

BIOTANEX NEW ZEALAND LIMITED TEST REPORT

SCOPE OF WORK

ASTM D143 STATIC BENDING AND MOISTURE CONTENT EVALUATION OF SICARO
WILDWOOD AND SICARO SAFARIWOOD DECKING

REPORT NUMBER

R6239.01-106-31 R0

TEST DATES

07/23/24 - 08/06/24

ISSUE DATE

08/23/24

RECORD RETENTION END DATE

08/06/28

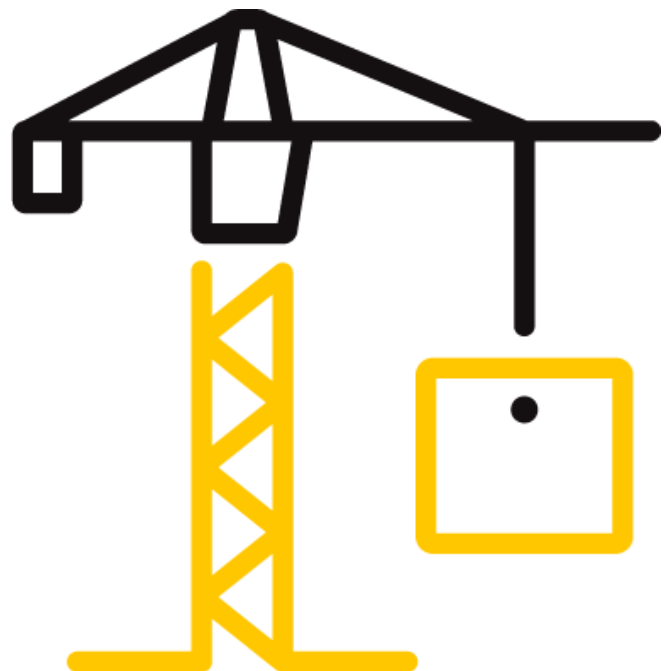
PAGES

13

DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-2827 (07/12/22)

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TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

REPORT ISSUED TO

BIOTANEX NEW ZEALAND LIMITED

2670 Omaha Road
Hastings, 4175
New Zealand

SECTION 1

SCOPE

Products: Sicaro Wildwood and Sicaro Safariwood Decking

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted by Biotanex New Zealand Limited to evaluate Sicaro Wildwood and Sicaro Safariwood decking in accordance with ASTM D143 for static bending and moisture content. Results obtained are tested values and were secured by using the designated test methods. Testing was conducted at the Intertek B&C test facility in York, Pennsylvania.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory.

Unless differently required, Intertek reports apply the "Simple Acceptance" rule, also called "Shared Risk approach," of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity.

For INTERTEK B&C:

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DATE:	08/23/24

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TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

SECTION 2

TEST METHOD

The specimens were evaluated in accordance with the following:

ASTM D143-23, *Standard Test Methods for Small Clear Specimens of Timber*, Sections 8 and 21

SECTION 3

MATERIAL SOURCE

The materials were provided by Biotanex New Zealand Limited. The following was received in good condition on 7/2/24:

- (12) 1 in. x 1 in. x 14 in. samples of Sicaro Wildwood decking
- (12) 1 in. x 1 in. x 14 in. samples of Sicaro Safariwood decking

Refer to the product description photo in Section 9. The materials were tested as received, except for preparing test specimens from the original materials. Representative materials/test specimens will be retained by Intertek B&C for a minimum of four years from the test completion date.

SECTION 4

LIST OF OFFICIAL OBSERVERS

NAME	COMPANY
Cag S. Saylor	Intertek B&C
Dawn M. Chaney	Intertek B&C

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

SECTION 5

TEST PROCEDURES

All conditioning of test specimens and test conditions were at standard laboratory conditions, unless otherwise reported. Refer to the test related photos in Section 9. Calibration certificates are available upon request.

ASTM D143, Section 8 Static Bending

The static bending strength was determined utilizing a Satec UTM (ICN: Y002011) equipped with a 5,000 lb load cell (ICN: INT02615) and operating at a crosshead of 0.10 in/min. Each specimen was supported by self-aligning pads at a support span of 14 inches and loaded at the midspan with a 1.5-inch radius bearing block until a failure mode occurred. Dimensions were measured with a digital caliper (ICN: INT02510).

ASTM D143, Section 21 Moisture Content

After the Static Bending test, a moisture section of approximately 1 in. was cut from each specimen near the point of failure. Immediately after the moisture specimen was obtained any loose splinters were removed, and the specimen was weighed using a balance (ICN: 65216). The moisture specimens were then placed into an oven (ICN: INT03118) and dried at a temperature of $103^{\circ}\text{C} \pm 2^{\circ}\text{C}$ until a constant mass was obtained.

SECTION 6

TEST SPECIMEN DESCRIPTIONS

TEST PROCEDURE	NUMBER OF SPECIMENS	NOMINAL SPECIMEN DIMENSIONS
ASTM D143, Section 8	10 per material	1 in. x 1 in. x 14 in.
ASTM D143, Section 21	10 per material	1 in. cube

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

SECTION 7

TEST RESULTS

ASTM D143, Section 8 Static Bending

Sicaro Wildwood Decking

SPECIMEN	WIDTH (in)	DEPTH (in)	ULTIMATE LOAD (lbf)	DISPLACEMENT AT MAX LOAD (in)	MODULUS OF RUPTURE* (psi)	YOUNGS MODULUS (psi)	FAILURE MODE
1	0.818	0.818	422	0.387	16,191	2,090,000	Cross grain tension
2	0.818	0.818	413	0.557	15,846	1,730,000	Splintering Tension
3	0.820	0.810	455	0.581	17,760	2,040,000	Brash tension
4	0.818	0.818	381	0.430	14,618	1,950,000	Cross grain tension
5	0.822	0.822	449	0.518	16,977	1,780,000	Brash tension
6	0.819	0.818	538	0.610	20,616	2,040,000	Simple tension
7	0.818	0.820	415	0.624	15,845	1,470,000	Cross grain tension
8	0.821	0.814	458	0.562	17,680	1,800,000	Simple tension
9	0.822	0.815	498	0.577	19,154	1,850,000	Cross grain tension
10	0.821	0.818	396	0.464	15,138	1,600,000	Simple tension
Average			443	0.531	16,982	1,835,000	
Std. Dev.			47.9	0.079	1,862	201,729	

**Not required per test method. Values determined using a basic flexural calculation.*

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

Sicaro Safariwood Decking

SPECIMEN	WIDTH (in)	DEPTH (in)	ULTIMATE LOAD (lbf)	DISPLACEMENT AT MAX LOAD (in)	MODULUS OF RUPTURE* (psi)	YOUNGS MODULUS (psi)	FAILURE MODE
1	0.820	0.830	438	0.575	16,283	1,600,000	Simple tension
2	0.827	0.814	378	0.556	14,486	1,460,000	Simple tension
3	0.826	0.818	559	0.593	21,240	2,360,000	Brash tension
4	0.826	0.818	422	0.780	16,034	1,350,000	Simple tension
5	0.824	0.820	547	0.483	20,733	2,460,000	Brash tension
6	0.827	0.814	450	0.576	17,246	1,750,000	Brash tension
7	0.827	0.816	481	0.573	18,343	1,890,000	Brash tension
8	0.825	0.821	530	0.616	20,015	2,130,000	Simple tension
9	0.823	0.813	525	0.470	20,267	2,410,000	Brash tension
10	0.825	0.820	490	0.584	18,550	1,950,000	Brash tension
Average			482	0.581	18,320	1,936,000	
Std. Dev.			59.4	0.084	2,268	399,505	

**Not required per test method. Values determined using a basic flexural calculation.*

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

ASTM D143, Section 21 Moisture Determination

Sicaro Wildwood Decking

SPECIMEN	INITIAL WEIGHT (g)	DRY WEIGHT (g)	MOISTURE CONTENT (%)
1	8.253	7.502	9.1
2	7.394	6.710	9.3
3	7.830	7.147	8.7
4	8.104	7.357	9.2
5	7.980	7.255	9.1
6	8.610	7.809	9.3
7	7.418	6.760	8.9
8	7.925	7.216	8.9
9	8.184	7.422	9.3
10	7.887	7.200	8.7
Average	7.959	7.238	9.1
Std. Dev.	0.368	0.327	0.228

Sicaro Safariwood Decking

SPECIMEN	INITIAL WEIGHT (g)	DRY WEIGHT (g)	MOISTURE CONTENT (%)
1	8.369	7.496	10.4
2	8.255	7.366	10.8
3	9.372	8.356	10.8
4	8.592	7.678	10.6
5	8.764	7.835	10.6
6	9.072	8.140	10.3
7	10.019	8.895	11.2
8	9.191	8.163	11.2
9	9.166	8.238	10.1
10	9.142	8.149	10.9
Average	8.994	8.032	10.7
Std. Dev.	0.521	0.451	0.358

SECTION 8

CONCLUSION

The requested test method does not contain specific performance requirements. Results are reported as obtained.

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

SECTION 9

PHOTOGRAPHS



Photo No. 1
Material as Received



Photo No. 2
ASTM D143, Section 8 Static Bending Test Setup (Wildwood)

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

**Photo No. 3****ASTM D143, Section 8 Static Bending Test Setup (Safariwood)****Photo No. 4****ASTM D143, Section 8 Static Bending Test in Progress (Wildwood)**

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24



Photo No. 5

ASTM D143, Section 8 Static Bending Failure Mode (Wildwood)

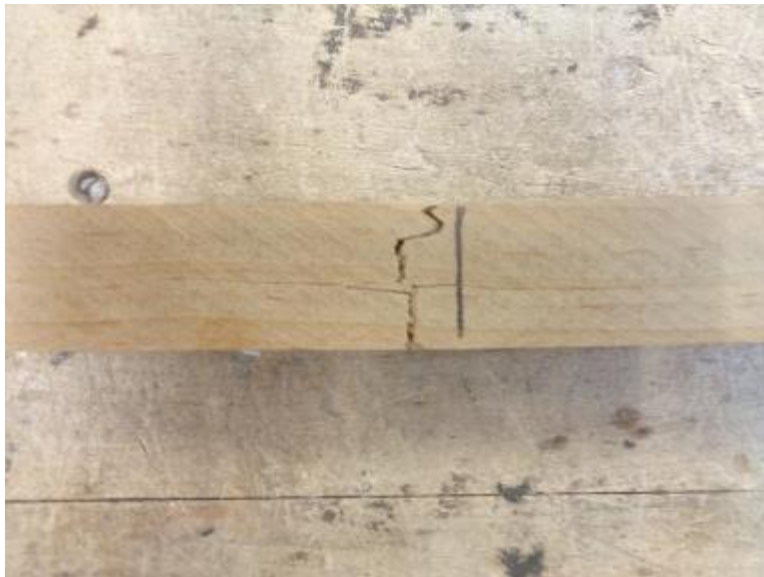


Photo No. 6

ASTM D143, Section 8 Static Bending Failure Mode (Wildwood)

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24



Photo No. 7

ASTM D143, Section 8 Static Bending Failure Mode (Wildwood)



Photo No. 8

ASTM D143, Section 8 Static Bending Failure Mode (Safariwood)

TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24



Photo No. 9

ASTM D143, Section 8 Static Bending Failure Mode (Safariwood)



Photo No. 10

ASTM D143, Section 8 Static Bending Failure Mode (Safariwood)



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TEST REPORT FOR BIOTANEX NEW ZEALAND LIMITED

Report No.: R6239.01-106-31 R0

Date: 08/23/24

SECTION 10

REVISION LOG

REVISION #	DATE	PAGES	REVISION
0	08/23/24	N/A	Original Report Issue