TEST REPORT

Report No.: E9988.02-109-44

Rendered to:

SIPLAST - ICOPAL
Arkadelpia, 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:	09/18/15
Report Date:	11/24/15
Test Record Retention Date:	09/18/19

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 -1436 Pa (-30.00 psf).

3.4 Test Date(s): 09/18/15

3.5 Test Record Retention End Date: All test records for this report will be retained until September 18, 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:

Name	Company
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	997	39-1/4

5.2 Decking:

Type	Plywood sheathing
Manufacturer	Generic
Thickness	5/8"
Equivalents	Any decking material with pull-out resistance equal to or greater than the referenced test deck
Joist spacing	610 mm (24")
Attachment method	Mechanically attached
Fastener type	10d pneumatically driven coated ring shank nails
Fastener spacing	152 mm (6") at each joist location
Fastening uplift resistance (per ANSI/SPRI FX-1)	1.85 kN (416.9 lbf) average of 10 pull-outs

5.0 Test Specimen Description: (Continued)

5.3 Coverboard:

Type	Protectoboard
Manufacturer	IKO
Description	Mineral-fortified asphaltic core between two non-woven glass fiber mats
Thickness	6.4 mm (1/4") 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^2 (4 ft^2)

5.4 Base Sheet:

Type	Paradiene 20 TG
Manufacturer	Siplast
Description	Torch Grade bitumen roll in accordance with ASTM D 5147/D5147M-14
Nominal thickness	3.0 mm (120 mil)
Width	991 mm (39")
Attachment method	Torched
Seam type	Lapped
Overlap	76.2 mm (3")

5.0 Test Specimen Description: (Continued)

5.5 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	41 hours
Temperature at the beginning of test	21°C (70°F)
Temperature at the end of test	29°C (84°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)	Failed during interval 8, on the 2nd gust. Fasteners pulled from the deck	FAILED

Dynamic Wind Uplift Resistance: -1436 Pa (-30.0 psf)

Total Test Duration: 4 hours and 51 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.

Digitally Signed for: Eric Brennan by Anne Mendoza

Eric M. Brennan
Project Manager

Digitally Signed for: Timothy J. McGill by Vicki L. McElwain

Timothy J. McGill
Manager – Product Testing

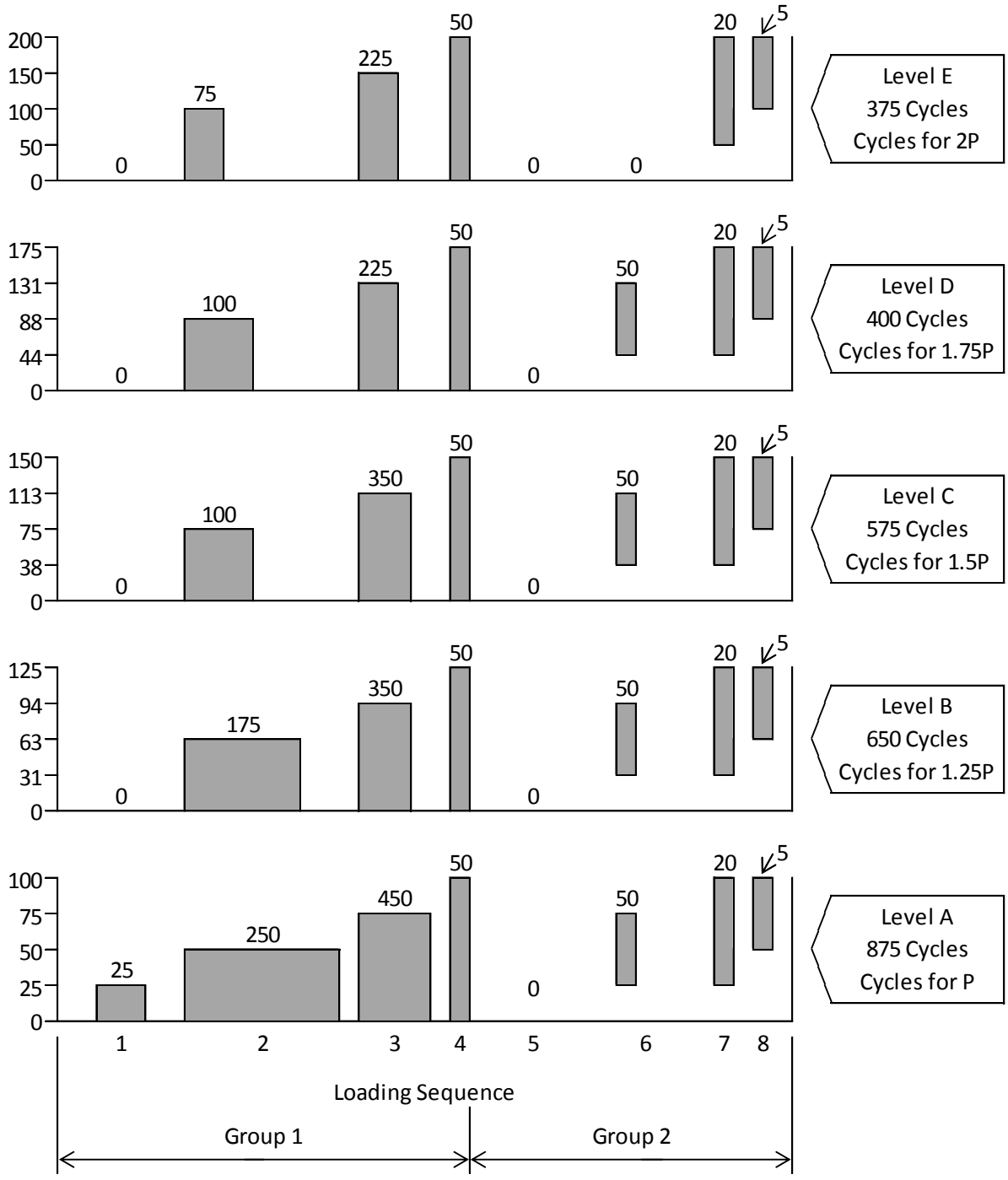
EMB:asm

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
IKO Protectoboard over the Wood Sheathing

Photo No. 2
Torching the Base Sheet

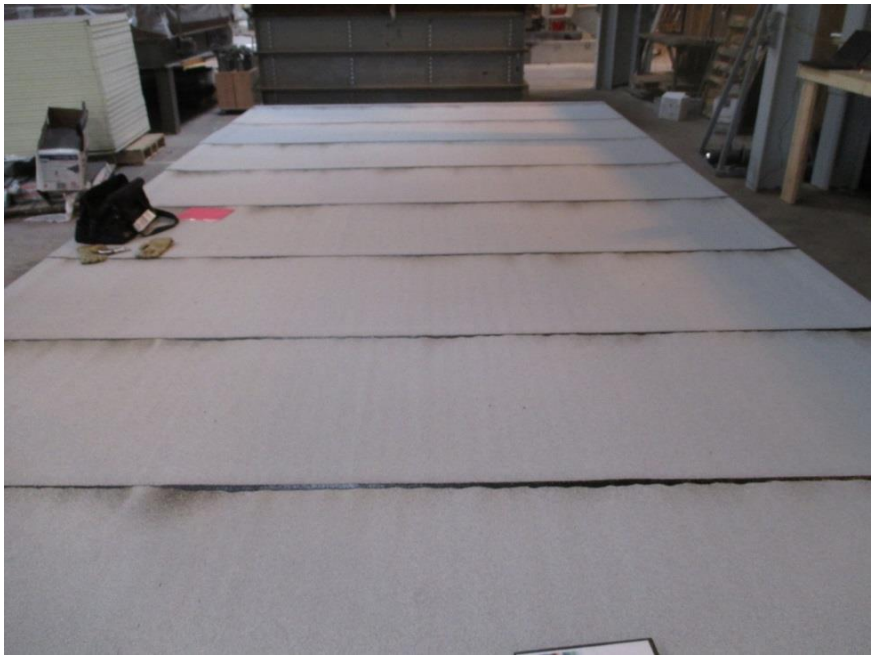


Photo No. 3
Finished Cap Sheet