

PERFORMANCE TEST REPORT

Rendered to:

CARLISLE SYNTEC INCORPORATED

**SERIES/MODEL: EcoStar, Inc.
"Majestic Slate Shingles"**

Report No:	01-39866.02
Test Date:	08/07/01
Report Date:	09/19/01
Expiration Date:	08/07/05



Architectural Testing

PERFORMANCE TEST REPORT

Rendered to:

CARLISLE SYNTEC INCORPORATED
P.O. Box 7000
Carlisle, Pennsylvania 17013

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Test Date: 08/07/01
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Product: EcoStar, Inc. "Majestic Slate Shingles"

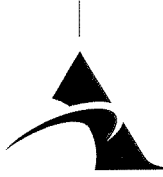
Project Summary: Architectural Testing, Inc., (ATI) was contracted by Carlisle SynTec Incorporated to conduct tests on a simulated slate roofing product identified as EcoStar, Inc. "Majestic Slate Shingles". The mock-up was tested to and met the performance requirements according to the Dade County Building Code PA 100-95. This report includes a complete description of the "As Tested" roof assembly, photos, installation guidelines, and documentation of the test results.

Reference Documents: The test specimen was evaluated in accordance with Dade County Building Compliance Office Protocol PA 100-95, *Test Procedure for Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems*.

Official Observers: The following representatives witnessed all or part of the testing.

Joe Malpezzi
Carl Shrawder
Dick Gillenwater
Carl Stone
Scott Kramer

Carlisle SynTec, Incorporated
Carlisle SynTec, Incorporated
Carlisle SynTec, Incorporated
Architectural Testing, Inc.
Architectural Testing, Inc.



PA 100-95 WIND DRIVEN RAIN TEST

Overall Size: 8' 0" wide by 10' 0" long (with valley condition)

Slope: 4:12

General Description: The 4:12 slope roof system test assembly incorporated a valley, eave and one rake condition. The plywood test deck consisted of four ply 15/32" thick sheathing installed over 2" x 10" perimeter supports and 2" x 10" intermediate supports spaced on 24" centers. The valley condition was constructed into the test deck and located at the deck's front edge.

The "Majestic Slate Shingle" was fabricated from a pliable plastic. A full shingle was 12" wide x 18" high.

The roof deck was prepared with an underlayment application. A 36" wide ice and water barrier was applied around the roof perimeter and through the valley. 30 lb roofing felt was applied next allowing a 9" lap on every sheet and fastened with 1-1/2" long roofing nails spaced every 6". A 20" wide metal flashing was placed in the valley and fastened with 1-1/2" long roofing nails spaced every 12". Aluminum drip edge was utilized at the eave and rake conditions. Each full shingle was initially fastened with two 1-1/2" long roofing nails. Overlapping shingles were positioned allowing for a 6" exposure, and these were also fastened with two 1-1/2" long roofing nails (which penetrated the shingle below). The resulting finished layout resulted in the use of four roofing nails for attachment of each full shingle. Each half shingle was initially fastened with two 1-1/2" long roofing nails and the resulting finished layout resulted in the use of three roofing nails for attachment of each half shingle. Exposed nails at top shingles were sealed.

Test Procedure:

Interval No.	Wind Speed (mph)	Time (min)	Water Spray
1	35	15	On
2	0	10	Off
3	70	15	On
4	0	10	Off
5	90	15	On
6	0	10	Off
7	110	5	On
8	0	10	Off



Test Results: Sample #1

Wind Speed

35 mph
70 mph
90 mph
110 mph

Observations

No leakage
No leakage
No leakage
No leakage

Passed

Reference Photos Nos. 1 through 13.

General Note: *Several shingles lifted during the test intervals of 70, 90 and 110 mph. Most settled flat within a few minutes following the tests. See photo No. 14 for shingle condition the following day. There was no damage to the roof system at the conclusion of the test.*

A copy of this report will be retained by ATI for a period of four years. This report is the exclusive property of the client so named herein and is applicable to the sample tested. Results obtained are tested values and do not constitute an opinion or endorsement by this laboratory.

For ARCHITECTURAL TESTING, INC.:

Scott D. Kramer
Technician

Joseph W. Wise
Director – Project/Curtain Wall Testing

SDK:baw
01-39866.02



DOCUMENT CONTROL ADDENDUM #01-39866.00

Current Issue Date: 09/19/01

Report No.: 01-39866.01

Requested by: Joe Malpezzi, Carlisle SynTec Systems

Purpose: Performance report for research and development.

Issued Date: 08/31/01

Comments: Specimen was tested to Metro-Dade PA 100-95. This was not a certified test.

Report No.: 01-39866.02

Requested by: Joe Malpezzi, Carlisle SynTec Incorporated

Purpose: Revision of ATI Report No. 01-39866.01

Issued Date: 09/19/01

Comments: Corrections and preferences to initial report.