

PRODUCT EVALUATION REPORT

Code: Florida Building Code 2020 (7th Edition)
Product Category: Skylights
Product Sub-Category: Skylights
Product Name: Kalwall Translucent Skylight-Roof Panels
Product Approval #: FL-4097
Manufacturer: Kalwall Corporation
1111 Candia Road, P.O. Box 237
Manchester, NH 03105-0237
Fire Classification: N/A

1. Executive Summary

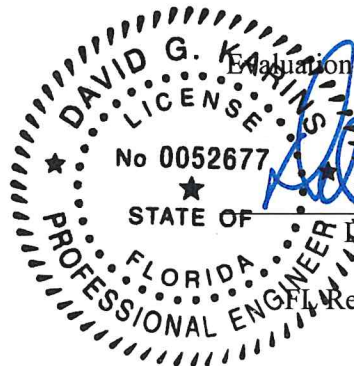
The following is a Product Evaluation Report issued by David G. Karins, P.E., a certified and licensed Florida Professional Engineer, to Kalwall Corporation (Kalwall) for statewide acceptance according to the Florida Department of Community Affairs – Florida Building Commission (FBC) Rule Chapter No. 61G20-3.005, per Method 1(d) Product Approval and Quality Assurance for Statewide Approval.

2. Statement of Compliance

Upon receipt of drawings and testing results from FBC certified testing agencies, it is the professional opinion of Karins Engineering (Karins) that the panel systems manufactured by Kalwall are in compliance with the Florida Building Code 2020 – 7th Edition (the Code) for use as skylights and that the products are, for the purpose intended, at least equivalent to that required by the Code by evidence of test results and comparative and rational analysis.

Re-evaluation of this Product Control Evaluation Report is necessary following any code changes to maintain its validity.

Evaluation Report Prepared By:
Karins Engineering
No 0052677
STATE OF FLORIDA
PROFESSIONAL ENGINEER
David G. Karins, P.E.
President
FL Registration No. 52677
September 21, 2020



Florida Certificate of Authorization #08371

3. Product Information

The Kalwall Panel Systems are translucent, fiberglass panels with framing members constructed of 6005-T5 Aluminum Alloy, minimum. Kalwall panels can be assembled into a variety of configurations, including single units, shed type, and self-supporting ridge roofs. Spans and panel sizes are a function of the wind load as determined by the Code. Final configurations are to be determined by local conditions, supported by calculations signed and sealed by a FL Registered PE.

See attached product information by Kalwall Corp. (Appendix A).

4. Substantiating Data

4.1 Test Reports

- a. The following tests were conducted and documented by FBC Approved Testing Laboratories:
 - See Architectural Testing, Inc. (ATI) Performance Test Report, ATI Project No. 90976.03-106-31, November 5, 2009 (Appendix B)
 - See Architectural Testing, Inc. (ATI) Performance Test Report, ATI Project No. 16263/16264/16265, November 1, 1995 (Appendix B)
 - See ETC Laboratories Test Report, Test Report: ETC-07-066-19171.0, July 7, 2007 (Appendix B)
 - See UL Online Certifications, Certification R7415 (Appendix B)

4.2 Evaluation Analysis

Kalwall supplied Karins with technical and engineering justification for qualification of Kalwall Translucent Panel Systems for product acceptance in confidence for the evaluation of requirements of the product according to the Code. All testing required by the Code and ASTM Standards for these products were performed by independent testing laboratories certified by FBC and not affiliated with Kalwall.

The Kalwall Translucent Panel Systems are impact-resistant and are intended for use as skylights. Therefore, the qualifications of the product for use in Florida correspond to the applicable regulations, chapters 16, 17, 20, 24 and 26 of the Code.

The design loads shall be combined according to Section 2404.2 Sloped Glazing sloped more than 15 degrees (0.26 rad) as follows:

1. 0.6*Negative wind load – dead load
2. 0.6*Positive wind load + dead load
3. 0.3*positive wind load + dead load

The testing conducted was specifically designed to meet the acceptance requirements of the FBC for skylights-roof panels as follows:

- Physical Properties & Performance Data
- TAS 201
- TAS 202
- TAS 203
- ASTM D1929
- ASTM D635
- UL 723 / ASTM E84
- ASTM D638
- ASTM D256

5. Installation

This product shall be installed in strict compliance with its respective professionally approved evaluation documents, i.e. engineering drawings, along with all components noted therein.

This product's components shall be of the material specified in the professionally approved evaluation documents, i.e. engineering drawings.

6. Limitation and Conditions

Use of this product shall be in strict accordance with its professionally approved evaluation documents, i.e. engineering drawings, along with all components noted therein.

All scope beyond the description of this product evaluation shall be the responsibility of the registered professional engineer of the host structure.

This product has been designed for use within the High Velocity Hurricane Zone (HVHZ), as well as, outside the HVHZ. The maximum design pressure used to in this evaluation is 100 PSF. The deflection criteria is as follows:

Non-HVHZ: Roof = $L/180$

HVHZ: Roof = $L/240$

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

See installation instructions for maximum panel size. Kalwall system shall be fastened to the substrate and shall be spaced at 6" on center, maximum, unless designed otherwise.

The system detailed herein is generic and does not provide information for site-specific. Where site-specific documents are required, a licensed engineer or registered architect shall perform analysis and shall prepare site-specific documents for variations in size, shape, layout, additional framing, etc. and shall be used in conjunction with this document.



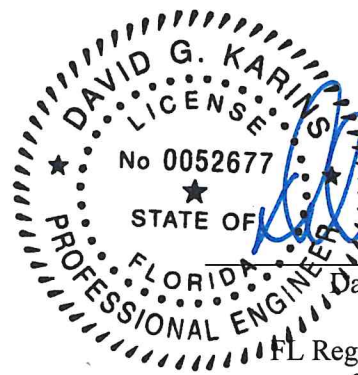
7. Certification of Independence

This Florida Professional Engineer does not have, nor does intend to acquire nor will it acquire, a financial interest in any company manufacturing or distributing products evaluated.

This Florida Professional Engineer is neither owned, operated nor controlled by any company manufacturing or distributing products it evaluates.

This Florida Professional Engineer performing an evaluation does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.

This Florida Professional Engineer performing an evaluation does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.

A circular professional engineer seal for David G. Karins, P.E., State of Florida. The seal contains the text: 'DAVID G. KARINS', 'LICENSE', 'No 0052677', 'STATE OF', 'FLORIDA', and 'PROFESSIONAL ENGINEER'. There is a blue ink signature over the seal and a date '9/21/20' written next to it.

David G. Karins, P.E.
President
FL Registration No. 52677
September 21, 2020

Appendix A

- Installation Drawings

Below is a summary of the results of deflection calculations for two specified configurations. The wind pressures of 30 PSF and 100 PSF are examples of low and high pressure under which the products are to perform.

DEFLECTION TABLE

WIND PRESSURE (PSF)	CONFIGURATION	DEFLECTION CRITERIA	L/D
30 – Roof	5'-0" Module, 6 Heavy I	L/180	184
100 – Roof (Non-HVHZ)	5'-0" Module, 6 Heavy I	L/180	241
100 – Roof (HVHZ)	5'-0" Module, 6 Heavy I	L/240	241
30 – Roof	5'-0" Mod, 2 Heavy I w/ 3 ¼ IS Heavy	L/180	180
100 – Roof (Non-HVHZ)	5'-0" Mod, 2 Heavy I w/ 3 ¼ IS Heavy	L/180	243
100 – Roof (HVHZ)	5'-0" Mod, 2 Heavy I w/ 3 ¼ IS Heavy	L/240	243

Appendix B - Provided to Validator and Administrator

- Testing Reports
- UL Certification BTOR.R7415 for UL723 (ASTM E84)
- Letter of Equivalency for ASTM D256, D635, D1929