drawings.

2.0 Building Code Requirements for Products

- 2.1 Products will be evaluated by the TDI according to the wind load criteria of Chapter 3 of the 2003 International Residential Code (IRC); the wind load criteria of Section 1609 of the 2003 International Building Code (IBC); test standards and performance criteria referenced in the IRC and the IBC; and nationally recognized test standards or procedures.
- 2.2 Basic design wind speed requirements for construction in the designated catastrophe areas along the Texas Gulf Coast are as follows:
 - Inland II Zone- 110 mph, 3-second gust
 - Inland I Zone- 120 mph, 3- second gust
 - Seaward Zone- 130 mph, 3-second gust
- 2.3 Design Pressure Requirements- For all construction, exterior window, exterior door, garage door, skylight, impact protective system, roof covering, roof vent, and exterior wall covering products must be tested for uniform static air pressure resistance using the component and cladding wind pressures appropriate for the product's size and for the product's location on the structure.
 - *For guidance on the required design pressures for cladding products, refer to Tables R301.2 (2) of the IRC or Table 1609.6.2.1(2) of the IBC.*
- 2.4 Windborne Debris Requirements- For construction in the Inland I Zone, glazed exterior opening products must either be designed to resist windborne debris or be protected from windborne debris by an impact protective system. For construction in the Seaward Zone, all exterior opening products must either be designed to resist windborne debris or be protected from windborne debris by an impact protective system.

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2.5 For a summary of requirements for each product type, see Table 1 at the end of this document.

3.0 Product Applicability and Limitations of Evaluation Report

- 3.1 Evaluation of a product does not constitute approval of the product for use on all structures. The design pressure rating or appropriate resistance rating of the product (reported in the TDI evaluation) must exceed the required design pressure or resistance determined for the specific structure.
- 3.2 The TDI will develop the product evaluation report based on the manner in which the products were tested or analyzed for wind load resistance and windborne debris resistance (if submitted). This includes the attachment of the product to the test buck and the material used for the test buck.
- *Products should be tested as they would be installed in the field. Products should be tested with a test buck or framing utilizing common framing materials and be attached to the test buck or framing with readily available, commonly used fasteners.*

4.0 Testing and Test Report Minimum Information Requirements

- 4.1 Testing Facility- Products shall be tested by an independent testing laboratory accepted by one of the following:
- Texas Department of Insurance
 - International Code Council Evaluation Service
 - AAMA, NWWDA
 - Dade County, Florida
- 4.2 Windborne Debris Testing- (Window, Door, Garage Door, Skylight and Impact Protective Systems)
The TDI can develop a product evaluation report for products tested to meet the following windborne debris standards:
- ASTM E 1886-97 and ASTM E 1996-01, or
 - Florida Building Code/Dade County test protocols (if equivalency to the ASTM standards can be determined)
- 4.3 Uniform Static Air Pressure- (Exterior wall covering and exterior opening products)
- ASTM E 330
 1. *Exception: Window and sliding glass door products* shall be tested and bear a label indicating compliance with the AAMA/NWWDA 101/I.S.2 or AAMA/NWWDA 101/NAFS specification in accordance with Section R613.3 of the IRC and Section 1714.5.1 of the IBC.
 2. *Exception: Skylights* shall be tested and bear a label indicating compliance with the AAMA/NWWDA 101/NAFS specification in accordance with Section R308.6.9 of the IRC and Section 2405.5.2 of the IBC.
 - Vinyl siding shall be tested in accordance with ASTM D 3679.
 - Equivalent test accepted by the TDI.
- 4.4 Uniform Static Air Pressure- (Roof covering and roof vent products)
- The roof covering or roof vent system shall be tested in accordance with nationally recognized standards or procedures (ASTM, FM, and UL) or other methodologies accepted by the TDI. Roof systems with built-up, modified bitumen, fully adhered or mechanically attached single ply and other membrane roof systems shall be tested in accordance with FM 4450, FM 4470, UL 580 or UL 1897. Metal panel systems through fastened or standing seam shall be tested in accordance with UL 580 or ASTM E 1592. Concrete and clay roof tiles shall be tested in accordance with SBCCI SSTD 11 (Section 1715.2 of the IBC) and their performance evaluated in accordance with Section 1609.7.3 of the IBC.
- 4.5 Lateral (Racking) Load Resistance- (Exterior wall covering products)
- The exterior wall covering may be tested in accordance with nationally recognized standards or procedures (ASTM, FM, and UL) or other methodologies accepted by the TDI. The product must also be tested for uniform static air pressure.

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- 4.6 Test Information- Test reports or other information verified by the testing facility as part of the report, i.e. drawings or bill of materials, shall provide the following information as a minimum:
- Description of the product to include model, series or product name.
 - Overall dimensions of the tested assembly.
 - Description of tested assembly configuration where applicable.
 - Component dimensions (including fixed and operable sash and panel sizes) and glass dimensions in door panels.
 - Material specifications of the product assembly pertinent to the product and installation method's resistance to the loads that were applied during testing.
 - Glass construction and glazing method for all glazed products.
 - Hardware description and attachment (include fastener type, size, and quantity)
 - Assembly information of the product pertinent to the product and installation method's resistance to the loads that were applied during testing.
 - The lumber species and grade of the test buck. If the product is attached to sheathing, specify the type and thickness of the sheathing.
 - Description of fasteners used during testing to secure the product to the test buck. Include type, size, length, spacing, and embedment of the fasteners.
 - Design or test pressure used for uniform static air pressure testing.
 - Windborne debris criteria for product testing, where applicable, to include description of the missile, missile velocity, impact location(s), and pressures used for the cyclic pressure loading.

5.0 Substantiating Information

- 5.1 The following information will be acceptable as substantiating information for development of a product evaluation:
- Code Evaluations- Current final model code, Florida Building Code, or Dade County, Florida (NOA) evaluation.
 - (1) A completed final model code, Florida Building Code, or Dade County, Florida (NOA) evaluation report with any referenced drawings or information attached.
 - (2) Complete test information or other evidence submitted to the code bodies should be provided.
 - (3) Where engineering analysis has been performed in conjunction with the model code, Florida Building Code, or Dade County, Florida evaluation and the results are included in signed and sealed drawings or specifications, the complete signed and sealed analysis may be required to be submitted to the TDI.
 - Testing Information- Test reports containing the minimum information outlined under Section 4.0 of this document.
 - (1) Where engineering analysis has been performed in conjunction with the test report for performance or installation of the product, the complete signed and sealed analysis must be submitted for inclusion of the information into the evaluation report.
 - Engineering Analysis- A signed and sealed engineering analysis may be submitted as substantiating information to analyze specific structural components or to specify acceptable installation methods.
 - (1) All calculations must be signed and sealed by a Texas licensed engineer.
 - Engineer Drawings- A signed and sealed engineer drawing may be submitted as substantiating information to analyze specific structural components or to specify acceptable installation methods. A master engineer drawing along with six (6) copies of the master shall be submitted for review.
 - Labels (Exterior windows, sliding glass doors, skylights) – For each window or sliding glass door product to be listed in the evaluation report, submit a copy of the label which complies with either Section R613.3 of the IRC or Section 1714.5.1 of the IBC. For each skylight to be listed in the evaluation report, submit a copy of the label which complies with either R308.6.9 of the IRC or Section 2405.5.2 of the IBC.
- 5.2 All evaluations, test reports and engineering analysis must be in their final form. Draft reports, evaluation or analysis can not be used as substantiating information.

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5.3 Where ultimate test loads are reported, an applicable factor of safety for the product type will be applied by the TDI to determine an acceptable design load for the evaluation report.

Table 1
Testing Requirements Based on Product Type

Testing Requirements	Product Type			
	Exterior Opening Products ¹	Roof ³ Covering Products	Exterior Wall Covering Products	Impact Protective Systems
Shall be tested to meet uniform static wind pressure requirements (Section 4.3)	Yes	Yes	Yes	Yes
May be tested to meet lateral bracing requirements	No	No	Yes	No
May be tested to meet windborne debris and cyclic wind pressure requirements (Section 4.2)	Yes	No	No	Yes
Shall be tested to meet windborne debris and cyclic wind pressure requirements (Section 4.2)	No ²	No	No	Yes

¹ Exterior opening products include windows, doors, garage doors, and skylights.

² Opening must be protected from windborne debris with an impact protective system.

³ For asphalt shingle roof coverings, please refer Asphalt Shingle Submittal Requirements.