



**TEST REPORT**

**Report No.:** E9988.01-109-44

**Rendered to:**

SIPLAST - ICOPAL  
Arkadelphia, Arkansas

**PRODUCT TYPE:** Elastomeric Asphalt Sheets  
**SERIES/MODEL:** Paradiene 20/Paradiene 30

**SPECIFICATION:** CSA A123.21-10, Canadian Standards Association,  
*Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane-Roofing Systems*

**Test Date:** 09/17/15  
**Report Date:** 11/24/15  
**Test Record Retention Date:** 09/17/19

**1.0 Report Issued To:** Siplast - Icopal  
 1111 Highway 67 South  
 Arkadelphia, Arkansas 71923

**2.0 Test Laboratory:** Architectural Testing, Inc., an Intertek company ("Intertek-ATI")  
 130 Derry Court  
 York, Pennsylvania 17406-8405  
 717-764-7700

**3.0 Project Summary:**

**3.1 Product Type:** Elastomeric Asphalt Sheets

**3.2 Series/Model:** Paradiene 20/Paradiene 30

**3.3 Compliance Statement:** Results obtained are tested values and were secured by using the designated test method(s). The test specimen was tested in accordance with CSA A123.21-10 and achieved a Dynamic Wind Uplift Resistance of -1915 Pa (-40.00 psf).

**3.4 Test Date(s):** 09/17/15

**3.5 Test Record Retention End Date:** All test records for this report will be retained until September 17, 2019.

**3.6 Test Location:** Intertek-ATI test facility in York, Pennsylvania.

**3.7 Test Specimen Source:** The test specimen(s) was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of four years from the test completion date.

**3.8 Test Specimen Installation:** The test specimen was installed by representatives from Siplast-Icopal.

**3.9 Drawing Reference:** The test specimen drawings were not provided by the client.

**3.10 List of Official Observers:**

<u>Name</u>	<u>Company</u>
Todd Corley	Siplast-Icopal
Zack Taylor	Siplast-Icopal
Timothy J. McGill	Intertek-ATI
Eric M. Brennan	Intertek-ATI

#### 4.0 Test Specification(s):

CSA A123.21-10, Canadian Standards Association, *Standard Test Method for the Dynamic Wind Uplift Resistance of Membrane-Roofing Systems*

#### 5.0 Test Specimen Description:

##### 5.1 Product Sizes:

	Width		Length	
	millimeters	inches	millimeters	inches
Overall size	3658	144	7315	288
Membrane size	3658	144	1219	48

##### 5.2 Decking:

Type	Galvanized steel, ASTM A 653 Grade 33, Type B
Manufacturer	Generic
Thickness	22 gauge minimum; 0.74 mm (0.029")
Equivalents	Any decking material with pull-out resistance equal to or greater than the referenced test deck
Purlin spacing	1829 mm (72")
Attachment method	Mechanically attached
Fastener type	12 x 1-1-1/4" hex washer head Tek screws
Fastener spacing	152 mm (6") at each purlin location
Fastening uplift resistance (per ANSI/SPRI FX-1)	1.86 kN (418 lbf) Average of 10 pull-outs

## 5.0 Test Specimen Description: (Continued)

### 5.3 Coverboard:

Type	DensDeck Prime Roof Board
Manufacturer	Georgia Pacific
Description	Fiberglass mat-faces gypsum core panel (ASTM E136)
Thickness	13 mm (1/2") minimum
Attachment method	Mechanically attached
Fastener type	Siplast Parafast-PA (pre-assembled) #12 x 2" long, pan head, self-tapping fasteners with 73.0 mm (2-7/8") diameter steel insulation plate
Fastener application	One per 0.4 m <sup>2</sup> (4 ft <sup>2</sup> )

### 5.4 Vapor Barrier:

Type	Paradiene 20 TG
Manufacturer	Siplast
Description	Torch Grade asphalt bitumen roll with sanded surface in accordance with ASTM D 5147/D5147M-14
Nominal thickness	3.3 mm (130 mil)
Width	1.2 m (4')
Attachment method	Torched
Seam type	Torched
Overlap	76.2 mm (3")

### 5.5 Thermal Insulation:

Type	Paratherm (Polyisocyanurate)
Manufacturer	Carlisle SynTec, Incorporated
Description	ASTM C 1289 Type II, Class 1, Grade 2 Polyisocyanurate
Thickness	38.1 mm (1-1/2")
Attachment method	Adhered
Adhesive	Parafast/Olybond two-part urethane foam adhesive
Adhesive Application	Applied in beads spaced 30.5 cm (12") on center

**5.0 Test Specimen Description:** (Continued)**5.6 Coverboard:**

Type	DensDeck Prime Roof Board
Manufacturer	Georgia Pacific
Description	Fiberglass mat-faces gypsum core panel (ASTM E136)
Thickness	13 mm (1/2") minimum
Attachment method	Adhered
Adhesive type	Parafast/Olybond two-part urethane foam adhesive
Adhesive application	Applied in beads spaced 305 mm (12") on center

**5.7 Base Sheet:**

Type	Paradiene 20 SA
Manufacturer	Siplast
Description	Self-adhered (peel and stick) bitumen roll in accordance with ASTM D 5147/D5147M-14
Nominal thickness	3.0 mm (120 mil)
Width	991 mm (39")
Attachment method	Self-adhered
Seam type	Lapped
Overlap	76.2 mm (3")

**5.8 Cap Sheet:**

Type	Paradiene 30 TG
Manufacturer	Siplast
Description	Torch Grade asphalt bitumen roll with granulated surface in accordance with ASTM D 5147/D5147M-14
Nominal thickness	3.3 mm (130 mil)
Width	991 mm (39")
Attachment method	Torched
Seam type	Torched
Overlap	76.2 mm (3")

**6.0 Test Results:** One assembly was tested per CSA A132.21-10. The following results were recorded.

**6.1 Test Conditions:**

Curing temperature	21°C (70°F)
Elapsed time between system construction and testing	36 hours
Temperature at the beginning of test	21°C (70°F)
Temperature at the end of test	27°C (81°F)

**6.2 Test Results:**

Test Level	Observations	Results
Level A 1436 Pa (-30.0 psf)	No visible damage to the system	PASSED
Level B 1796 Pa (-37.5 psf)	No visible damage to the system	PASSED
Level C 2155 Pa (-45.0 psf)	No visible damage to the system	PASSED
Level D 2514 Pa (-52.5 psf)	No visible damage to the system	PASSED
Level E 2872 Pa (-60.0 psf)	No visible damage to the system	PASSED

**Note:** Upon completion of the -2872 Pa (-60.0 psf) Level E, the client requested that the test be re-started at Level A with a pressure of -3352 Pa (-70 psf).

Test Level	Observations	Results
Level A -3352 Pa (-70.0 psf)	Failed during interval 3, on the 52 <sup>nd</sup> gust. All fasteners pulled from the deck	Failed

Dynamic Wind Uplift Resistance: -1915 Pa (-40.0psf)

Total Test Duration: 6 hours and 4 minutes

**Notes:**

- Reference Chart #1 located in Appendix A for dynamic wind load cycles.
- Reference Appendix B for Photographs

Intertek-ATI will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For ARCHITECTURAL TESTING, Inc.

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Eric M. Brennan  
Project Manager

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Timothy J. McGill  
Manager – Product Testing

EMB:asm

Attachments (pages): This report is complete only when all attachments listed are included.

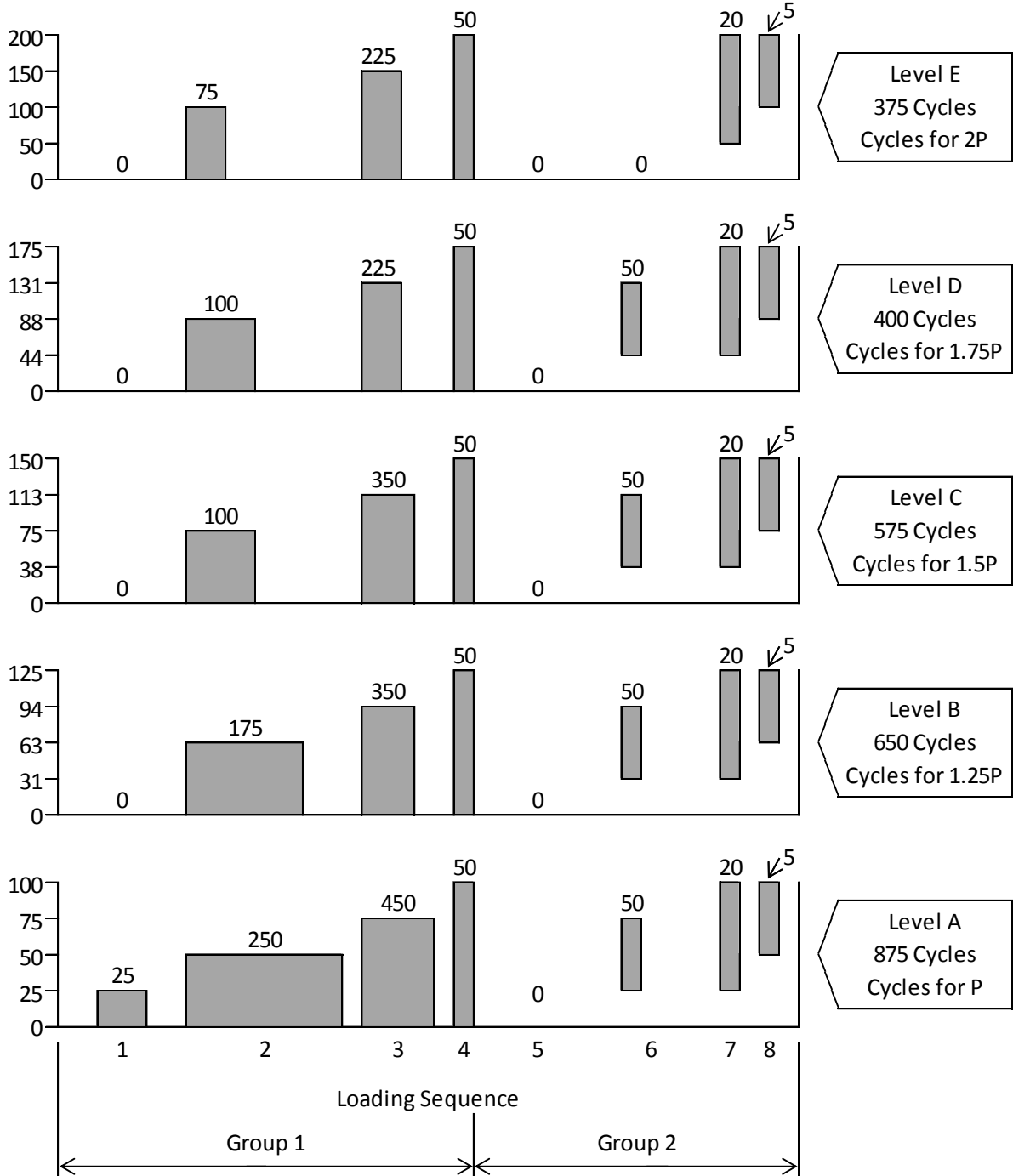
Appendix-A: Chart(s) (1)

Appendix-B: Photograph(s) (2)

Appendix A

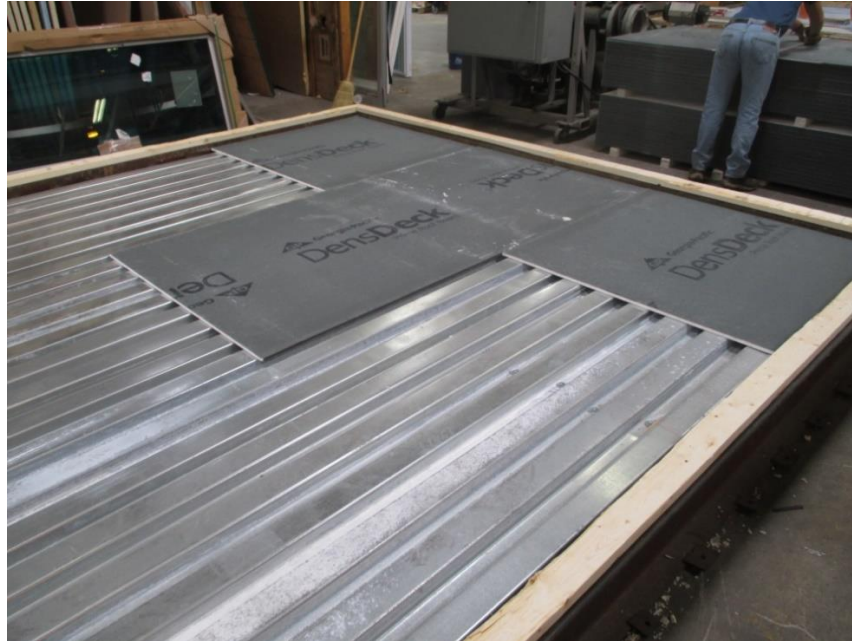
Chart(s)

**Dynamic Wind Load Cycles for Method 2**





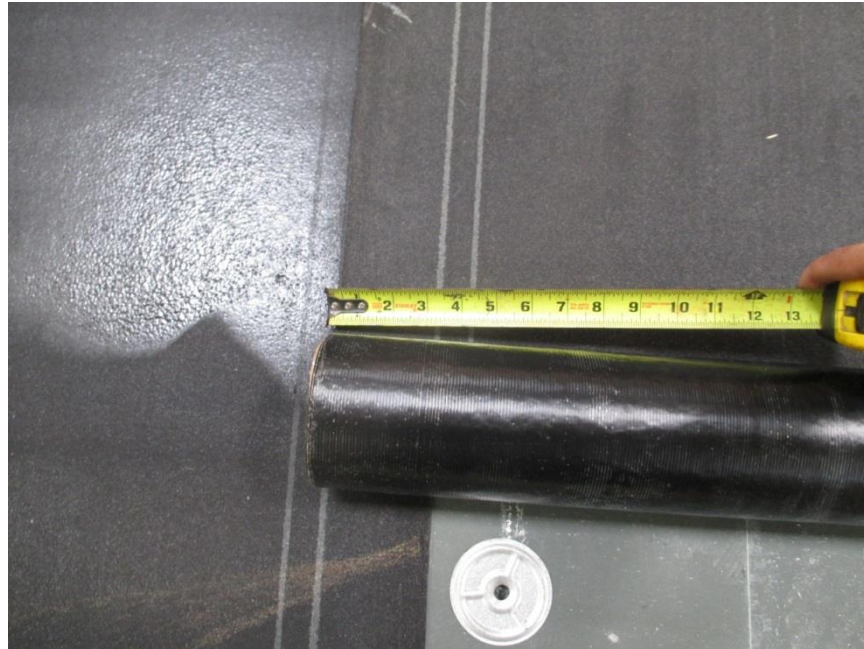
**Appendix B**  
**Photograph(s)**



**Photo No. 1**  
**DensDeck Over B-Decking**



**Photo No. 2**  
**Vapor Barrier**



**Photo No. 3**  
**Overlap**