PA 100-95 Wind Driven Rain Test

Client: C & H Roofing, Inc.
Product: Endureed 'Thatch' Shingles

MTS Job No.: 520397
Metro Dade Not. No.: 99232

Slope: 2" in 12" **Air Temp:** 74 °F **Deck Conditioning:** Not Req'd

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Air Velocity: 35 MPH **Simulated Rainfall:** 8.8 ins/hr **Time:** 15 min
Slight undulation of individual fibers, no significant lift. No water intrusion observed.

Air Velocity: Off **Simulated Rainfall:** Off **Time:** 10 min
No water intrusion observed. All thatch relaxed to a normal position.

Air Velocity: 70 MPH **Simulated Rainfall:** 8.8 ins/hr **Time:** 15 min
Undulation of individual fibers occurring at gable, rake and step edges. some fibers bent to 90°. No water intrusion observed.

Air Velocity: Off **Simulated Rainfall:** Off **Time:** 10 min
No water intrusion observed. All thatch relaxed to a normal position.

Air Velocity: 90 MHP **Simulated Rainfall:** 8.8 ins/hr **Time:** 15 min
Heavy undulation of individual fibers occurring at gable, rake, step edges. Some fibers bent beyond 120°. No water intrusion observed.

Air Velocity: Off **Simulated Rainfall:** Off **Time:** 10 min
No water intrusion observed. All thatch relaxed to a normal position.

Air Velocity: 110 MPH **Simulated Rainfall:** 8.8 ins/hr **Time:** 5 min
Very heavy undulation of individual fibers occurring at gable, rake, step edges and lift occurring in the fields perpendicular to the wind stream. Some fibers bent beyond 120°. No water intrusion observed.

Air Velocity: Off **Simulated Rainfall:** Off **Time:** 10 min
No water intrusion observed. All thatch relaxed to a normal position.

Summary of Observations
Underside of Deck: No water intrusion occurred. PASS
Roof Top Surface: Undulation of individual fibers occurred but after the test the thatch relaxed to a normal position. PASS

Test Conducted by:
G.H. Griswold
Project Coordinator
Date: 9/17/1999

Approved by:
Mark E. Hennis
Research Chemist
Date 10/5/99