



BUILDING CODE COMPLIANCE OFFICE (BCCO)
 PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
 METRO-DADE FLAGLER BUILDING
 140 WEST FLAGLER STREET, SUITE 1603
 MIAMI, FLORIDA 33130-1563
 (305) 375-2901 FAX (305) 375-2908

NOTICE OF ACCEPTANCE (NOA)

NCFI Polyurethanes
P.O. Box 1528
Mount Airy, NC 27030-1528

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The BCCO (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: NCFI Sprayed Polyurethane Foam Systems over Steel Deck

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA renews NOA No. 01-0820.05 and consists of pages 1 through 6.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No: 06-0712.04
Expiration Date: 11/29/11
Approval Date: 10/19/06
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ROOFING COMPONENT APPROVAL

Category: Roofing
Deck: Steel
Sub-Category: Spray Applied Polyurethane Roof System

Materials: Polyurethane
Maximum Design Pressure: -82.5 psf
Maximum Fire Classification: See General Limitation #1.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
NCFI 591-2.8	N/A	TAS 110	Polyurethane spray applied foam intended for roofing applications.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>	<u>Manufacturer</u>
Elastomeric Roof Coating	N/A	ASTM D 6083	Elastomeric coating for application over polyurethane spray applied foam.	Generic. (with current PCA)
Hilco Fiberglass Fabric	Various	N/A	Mesh impregnated with a highly specialized asphaltic material.	E.L. Hilts & Co.
Olympic Fastener		TAS 114	Insulation fastener	Olympic Mfg. Group, Inc. (with current PCA) □
Olympic Standard	3" round	TAS 114	3" round galvalume AZ55 steel plate	Olympic Mfg. Group, Inc. (with current PCA) □
Olympic Polypropylene	3.25" round	TAS 114	Polypropylene plastic plate	Olympic Mfg. Group, Inc. (with current PCA) □
TAPCO 410 quick dry asphalt	N/A	ASTM D 41	Primer used as a bonding coat.	Tropical Asphalt Products Corporation

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Celotex Corporation Testing Service	258132	Physical Properties	05/97
Underwriters Laboratories Inc.	01NK20266	UL 1897	06/20/01
PRI Asphalt Technologies	NCF-003-02-01	ASTM D 2842 ASTM D 2126	02/13/01
IRT & Consulting of S. Florida, Inc.	01015, 016, 018, 019, 020, 021	TAS 114	06/12/01
Factory Mutual	3016938	Class 4470/4880	01/13/05



AMBIENT HUMIDITY APPLICATION LIMITS SPRAYED POLYURETHANE FOAM

Maximum Wet Bulb and Relative Humidity for a Given Dry Bulb Reading
Table 1

Dry Bulb Temp. (°F)	Wet Bulb Temp. (°F)	R.H. (%)	Dry Bulb Temp. (°F)	Wet Bulb Temp. (°F)	R.H. (%)
45	40½	67	73	68	79
46	41½	68	74	70	78
47	42½	68	75	70	78
48	43½	69	76	70½	77
49	43½	69	77	71½	77
50	45½	70	78	72	76
51	46½	70	79	73	76
52	47½	71	80	73½	75
53	48½	71	81	74½	74
54	49½	72	82	75	73
55	50½	72	83	75½	72
56	51½	73	84	76	71
57	52½	73	85	77	70
58	53½	74	86	77½	69
59	54½	74	87	78	68
60	55½	75	88	78½	66
61	56½	75	89	79	65
62	57½	76	90	79½	64
63	58½	77	91	80	63
64	59½	77	92	80½	62
65	60½	78	93	81	60
66	61½	78	94	81½	59
67	62½	79	95	82	58
68	63½	79	96	82	56
69	64½	80	97	82½	54
70	65½	80	98	82½	53
71	66½	80	99	83	52
72	67½	79	100	83	50

NOTE: Spray polyurethane foam shall not be sprayed when environmental conditions are beyond the temperature and relative humidity limits listed in this Table.



APPROVED ASSEMBLIES:

Deck Type 2: Steel, Non-Insulated
Deck Description: 18-22 ga. Steel
System Type: Sprayed polyurethane foam covered with an elastomeric coating.

All General and System Limitations apply.

Deck: Minimum 22 ga., Type B steel decking attached to steel supports spaced 6 ft. o.c. 5/8 puddle welds and washers fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Teks 1 fasteners spaced at max. of 6" o.c.

Deck Preparation: Seal all deck side laps with spray-applied polyurethane foam and then install an asphalt coated fiber glass mesh fabric having a 20 x 10 weave and meeting ASTM D 1668 Type I. The mesh is to be installed over the entire surface of the metal deck in accordance with NCFI specifications and recommendations.

Surface Preparation: Metal surfaces should cleaned with TSP or equal.
For ferrous metal, remove loose rust and unsound primer from shop-primed iron and steel surfaces by scraping, wire brushing or sandblasting. Prime according to NCFI recommendations. For non-ferrous metals, clean and prime aluminum, copper and stainless steel surfaces as recommended by NCFI.
Primers shall be applied in accordance with their manufacturers instructions. All primers must be thoroughly dry and cured prior to foam application.

Polyurethane Foam Application: The polyurethane foam shall be applied uniformly over the entire surface a minimum of 1" thick in compliance with the requirements set forth in Roofing Application Standard RAS 109. The sprayed polyurethane foam shall be feathered at the edges to produce a smooth transition.

Protective Coating Application: Shall apply a Miami-Dade County approved elastomeric roof coating with a current NOA in accordance with the guidelines listed in the NOA.

Polyurethane foam surface shall be free of moisture, dust, debris, oils, tars, grease or other materials that will impair adhesion of the protective coverings. Any damage or defects to the polyurethane foam surface shall be repaired prior to the coating application. The base coat shall be applied the same day as the foam when possible. If more than 72 hours elapse prior to the application of the base coat, the polyurethane foam shall be inspected for UV degradation.

Maximum Design Pressure: -82.5 psf (See General Limitation #9)



Deck Type 2: Steel, Insulated
Deck Description: 18-22 ga. Steel
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All General and System Limitations apply.

Deck: Minimum 22 ga., Type B steel decking attached to steel supports spaced 6 ft. o.c. 5/8 puddle welds and washers fasteners spaced 6" o.c. (at the bottom flute), and with side laps attached with Buildex Tek's 1 fasteners spaced at max. of 6" o.c.

<u>Insulation (Optional) Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Any approved polyisocyanurate insulation Minimum: 1.5" x 4' x 4'	Olympic S/P	[3]	8	1:2 ft. ²

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): High Density Wood Fiberboard Minimum: 1/2" x 4' x 4'	Olympic S	[3]	8	1:2 ft. ²

Approved Type(s): Dens Deck Minimum: 1/4" x 4' x 8'	Olympic S	[3]	16	1:2 ft. ²
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Protective Coating Application: Shall apply a Miami-Dade County approved elastomeric roof coating with a current NOA in accordance with the guidelines listed in the NOA.

Polyurethane foam surface shall be free of moisture, dust, debris, oils, tars, grease or other materials that will impair adhesion of the protective coverings. Any damage or defects to the polyurethane foam surface shall be repaired prior to the coating application. The base coat shall be applied the same day as the foam when possible. If more than 72 hours elapse prior to the application of the base coat, the polyurethane foam shall be inspected for UV degradation.

Maximum Design Pressure: -45 psf (See General Limitation #7)



GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. All work shall be performed by a contractor licensed to perform roofing in Miami-Dade County. The contractor shall be familiar with the details and specifications published by NCFI and the elastomeric coating manufacturer. **An original signed and sealed authorization letter from NCFI, approving both the foam applicator and the project, shall accompany each permit application.**
3. Spray polyurethane foam shall not be sprayed when ambient temperature is within 5 degrees of the dew point. Ambient humidity applications limits shall be as listed in Table 1 herein. Contractor shall monitor and record environmental conditions in the Job Log in compliance with RAS 109. Job Log shall be maintained at the job site and accessible to The Building Official.
4. Flashings and waterproof coverings for expansion joints shall be of compatible materials and in accordance with NCFI published literature. Installation of system shall be in accordance with NCFI published literature.
5. Miscellaneous materials such as adhesives, elastomeric caulking compounds, metal, vents and drains shall be a composite part of the roof system and shall be compatible with the foam and coating.
6. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and the wind load requirements of applicable building code.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

END OF THIS ACCEPTANCE

