Evaluation Report

FOAM-LOK™ FL 2000
Closed Cell Spray Foam

Manufacturer

Lapolla Industries, Inc.
15402 Vantage Parkway East, Suite 322
Houston, TX 77032 USA

for

Florida Product Approval

FL 14666.1 R5

Florida Building Code 8th Edition (2023)
Per Rule 61G20-3

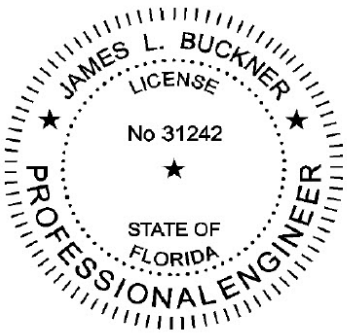
Method:	**2 – B**
Category:	**Roofing**
Sub - Category:	**Cements – Adhesives – Coatings**

Product Description:	*Spray Polyurethane Foam Adhesive*
Deck Type:	*Plywood*
Application Type:	*3 inch Fillet*

Prepared by:
James L. Buckner, P.E., SECB
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Report No. 23-590.01_FL2000-SPFA-Fillet-ER
(Revises Report No. 20-296.01_FL2000-SPFA-Fillet-ER, FL14666.1 R4)
Date: 12/26/2023

Contents:

This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.



James L. Buckner, P.E.
FL31242

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1.0 Product

1.1 **Manufacturer** Lapolla Industries, Inc.

1.2 **Product Name:** FOAM-LOK™ FL 2000
Closed Cell Spray Foam

2.0 Evaluation Scope:

2.1 **Compliance with the following**
Florida Building Code 8th Edition (2023)

2.2 **Evaluation Method:**
Florida Product Approval Rule 61G20-3.005 (2) (b)

2.3 **Evaluation Classification:**
Category: Roofing
Sub Category: Adhesives

2.4 **Properties Evaluated**
Structural Properties

2.5 **Limits of Evaluation:**
This product assembly evaluation is limited to compliance with section 2.1 to section 2.4 of this report.

3.0 Evaluated Uses:

3.1 **Structural:**
The FOAM-LOK™ FL 2000 Closed-Cell Spray Foam adhesive, as evaluated in this report, can be used for supplemental attachment of roof plywood deck to rafter/truss top chords (dimensional lumber) for commercial and residential buildings. This product may be used for code plus wind resistance in new construction or for enhancing the wind uplift resistance on existing structures.

4.0 Product Assembly Description:

4.1 **General:**
FOAM-LOK™ FL 2000 Closed-Cell Spray Foam adhesive is polyurethane foam plastic. FOAM-LOK™ FL 2000 Closed-Cell Spray Foam adhesive is produced in the field by combining a polymeric isocyanate (A) component and a resin (B) component. This spray foam adhesive provides wind uplift resistance when applied directly to the junction of the roof plywood deck and the roof rafter/truss top chords. FOAM-LOK™ FL 2000 Closed-Cell Foam adhesive fillet is applied to both sides of the roof rafter/truss top chords.

5.0 Evaluated Components to be Adhered:

5.1 Structural Roof Sheathing (Roof Deck):
Type: Plywood per FBC Chapter 23

5.2 Rafter/Truss Top Chord:
Function: Typically Roof Rafter or Wood Truss Top Chord
Type: Dimensional Lumber
Spacing: 24 in. o.c. (As Tested and Evaluated)

(Design of wood components is outside the scope of this evaluation)

6.0 Product Assembly Structural Performance:

6.1 Allowable Design Uplift Resistance:

Resistance **- 175 PSF**

Allowable design pressure for allowable stress design (ASD).

7.0 Performance Standard:

7.1 The following test protocols were performed to demonstrate compliance with the intent of the code:

- TAS 202, *Criteria for Testing Building Envelope Components using Uniform Static Air Pressure* (Structural & Negative Load Only)
- TAS 203, *Criteria for Testing Products Subject to Cyclic Wind Pressure Loading*

8.0 Code Compliance:

8.1 The product assembly described herein has demonstrated compliance with the:
8.1.1 Florida Building Code 8th Edition (2023), Section 1708.2.

9.0 (Optional) Insulation:

9.1 Evaluation of additional Spray Polyurethane Foam to the underside of wood deck for insulation purposes is outside the scope of properties evaluated in this report. Any applications and/or uses that are not within the scope of this evaluation shall be the responsibilities of others.

10.0 Limitations and Conditions of Use:

10.1 FOAM-LOK™ FL 2000 Closed-Cell Spray Foam adhesive shall be installed by a Lapolla Industries' qualified spray foam applicator trained in the processing and application of SPF systems as well as the plural component polyurethane dispensing equipment.

10.2 Scope of "Limitations and Conditions of Use" for this evaluation:

This evaluation report for "State Approval" contains technical documentation, specifications and installation method(s) which include "Limitations and Conditions of Use" throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under "State Approval".

10.3 Option for application outside "Limitations and Conditions of Use"

Rule 61G20-3.005(1)(e) allows engineering analysis for "project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code". Chapter one of the FBC and IBC addresses design for alternative materials, design and methods of construction. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.

10.4 The scope of this evaluation is limited to structural properties.

10.5 This report does not evaluate the use of this product for other types of applications as allowed in the code.

10.6 Fire Classification and Thermal Properties are outside the scope of Rule 61G20-3, and are therefore not included in this evaluation.

10.7 This report does not evaluate the use of this product for use in the High Velocity Hurricane Zone code section. (Dade & Broward Counties)

11.0 Quality Assurance:

The manufacturer has demonstrated compliance of products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity through **Intertek Testing Services, Inc.-ETL/Warnock Hersey** (FBC Organization #: QUA 1673).

12.0 Components & Material Standards:

Material shall comply with:

Property:	Nominal Values:	Standard:
Core Density	2.0 – 2.3 pcf	ASTM D 1622
Compressive Strength	25 – 30 psi	ASTM D 1621
Tensile Strength	40 – 48 psi	ASTM D 1623

The properties listed above are presented as typical average values as determined by accepted ASTM Test methods and are subjected to normal manufacturing and application variations.

13.0 General Installation Method:

- Surface Preparation:
  All surfaces intended to receive the spray foam adhesive must be dry, clean, secure, and free of any oils, grease, or other contaminant(s) that may adversely affect the adhesion of the foam. Remove sawdust and other debris from areas intended to receive the spray foam by blowing with compressed air or vacuuming with a shop vacuum. Check surfaces with moisture detection strips or other reliable method(s) to verify dryness.

- Fillet Foam Application:
  Apply the spray foam using a "picture framing" technique. Foam must cover at least 3-inches of the rafter member and 3-inches of the roof deck. The resulting triangular cant, at least 3-inches high and 3-inches wide, will cover the joint between the rafter member and the underside of the roof deck. Spray foam adhesive shall be applied in consecutive layers not to exceed 2 inches per pass. Allow foam to fully expand and cool for a period of 20 to 30 minutes or until surface temperature has returned to ambient between each layer.

  Install the system in compliance with the evaluated installation method(s). The installation method(s) described herein have been evaluated to address the scope of the evaluation. Refer to manufacturer's installation instructions as a supplemental guide for spray foam application.

(Refer to installation method on Page 6 of this evaluation report.)

14.0 Evaluation Reference Data:

14.1 Testing Application Standard (TAS) 202
Criteria for Testing building Envelope Components using Uniform Static Air Pressure
By Certified Testing Laboratories, Inc. (TST ID: 1577)
Test Number# CTLA 2056W, Date: 02/25/11

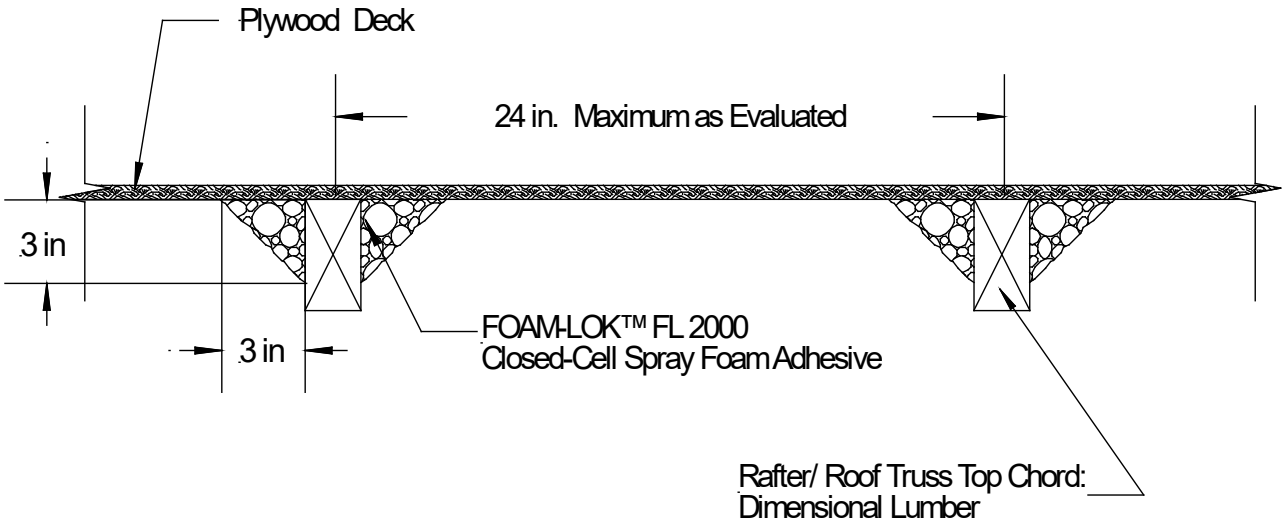
14.2 Testing Application Standard (TAS) 203
Criteria for Testing Products Subject to Cyclic Wind Pressure Loading
By Certified Testing Laboratories, Inc. (TST ID: 1577)
Test Number# CTLA 2056W, Date: 02/25/11

14.3 Quality Assurance
Intertek Testing Services NA Inc.-ETL/Warnock Hersey (FBC Organization #: QUA 1673)

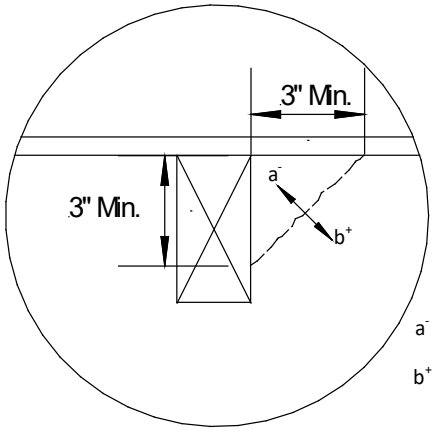
14.4 Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

Installation Method
Lapolla Industries, Inc.
FOAM-LOK™ FL 2000 Closed-Cell Spray Foam Adhesive with Plywood

Application Type: Fillet



Typical Roof Deck Section



a^- Direction: Zero Tolerance

b^+ Direction: Any Greater

Fillet Tolerances