

Bulletin

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

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SIPLAST PARADIENE 30 FR / 20 ADHERED WITH PA-311 R, WOOD DECK

(PARS) PARTIALLY ATTACHED (HYBRID) ROOFING SYSTEM

Test conducted by Intertek B&C, Pennsylvania

Tested Roofing System Summary

Cap sheet membrane:	Modified bitumen membrane / Adhered
Base sheet membrane:	Modified bitumen membrane / Adhered
Cover board:	Moisture and fire-resistant gypsum board 4 x 8 ft x 1/4 in / Adhered
Insulation:	Polyisocyanurate foam insulation board 4 x 8 ft x 2 in / Mechanically fastened
Vapour barrier:	Modified bitumen membrane / Self-adhered
Thermal barrier:	N/A
Decking:	Plywood board

Dynamic Uplift Resistance (DUR) as per CSA A123.21

System Designation	Measured Value	Computed Value (To Include 1.5 Experimental Factor)
A	-3,4 kPa (-70 psf)	-2,3 kPa (-47 psf)

According to the scope of accreditation published on the SCC website
Accredited Laboratory No. 797



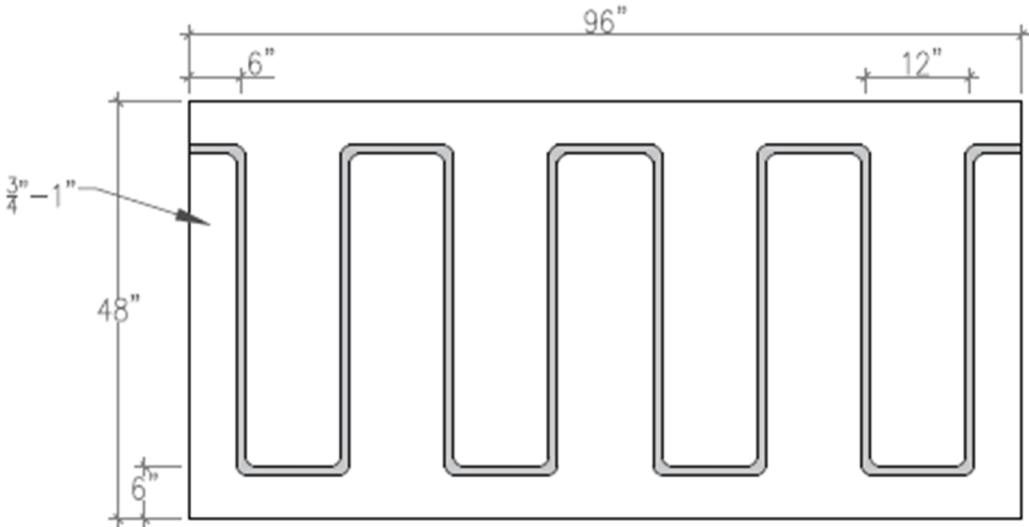


Products

CAP SHEET MEMBRANE				
TESTED PRODUCT: Membrane composed of a lightweight random fibrous glass mat impregnated and coated with SBS modified bitumen and surfaced with ceramic granules.				
System	Application Method			
A	Fully adhered with PA-311 R Adhesive (1,5 to 2,0 gal/100 ft²).			
ELIGIBLE PRODUCT(S)				
Siplast	Paradiene 30 FR	Paradiene 20 PR	Parafor 30	Parafor 50 LT
	Paradiene 30 HT FR	Paradiene 40 FR		

BASE SHEET MEMBRANE				
TESTED PRODUCT: Membrane composed of a lightweight random fibrous glass mat impregnated and coated with SBS modified bitumen.				
System	Application Method		Row spacing	Fasteners spacing
A	Fully adhered with PA-311 R Adhesive (1,5 to 2,0 gal/100 ft²).		N/A	N/A
ELIGIBLE PRODUCT(S)				
Siplast	Paradiene 20	Paradiene 20 HT	Paradiene 20 EG	Paradiene 20 F
	Paradiene 20 HV			



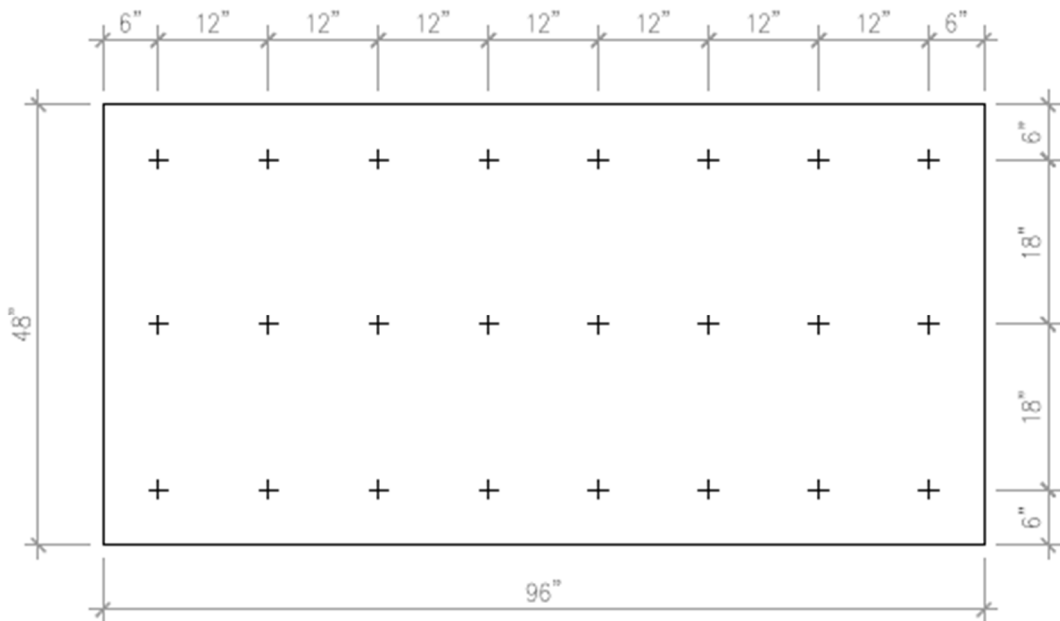
COVER BOARD				
TESTED PRODUCT: Moisture and fire-resistant gypsum board, covered with non-combustible fiberglass felt and non-asphaltic coating.				
System	Application Method		Fastening Rate	
A	Adhered		Ribbons at 12 in o.c.	
ELIGIBLE THICKNESS(ES)				
¼ in minimum				
FASTENING METHOD				
Parafast Insulation Adhesive				
FASTENING PATTERN				
				
ELIGIBLE PRODUCT(S)				
Georgia-Pacific	DensDeck Prime			

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INSULATION (Top Row)				
TESTED PRODUCT: Insulation board composed of a polyisocyanurate foam core bonded on both sides to a glass fiber reinforced cellulosic felt facers.				
System	Application Method		Fastening Rate	
A	Mechanically fastened		24 fasteners per 4 x 8 ft board	
ELIGIBLE THICKNESS(ES)				
2 in minimum				
FASTENING METHOD				
Screws and plates				
FASTENING PATTERN				
				
ELIGIBLE PRODUCT(S)				
Siplast	Paratherm G	Paratherm W	Paratherm	Paratherm CG
GAF	EnergyGuard	EnergyGuard Ultra		
Atlas Roofing Corp.	ACFoam-II	ACFoam-III	ACFoam-IV	
IKO	IKOTerm II	IKOTerm III		

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ADDITIONAL INSULATION	
TESTED PRODUCT: Optional (same thicknesses and same eligible products as top row). Fastening method loose laid, mechanically fastened or adhered.	

VAPOUR BARRIER				
TESTED PRODUCT: Membrane composed of a lightweight random fibrous glass mat impregnated and coated with SBS modified bitumen. The back surface is coated with a self-adhesive bitumen layer.				
System	Fastening Method		Primer	
A	Self-adhered		PA-917	
ELIGIBLE PRODUCT(S)				
Siplast (self-adhered)	Paradiene 20 SA	Paradiene 20 HT SA	Paradiene 20 HV SA	Paradiene 20 EG SA
Siplast (PA-311 R or SFT Adhesive)	Paradiene 20	Paradiene 20 HT	Paradiene 20 HV	Paradiene 20 EG
Siplast (fused)	Paradiene 20 TG	Paradiene 20 HT TG	Paradiene 20 HV TG	Paradiene 20 EG TG

THERMAL BARRIER	
TESTED PRODUCT: N/A	

FASTENERS (see general note #3)		
TESTED PRODUCT(S): #12 roofing fasteners.		
System	Screws	Plates
A	#12	Metal plates of 3 in
FASTENERS MEASURED PULL OUT RESISTANCE		
417 lbf		
ELIGIBLE PRODUCT(S)		
Siplast	#12	Metal plates of 3 in



ADHESIVE				
TESTED PRODUCT: Membranes : Asphalt adhesive containing non-asbestos fibers (PA-311 R).				
TESTED PRODUCT: Cover board : Quick curing, two components, bead-applied polyurethane adhesive (Parafast).				
System	Ribbon's spacing		Primer	
A	Membranes: fully adhered		N/A	
	Cover board: 12 in o.c.		N/A	
ELIGIBLE PRODUCT(S)				
Siplast (membranes)	PA-311 R Adhesive			
Siplast (cover board)	Parafast Insulation Adhesive	Parafast Insulation Adhesive C	Parafast Insulation Adhesive T	
OMG	OlyBond Classic	OlyBond 500	OlyBond 500 Green	

DECKING						
PRODUCT: Plywood board.						
Gauge	Type	Grade	Thickness (in)	Yield point (ksi)	Span spacing (in)	Fasteners spacing (in)
n/a	n/a	n/a	0,625	n/a	24	6
On a building, the attachment of the decking to the supporting structure must be strong enough to resist wind uplift loads (as defined per NBCC requirements).						

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General Notes

1. Source:

This publication is based on a test conducted by **Intertek B&C, Pennsylvania**.

2. Deck equivalency products:

18 to 22 gage steel deck. Wood or concrete deck which testing gave equivalent or superior uplift resistance than the value specified in the "Fasteners" section.

3. Fasteners Pull Out Resistance:

Testing were conducted in laboratory according to ANSI/SPRI FX-1 2011 standard, over a minimum of 10 test samples on a **Com-Ten** apparatus over steel deck (unless stated otherwise).

4. Adhesive Pull Resistance (when applicable):

Testing were conducted in laboratory over 3 test samples, according to ANSI/SPRI IA-1 2010 standard on a **Com-Ten** apparatus over steel deck (unless stated otherwise) or, according to ASTM D1623 standard over a universal press testing bench, for in-between materials.

5. Note on adhesive:

It is EXP opinion that the application of the adhesive beads in an "S" or straight-line arrangement will not affect the results of this publication. The intention at the job site should be that the glue bead spacings be reasonably distributed on the substrate, in order to come as close as possible to the theoretical patterns when the boards are laid in. Comply with all additional manufacturer's requirements regarding the use of adhesives.

6. Equivalent products:

Only the products listed in this report under eligible products are deemed acceptable as substitute to the tested products. Any other modifications must be requested in written, on EXP application form, to be studied for approval.

7. Optional components:

Any components of this roofing system listed as optional, may be removed from the roof design. Inclusion or exclusion of the said component having no effect on the published dynamic uplift resistance results. (DUR).

8. Experimental factor:

In accordance with CSA A123.21 standard, the published dynamic uplift resistance (DUR) include a computed experimental factor of 1,5.

9. Building Wind Load Calculation:

An online calculator is available at <https://www.nrc-cnrc.gc.ca>.

The calculator will compute, the Wind Load of any given building, for field, perimeter and corners, as per 2015 NBCC requirement, without experimental factor. It will also compute perimeter's and corner's zone dimensions.



10. Technical Advisories:

This roof system assessment reports must be read in conjunction with any issued technical advisories from EXP.

11. Notice:

EXP reserves the right to withdraw, without prior notice, any Bulletin of Roof System Dynamic Wind Uplift Resistance Results published and/or make any necessary corrections.

The information in this roofing system report (the "Report") are based on the tests run by EXP of certain combination of materials in a specific and controlled condition to determine the resistance of different roofing systems to wind uplift forces (the "Test"). The results of the Test are subject to certain prerequisite conditions and assumptions made during the Test. In this regard, the Report is for the exclusive use of EXP client for whom the Report was prepared. The information contained in the Report must not be reproduced, used or relied upon in whole or in part without the written consent of EXP. Any third-party user assumes sole responsibility for the use it makes of the information in the Report including but not limited to any decision to purchase roofing material in reliance of the information found in the Report or on the Site. **Exp disclaims all warranties as to the accuracy, completeness or adequacy of the information in the Report or on the Site and accepts no responsibility for damages suffered by any third party arising out of decisions made or actions based on the Report.**

12. Version tracking table:

2021-04-27	First edition.

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Date