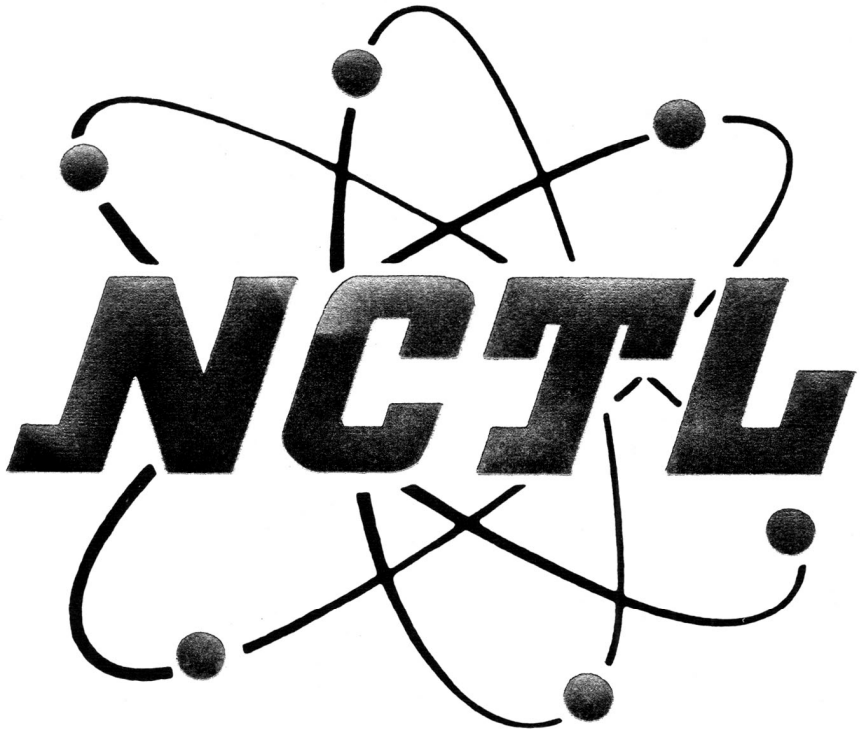

Clever Covers, Inc. dba Storm Stoppers™

STRUCTURAL PERFORMANCE TEST

NCTL-210-3128-1

Missile C
Wind Zones 1 & 2

NATIONAL CERTIFIED TESTING LABORATORIES

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8350 PARKLINE BLVD SUITE 320 • ORLANDO, FLORIDA 32809 • TELEPHONE (407) 240-1356
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www.nctlinc.com

ASTM E1996 COMPLIANCE STATEMENT

On December 21, 2005, Clever Covers, Inc. completed impact testing at National Certified Testing Laboratories in Orlando, FL. All tests were performed in full accordance with ASTM E 1886 and ASTM E 1996 .

Manufacturer:	*Clever Covers, Inc. dba Storm Stoppers™*
Product Series:	*Original 3/8" Translucent Storm Stoppers™ Panel*
Product Configuration Tested:	*Fixed Panel*
Tested Size:	*65" x 108" overall*
Glazing Configuration:	*N/A*

Level of Protection:	*Basic Protection*
Wind Zone:	*Wind Zone 2 – 120 mph ≤ basic wind speed < 130 mph at greater than one mile from the coastline measured from the mean high water mark.*
Assembly Height Above Ground:	*Less than or equal to 30 feet*

Impact Missile Used:	*Missile C*
Positive Design Pressure:	*N/A*
Negative Design Pressure:	*N/A*

See NCTL Report 210-3128-1 for complete specimen description and test results.

NATIONAL CERTIFIED TESTING LABORATORIES

Rick Moffett
Technician

Chris Bennett
Division Manager

01/27/06

PROFESSIONALS IN THE SCIENCE OF TESTING

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IMPACT PERFORMANCE TEST REPORT

Report No: NCTL-210-3128-1
Test Date: 12/21/05
Report Date: 12/28/05

Client: *Clever Covers, Inc.*
dba Storm Stoppers™
P O Box 547969
Orlando, FL. 32854-7969

Test Specimen: *Storm Stoppers™ Translucent Plastic Panel (65" x 108")*

Test Standards: *ASTM E1996-03, "Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors, and Storm Shutters Impacted by Windborne Debris in Hurricanes."* ***(Impact Only)***

TEST SPECIMEN DESCRIPTION

General: *The test specimen was a 65" x 108" 3/8" thick translucent corrugated plastic panel. An adhesive bonding promoter (primer) was applied to the Storm Stopper™ Panel under the 3M Dual Lock™ fasteners. The specimen was tested with glass behind the panel and there was no glass breakage at impact.*

Installation: *The test specimen was fastened to a 65" x 108" white aluminum window frame with sixty eight (68) 1.0" x 1.50" clear 3M Dual Lock™ fastener pairs, spaced 4.5" apart. There was one (1) fastener on the plastic panel and one (1) on the window frame at each location. Of the sixty eight (68) total fastener pairs, they were located nineteen (19) at the top, sixteen (16) at the bottom, eleven (11) on each side, six (6) on the horizontal cross bar measuring from left to right and five (5) on the vertical cross bar measuring from top to bottom (see fastener diagram for installation details).*

Interior & Exterior Surface Finish: *Translucent*

TEST PARAMETERS

The appropriate missile to be used for impact tests was selected in accordance with section 6 of ASTM E1996 based on the following criteria:

Level of Protection:	*Basic Protection*
Wind Zone:	*Wind Zone 2 - 120 mph ≤ basic wind speed < 130 mph at greater than one mile from the coastline measured from the mean high water mark.*
Assembly Height Above Ground Level:	*Less than or equal to 30 feet*

01/27/06

IMPACT TEST RESULTS

Large missile impact tests were conducted using a #2 Southern Yellow Pine 2 x 4 measuring 48" in length and weighing 4.50 lbs (Missile C) as shown in Table 2 of ASTM E 1996. Missile speeds and locations were in accordance with section 5.3 and Table 2 ASTM E1996. For pass/fail criteria, no penetration is defined as no tear longer than 5 inches in length and 1/16" wide or no opening through which a 3" diameter solid sphere can freely pass per section 7 of ASTM E 1996. All specimens were conditioned at 70° F ± 15°F prior to testing. Missile orientation at impact complies with section 11.2.2 of ASTM E1886

Specimen A - Panel

Impact No.	*Impact Location*	*Missile Speed*	*Results*
1	*Center of panel*	*40 feet/sec 27 mph*	*No Penetration*

Specimen B - Panel

Impact No.	*Impact Location*	*Missile Speed*	*Results*
1	*Top right Corner of Panel*	*40 feet/sec 27 mph*	*No Penetration*

Specimen C - Panel

Impact No.	*Impact Location*	*Missile Speed*	*Results*
1	*Bottom left Corner of panel*	*40 feet/sec 27 mph*	*No Penetration*

TESTS COMPLETED 12/21/05

Testing Observed by: *Rick Moffett (NCTL)*
Chris Bennett (NCTL)
John D. Smith (Clever Covers, Inc.)

The listed results were secured by using the ASTM E1886 test method and indicate compliance with the performance requirements of ASTM E1996 for the listed test parameters. ***(Impact only)***

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested and do not imply the quality of similar products manufactured or installed identical to the tested product. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in compliance with the referenced ASTM specifications. This report may not be reproduced, except in full, without the written consent of NCTL.

NATIONAL CERTIFIED TESTING LABORATORIES

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