

Bulletin

Roof Testing Laboratory (ISO 17025)

UL Third Party Test Data Program participant



Roof System Dynamic Wind Uplift Resistance Results

File number:	PTFS-218931-01
Test date:	2014-05-01
Reappraisal date:	2026-05-26



FRANBASE R+ 180 MOD-BIT SYSTEM

(PARS) PARTIALLY ATTACHED (HYBRID) ROOFING SYSTEM

Tested Roofing System Summary

Cap sheet membrane:	Modified bitumen membrane / Fused
Base sheet membrane:	n/a
Cover board:	Composite board comprising a modified bitumen membrane and a polyisocyanurate board 3 x 8 ft / Mechanically fastened
Insulation:	Polystyrene insulation board 4 x 4 ft / Mechanically fastened
Vapour barrier:	Self-adhesive membrane
Thermal barrier:	Optional
Decking:	Steel deck

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

System Designation	Sustained Pressure (S.P.) (measured)	As per CSA A123.21:20 DUR = (S.P. x 0,65)	As per CSA A123.21:14 DUR = (S.P. ÷ 1,5)
A	-5,3 kPa (-110 psf)	-3,4 kPa (-72 psf)	-3,5 kPa (-73 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 non-woven polyester reinforcement saturated with SBS modified bitumen.				
System	Application Method			
A	Fused			
ELIGIBLE PRODUCT(S)				
System with fused cap sheet membrane				
IKO	Torchflex TP-250-Cap	Torchflex TP-180-Cap	Torchflex TP-250-Cap 5 mm	Torchflex PrevEnt TP-180
	Torchflex PrevEnt TP-250	Torchflex PrevEnt Premium TP-250	Torchflex 180-FF	Torchflex 180-SF ⁽¹⁾
	Torchflex TP-HD-Cap	Torchflex TP-HD-FF-Base	PrevEnt TP-HD-Cap	PrevEnt TP Premium
	ArmourCool Granular TP-HD-Cap	ArmourCool HD-Cap	ArmourCool	Carrara ArmourCool-250
	Carrara ArmourCool HD			
LEXCOR	Vanguard TP 250 Cap	Vanguard 180 FF	Vanguard 180 SF ⁽¹⁾	
Johns Manville	DynaWeld Cap 180	DynaWeld Cap 180 FR	DynaWeld Cap 250	DynaWeld Cap 180 FR CR G
	DynaWeld 180 S ⁽¹⁾	DynaWeld 250 FR	DynaWeld Cap FR CR (coated)	DynaKap FR T1 HW
Henry Bakor	modifiedPLUS NP250gT4 Cap	Modified Plus NP 180	Modified Plus NP 250	
System with asphalt type III applied cap sheet membrane				
IKO	Modiflex MP-180-Cap	Modiflex MP-250-Cap	Modiflex MP-HD-Cap	Modiflex MP-HD-FS-Base
	PrevEnt MP Premium 250	PrevEnt MP-250 Cap	PrevEnt MP-HD-Cap	
LEXCOR	Vanguard 250 MC			
Johns Manville	DynaLastic 250 FR	DynaLastic 180 FR CR G	DynaLastic 180 Cap	DynaLastic 250 Cap
	DynaKap T1	DynaKap FR T1		
Henry Bakor	modifiedPLUS NP250gT4 Cap			

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

PTFS-218931-01

System with type III asphalt applied cap sheet membrane & surfacing ⁽¹⁾				
IKO	Modiflex MP-180-SS	Modiflex MP-HD-SS-Base		
LEXCOR	Vanguard 180 SS			
Johns Manville	DynaLastic 180 S			
Henry Bakor	modifiedPLUS NP180s/s			

⁽¹⁾ These membranes can be covered with a finishing surface; flood coat and gravel, reflective coating, others.

BASE SHEET MEMBRANE
TESTED PRODUCT: n/a



COVER BOARD				
TESTED PRODUCT: Composite board consisting of a polyester reinforced SBS modified bitumen membrane, factory-laminated to a high-density fiberglass faced polyisocyanurate board.				
System	Application Method	Fastening Rate		
A	Mechanically fastened	In the overlaps at 12 in, and in the center at 18 in		
ELIGIBLE THICKNESS(ES)				
19/32 in as per technical data sheet				
FASTENING METHOD				
Screws and plates				
FASTENING PATTERN				
<p>The diagram illustrates the fastening pattern for a 96" wide cover board. The fastening area is 36" high. Along the top edge, fasteners are spaced at 6" intervals, with 6" from each end. Along the bottom edge, fasteners are spaced at 12" intervals, with 12" from each end. The interior of the fastening area has fasteners spaced at 18" intervals. A 3" gap is indicated at the top right corner.</p>				
ELIGIBLE PRODUCT(S)				
Fransyl	Franbase R+ 180	Polybase R+ 180	Polybase R+ 180 S (sanded)	
Lexcor	Lexbase R+ 180	Lexbase R+ 180 S (sanded)		

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

PTFS-218931-01

INSULATION				
TESTED PRODUCT: Type I expanded polystyrene insulation board.				
System	Application Method		Fastening Rate	
A	Mechanically fastened		2 fasteners / 4 x 4 ft board	
ELIGIBLE THICKNESS(ES)				
n/a				
FASTENING METHOD				
Screws and plates				
FASTENING PATTERN				
ELIGIBLE PRODUCT(S)				
Fransyl	Izolon HR	Izolon THR	Izolon HD	Izolon THD
Lexcan	Isolex	Isolex II		
Atlas Roofing Corp.	ACFoam II	ACFoam III		
Johns Manville	ENRGY 3	ENRGY 3 CGF		
IKO	IKOTherm	IKOTherm III		



ADDITIONAL INSULATION	
TESTED PRODUCT: Optional (same thicknesses and same eligible products as top row).	

VAPOUR BARRIER				
TESTED PRODUCT: Cross-laminated, high-density polyethylene film backed with a proprietary high tack adhesive and a plastic liner.				
System	Fastening Method		Primer	
A	Self-adhered		n/a	
ELIGIBLE PRODUCT(S) : vapour barrier				
Lexcor	Lexshield	Permamate	Permamate Plus	Permamate Plus Extra
	Permamate Stick	Lexmat	Vanguard 95 SF	Vanguard 180 SF
IKO	ArmourGard Vapour Retardant	Aquabarrier AVB	IKO M.V.P.	
	Torchflex 95 SF	Torchflex 180 SF		
Bakor	Vaporbloc	Vaporbloc SA	Thermoskin	Blueskin SA
Generic	Any type of vapour barrier			
ELIGIBLE PRODUCT(S) : primer				
With adhered membranes				
Lexcor	Ultrastick	Multigrip		
With fused membranes				
Lexcor	Lexprime TG			

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

PTFS-218931-01

THERMAL BARRIER				
TESTED PRODUCT: Optional				
ELIGIBLE PRODUCT(S)				
Finex	Finex (½ in min.)			
Georgia-Pacific	DensDeck (½ in min.)	DensDeck Prime (½ in min.)		
USG	Securock (½ in min.)			
Unifix	PermaBase Dek (½ in min.)			
National Gypsum Company	DEXcell Cement Roof Board	DEXcell FA Glass Mat Roof Board		
Application method: loose laid, adhered or mechanically fastened. The securement method, rate and thickness to meet codes requirements, are de designer's responsibilities.				

FASTENERS (see general note #3)		
TESTED PRODUCT(S): #12 roofing fasteners.		
System	Screws	Plates
A	#12	Round metal barbed plates of 2 in or 2,4 in
FASTENERS MEASURED PULL OUT RESISTANCE		
310 lbf (measured)		
ELIGIBLE PRODUCT(S)		
Lexcor	Lexgrip	Round metal barbed plates of 2 in or the upper diameter

ADHESIVE
TESTED PRODUCT: n/a

DECKING				
PRODUCT: Steel deck.				
Grade	Thickness (in)	Yield strength (ksi)	Span spacing (in)	Fasteners spacing (in)
230	0,03	33	54	6
Additional testing could be performed on concrete, plywood, planks or other substrates to assess eligibility to possible decking equivalencies. On a building, the attachment of the decking to the supporting structure must be strong enough to resist wind uplift loads (as defined per NBC requirements).				

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

PTFS-218931-01

General Notes

1. Source:

This publication is based on a test conducted by **EXP Services inc.**

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 Pull Out Resistance" section.

3. Fasteners Pull Out Resistance:

Tests were conducted in laboratory according to ANSI/SPRI FX-1 standard, over a minimum of 10 specimens over steel deck (unless stated otherwise).

4. Adhesive Pull Resistance (when applicable):

Tests were conducted in laboratory over 3 test samples, according to ANSI/SPRI IA-1 standard over steel deck (unless stated otherwise) or, according to ASTM D1623 standard.

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. Liquid primers and adhesives:

Please observe the application rates specified by the manufacturers, as well as any additional requirements when applying liquid primers and adhesives.

7. 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 formally requested to EXP to be studied for approval.

8. 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).

9. Building Wind Load Calculation:

An online calculator will compute the Wind Load of any given building, for field, perimeters and corners, as per 2015 NBC requirement. It will also provide the dimensions of the perimeter and corner areas. The calculator is available at <https://nrc.canada.ca/en/research-development/products-services/software-applications/wind-load-calculators-roof-cladding-vegetated-roof-assembly>



10. Dynamic Uplift Resistance (DUR) calculation:

CSA A123.21 (2014 and earlier) specified to divide the measured result by 1,5 to obtain the effective wind resistance (DUR).
CSA A123.21 (2020) suggest to multiply the measured result with 0,65 to obtain the effective wind resistance (DUR).

11. Technical Advisories:

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

12. 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.**

13. Version tracking table:

2014-09-09	First edition.
2015-06-26 (R1)	N/D
2018-06-28 (R2)	New presentation layout.
2019-03-20 (R3)	Addition of eligible products.
2019-06-05 (R4)	Addition of eligible products.
2023-05-26 (R5)	Presentation update, addition of eligible cap sheet membranes and vapour barriers.

Prepared by:

EXP Services Inc.

2023-05-26

Date

Serge Rochon, P. Eng.
O.I.Q. N° : 114865
P.E.O. N° : 100023274
Provincial Manager – Building science and CSA laboratory