Architectural Testing

TEST REPORT

Rendered to:

FIBER COMPOSITES CORPORATION

For:

Reformulated *fiberon*® *Horizon* Deck Boards
HDPE Composite Deck Boards

Report No: 86626.01-119-19
Report Date: 10/14/08

130 Derry Court
York, PA 17406-8405
phone: 717-764-7700
fax: 717-764-4129
www.archtest.com

Architectural Testing

TEST REPORT

86626.01-119-19
October 14, 2008

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Architectural Testing

TEST REPORT

Rendered to:

FIBER COMPOSITES CORPORATION
34570 Random Drive
New London, North Carolina 28127

Report No: 86626.01-119-19
Test Date: 10/10/08
Report Date: 10/14/08

1.0 General Information

1.1 Product

Reformulated *fiberon*® *Horizon* Composite Deck Boards

1.2 Project Description

Architectural Testing was contracted by Fiber Composites Corporation to perform testing on their reformulated *fiberon*® *Horizon* composite deck boards. The purpose of the testing is coefficient of friction (slip resistance) testing in accordance with ASTM D 2394-05.

1.3 Product Description

The reformulated *fiberon*® *Horizon* composite deck boards are an extruded composite material composed of part polyethylene and part wood fiber. The manufactured product is intended for use as an exterior walking deck board. The mixture used in the processing of the product is extruded through a continuous feed system and is produced as a deck board measuring a nominal 1 in thick and 5-1/2 in wide with 1/4 in radius edges. Tested surfaces were smooth. Test specimens consisted of Brick and Slate colored products. A drawing is included in Appendix A to verify the overall dimensions and other pertinent information of the tested product.

1.4 Product Sampling

All reformulated *fiberon*® *Horizon* composite deck boards were provided by Fiber Composites Corporation.

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1.5 Witnessing

There were no witnesses from Fiber Composites Corporation present for testing conducted and reported herein.

1.6 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in a laboratory set to maintain temperature in the range of 68 ± 4ºF and humidity in the range of 50 ± 5% RH. All test specimen materials were stored in the laboratory environment for no less than 40 hours prior to testing.

2.0 Reference Standards

ASTM D 2394-05, S*tandard Test Methods for Simulated Service Testing of Wood and Wood-Base Finish Flooring*

3.0 Slip Resistance Testing

3.1 General

The purpose of this testing is to evaluate slip resistance of the reformulated *fiberon*® *Horizon* composite deck board for dry and wet conditions.

3.2 Test Specimens

Two sets of tests (dry and wet conditions) were conducted on two test specimens. Deck boards were provided in 6 in nominal lengths and measured a nominal 5.5 in wide and 1.0 in deep.

3.3 Test Procedure

Testing was performed using the methods described by ASTM D 2394. The deck board was placed on a testing apparatus as prescribed by ASTM D 2394 and placed under a 26.30 pound sled assembly consisting of a 25 pound calibrated weight, a wooden cleated sled, and a 4-1/2 in by 4 in by 1/4 in thick prime grade leather tile. The leather tile was the sliding surface in direct contact with the test board. Prior to each slip load measurement, the leather surface was lightly sanded and dry-brushed clean of debris. The sanding process was accomplished with 150 grit coarse sandpaper, making five passes in diagonal directions. Testing was performed in a SATEC Unidrive, Model MII 50 UD Universal Testing Machine (ICN: Y002011) with a 50 pound load cell, to which the sled was attached with a single steel cable.

3.3 Test Procedure (Continued)

The sled was then pulled at a constant rate of crosshead motion equal to 0.05 inches per minute until the load to break the static friction was reached. This value was recorded as the slip load. Tests were conducted parallel with the deck board (0 degrees), 90 degrees, 180 degrees, and 270 degrees on three dry and three wet specimens. All slip loads were recorded in the unit weight of pound and divided by the sled weight to determine the static coefficient of friction.

3.4 Test Results

3.4.1 Control Sample

	Direction	Slip Load (lb)	S.C.F. [1]
		Test No. 1	
Dry	0°	12.466	0.47
	180°	12.452	0.47
	90°	11.660	0.44
	270°	12.997	0.49

[1.] *S.C.F. - Static coefficient of friction*

	Direction	Slip Load (lb)	S.C.F. [1]
		Test No. 1	
Wet	0°	12.906	0.49
	180°	13.970	0.53
	90°	12.929	0.49
	270°	13.640	0.52

[1.] *S.C.F. - Static coefficient of friction*

3.4 **Test Results** (Continued)

3.4.2 Test Sample (B4)

	Direction	Slip Load (lb) Test No. 1	S.C.F. [1]
Dry	**0°**	14.363	0.55
	180°	14.111	0.54
	90°	13.426	0.51
	270°	12.994	0.49

[1.] *S.C.F. - Static coefficient of friction*

	Direction	Slip Load (lb) Test No. 1	S.C.F. [1]
Wet	**0°**	15.165	0.58
	180°	15.546	0.59
	90°	15.221	0.58
	270°	16.018	0.61

[1.] *S.C.F. - Static coefficient of friction*

4.0 Closing Statement

Detailed drawings, data sheets, representative samples of test specimens, a copy of this test report, and all other supporting evidence will be retained by Architectural Testing for a period of four years from the original test date. At the end of this retention period, said materials shall be discarded without notice, and the service life of this report by Architectural Testing shall expire. Results obtained are tested values and were secured using the designated test methods. This report neither constitutes certification of this product nor expresses an opinion or endorsement by this laboratory; it is the exclusive property of the client so named herein and relates only to the tested specimens. This report may not be reproduced, except in full, without the written approval of Architectural Testing.

For ARCHITECTURAL TESTING:

Digitally Signed by: Justin M. Mann

Justin M. Mann
Laboratory Supervisor
Structural Systems Testing

Travis A. Hoover
Program Manager
Structural Systems Testing

JMM:jmm/alb

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix A - Drawings (1)
Appendix B - Photographs (2)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	10/14/08	N/A	Original report issue

APPENDIX A

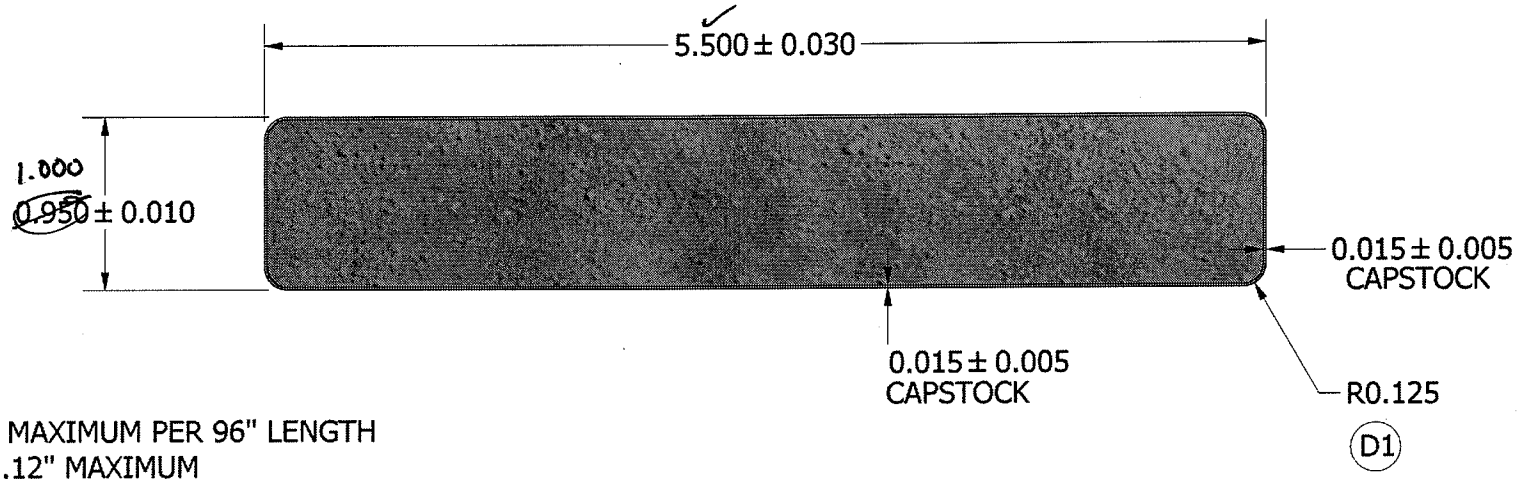
Drawings

Architectural Testing

Test sample complies with these details.
Deviations are noted.

Report# 86626.01-119-19

Date 10/10/08 Tech JMM



BOW: .12" MAXIMUM PER 96" LENGTH
SNAKING: .12" MAXIMUM
FLATNESS (CROWNING): .015" MAXIMUM PER 6" WIDTH

NO CAPSTOCK CHIPS ON ENDS OF BOARDS
CAPSTOCK SHOULD BE CONSISTENT AROUND PERIMETER

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REV.	DATE	DESCRIPTION	ECN #
D1	10/1/07	.125R WAS .188R	
C2	7/25/07	1.56 LB/FT WAS 1.62 LB/FT	
C1	7/25/07	.015" CAPSTOCK WAS .040"	
B1	7/24/07	ADDED R.188 DIM.	
A1	6/26/07	DWG# WAS E-00190	

DO NOT SCALE DRAWING | CHECKED BY | QA APPROVED | MFG APPROVED | DRAWN DAVE MANN

SCALE | WEIGHT/ LBS PER FOOT 1.56 LB/FT

PART VOLUME | MATERIAL

Fiber Composites, LLC
181 Random Dr. New London, NC 28127

DESCRIPTION: 6" PVC DECK BOARD

DWG NO **010-0026** REV D

SIZE A | DATE 6/7/2007 | SHEET 1 OF 1

APPENDIX B

Photographs

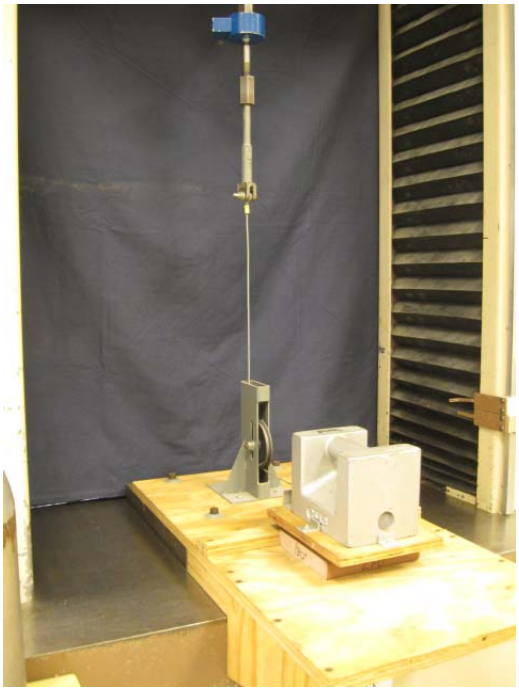

Photo No. 1
Overall Test Setup

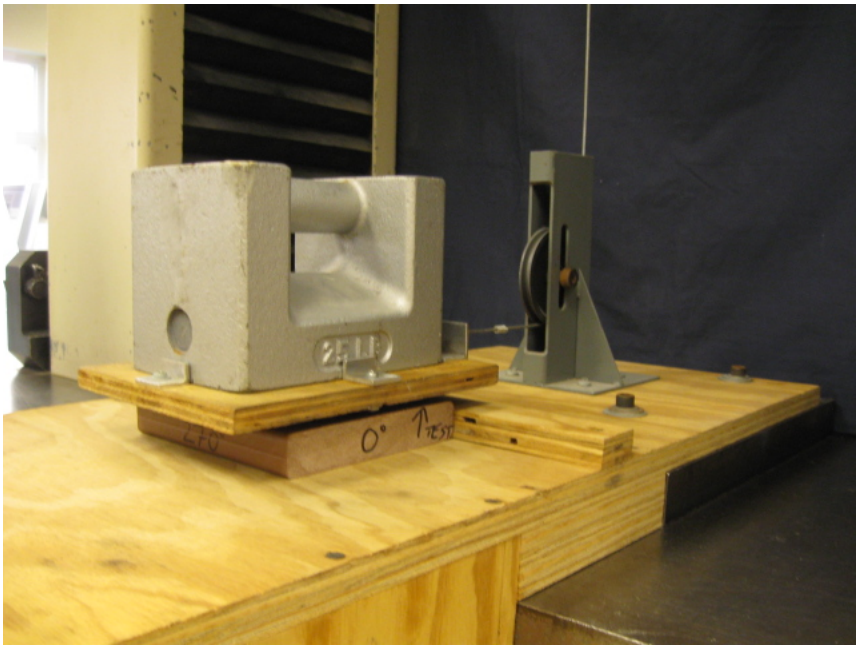

Photo No. 2
Close-up of Test Setup

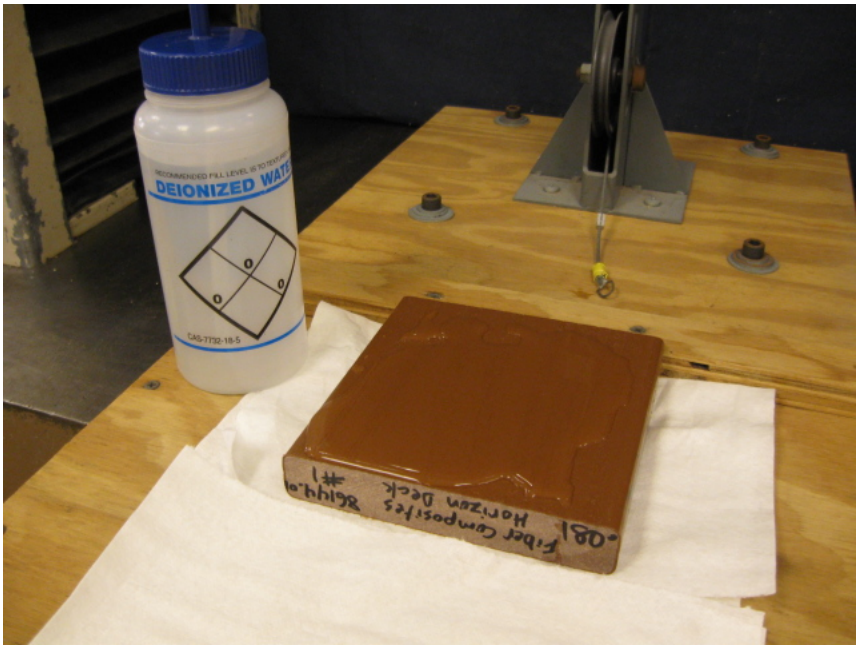

Photo No. 3
Wet Condition Testing - Typical Sample Preparation

Photo No. 4
Deck Board Test Specimens