



ASPHALT
TECHNOLOGIES

**Evaluation of
Active Ventilation Products Inc.
Aura-D (AV-24) Ventilator
in Accordance With
FLORIDA BUILDING CODE PROTOCOL TAS 100(A)-95
TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN
RESISTANCE AND/OR INCREASED WINDSPEED RESISTANCE OF
SOFFIT VENTILATION STRIP AND CONTINUOUS OR INTERMITTENT
VENTILATION SYSTEM INSTALLED AT THE RIDGE AREA**

Metro-Dade Notification Number: PRI03031

September 30, 2003

TEST REPORT

Dade County Building Code Compliance Office
FLORIDA BUILDING CODE PROTOCOL TAS 100(A)-95

TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN RESISTANCE AND/OR INCREASED WINDSPEED RESISTANCE OF SOFFIT VENTILATION STRIP AND CONTINUOUS OR INTERMITTENT VENTILATION SYSTEM INSTALLED AT THE RIDGE AREA

September 30, 2003

Client: Active Ventilation Products
P. O. Box 1521
85 Clinton Street
Newburgh, NY 12551-1521

Metro-Dade Notification Number: PRI03031
Test Date: September 24, 2003
PRI Job No: AVP-005-02-01

1.1 Description of Discontinuous Roof System:

Vent System

Product Type: Off Ridge Vent
Product Name: Aura-D (AV-24)
Dimensions: 15 1/2 high x 30 inch, diameter, with a 30 x 30
inch flange
Manufacturer: Active Ventilation Products

Prepared Roof Covering

Manufacturer: Tamko Roofing Products
Product Name: 25 yr
Product Dimensions: 12" x 36"
Product Type: Three tab strip shingle

Felt Underlayment

Manufacturer: Tamko Roofing Products
Type: ASTM D 226, Type I (No. 15)

AVP-005-02-01

PRI Accreditations: ICBO TL-189; NES Report No. NER-639; Metro-Dade 03-0515.04

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Roof Cement/Mastic

Manufacturer: Tamko Roofing Products
Name: Heavy Bodied Flashing Cement
Type: ASTM D 4586, Type I
Tin Caps: 29 gauge, 1 7/8 inch, and diameter

Primer

Manufacturer: Tamko Roofing Products
Name: Quick Dry Primer
Type: ASTM D 41

Asphalt Coated (Open Mesh) Fabric, 6 in. Wide:

Manufacturer: Gardner

Other Materials:

Caulk/Sealant: Urethane
Nails: 1¼ X ¾ inch Galvanized ring shank, roofing nails
Edge Metal: 26 gauge, 2 X 2 inch X 10'
Tin Caps: 29 gauge, 1⅝ inch diameter

1.2 Method of Roof Construction:

PRI Asphalt Technologies constructed the deck used for this testing as described in the following and in accordance with the requirements of TAS 100-95 and the Florida Building Code: Section 1518. The plywood deck was constructed with 2 inch by 6 inch framing members, spaced 24 inches apart and 15/32-inch thick APA 32/16 span rated sheathing. The sheathing was attached with 8d common nails at 6 inches on center at the edges and 12 inches on center at intermediate supports. See Figure 1 from TAS 100(A)-95.

Underlayment

The underlayment for this deck, ASTM D 226, Type I (No. 15) felt, was installed in accordance with the minimum requirements set forth in Florida Building Code: Section 1518. The underlayment was applied in two layers by applying a 19 inch wide starter strip at the eave and then applying additional sheets to cover the deck with a 19 inch overlap and minimum 6 inch end laps. The underlayment was fastened to the deck using 1¼ X ¾ inch Galvanized ring shank, roofing nails

through 29 gauge 1 $\frac{5}{8}$ inch diameter tin caps placed 6 inches on center at the edges and laps and 12 inches on center in the field.

Metal Flashing

Galvanized, 26 gauge, 2 inch X 2 inch metal drip edge was installed at the perimeter of the deck over the underlayment and then fastening 4 inches on center staggered using with 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch Galvanized annular ring shank, roofing nails. Any gaps and overlaps of the primed drip edge were sealed with roof cement. All corners were overlapped a minimum of 4 inches. The metal drip edge, after fastening, was primed with asphalt primer.

Shingle Application

The asphalt shingles were applied using a 7 inch width starter strip and at the eve edge of the test deck. Each starter strip was set in a 8 inches or wider bed of flashing cement and fastened with at least six 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch Galvanized annular ring shank, roofing nails. The shingles were applied at a 6 inch offset. The shingles were secured to the deck with 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch Galvanized annular ring shank, roofing nails at a rate of six nails per full shingle. Shingles at eave and rake edges were set in an $\frac{1}{8}$ x 8 inch wide bed of roof cement. All shingle cutouts and end pieces were positioned such that no piece exceeded 2 inches distance from the nail fastener. At the rake edges of the deck, the singles were fastened with 1 1/4 inch X 3/8 inch galvanized ring shank nails and cemented.

Vent Application

Two vent openings 24 inches in diameter were centered between the deck joists and positioned so the vent was 18 inches from the ridge. A $\frac{3}{8}$ continuous bead of Urethane sealant was placed between the shingle layer and the underlayment at the cut edge of the 24 inch vent openings. Two $\frac{3}{8}$ continuous beads of Urethane sealant was placed beneath the flanges of the Aura off ridge vents 1 and 2 inches from the perimeter. The vents were centered over the 24 inch diameter openings and fastened to the roof deck with 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch Galvanized annular ring shank, roofing nails placed 1 inch from outer edge of the flange at the four corners and 9 inches on center between the corners. The upper half of the flange was slipped beneath and covered with 3 courses of shingles. The shingles were fastened through the vent flange with 1 $\frac{1}{4}$ X $\frac{3}{8}$ inch Galvanized annular ring shank, roofing nails. All nail, heads were sealed with roof cement.

1.3 Method of Conditioning

The deck with roofing system applied was conditioned for sixteen hours. A recording thermocouple verified that the surface temperature of the shingles reached 135°F for the conditioning period. After vent installation no additional conditioning was required.

1.4 Photographs of Top and Underside of Deck Immediately Prior and Subsequent to Commencement and Termination of Testing.

TOP OF DECK IMMEDIATELY BEFORE COMMENCEMENT OF TEST



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UNDERSIDE OF DECK IMMEDIATELY BEFORE COMMENCEMENT OF TEST



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SOFFIT AREA BEFORE COMMENCEMENT OF TEST



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TOP OF DECK IMMEDIATELY AFTER END OF TEST



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UNDERSIDE OF DECK IMMEDIATELY AFTER END OF TEST



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SOFFIT AREA IMMEDIATELY AFTER END OF TEST



1.5 Absorptive Material Description

The absorptive material used for the simulated rainfall calibration was 46 gauge organic felt.

1.6 Wind stream, Simulated Rain Fall, and Flow Meter Calibration Data and Calculations.

See Appendix A.

1.7 Detailed Observations.

TAS 100(A) DATA AND OBSERVATIONS
Active Ventilation Aura-D (AV-24) Ventilator
 September 24, 2002

Slope: 2" in 12"

Air Temp: 86 °F

Deck Conditioning: Not Required

Air Velocity Condition	Simulated Rainfall Condition	Duration
35 mph Water Volume <u>0</u> ml	8.8 in/hr No water infiltration under deck	15 min
0 mph Water Volume <u>0</u> ml	Off No water infiltration under deck	5 min
70 mph Water Volume <u>0</u> ml	8.8 in/hr No water infiltration under deck	15 min
0 mph Water Volume <u>0</u> ml	Off No water infiltration under deck	5 min
90 mph Water Volume <u>0</u> ml	8.8 in/hr No water infiltration under deck	15 min
0 mph Water Volume <u>0</u> ml	Off No water infiltration under deck	5 min
110 mph Water Volume <u>0</u> ml	8.8 in/hr No water infiltration under deck	5 min
0 mph Water Volume <u>0</u> ml	Off No water infiltration under deck	5 min

Summary Observations: No Vent movement occurred during the test. No water infiltration was measured during the test. A total of 830,720 milliliters of water delivered to the 8 X 6 foot test area during 50 minutes of delivery. Maximum allowable infiltration is 0.05 percent or 415 milliliters.

1.8 Volume of water, which infiltrated the vent openings.

0.0 milliliters = 0.0% of water applied to the test deck.

1.9 Water Infiltration Through Sheathing.

None

1.10 Shingles Which Blow Off, Tear or Blow Upward Without Reseating:

None

2.0 Result of Testing:

PASS (No water applied infiltrated the vent system)

The sample submitted for testing complies with all the requirements of Metro-Dade Protocol TAS 100-95, **TEST PROCEDURE FOR WIND AND WIND DRIVEN RAIN RESISTANCE OF DISCONTINUOUS ROOF SYSTEMS.**

Signed: _____
Gary H. Griswold
Manager, Testing Services

Approved: _____
Charles L. Thomas
Professional Engineer

Date: _____

Date: _____

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