Bulletin

Roof Testing Laboratory (ISO/IEC 17025)

UL *Third Party Test Data Program* participant

Roof System Dynamic Wind Uplift Resistance Results

File number:	DRS-23013275-2
IKO number:	AARS030-B
Test date:	2024-03-20
Reappraisal date:	2027-07-17

MODIFIED BITUMEN MEMBRANE SYSTEM, FUSED CAP SHEET OVER FACTORY APPLIED BASE SHEET TO COVER BOARD

(AARS) ADHESIVE APPLIED ROOFING SYSTEM

Tested Roofing System Summary

Cap sheet membrane:	Modified bitumen membrane / Fused
Base sheet membrane:	Included with cover board
Cover board:	Board composed of a bitumen membrane over a polyisocyanurate board 3 x 8 ft x ½ in / Adhered
Insulation (top):	Rigid polyisocyanurate foam insulation board 4 x 4 ft x 1½ in / Adhered
Additional insulation (bottom):	Rigid polyisocyanurate foam insulation board 4 x 4 ft x 1½ in / Adhered
Vapour barrier:	Self-adhesive membrane
Thermal barrier:	n/a
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	-5,2 kPa (-109 psf)	-3,4 kPa (-71 psf)	-3,5 kPa (-73 psf)

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

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Products

CAP SHEET MEMBRANE				
TESTED PRODUCT: Membrane composed of a non-woven polyester mat strengthened with glass fiber strands and saturated with SBS modified bitumen.				
System	**Securement Method**			
A	Fused			
ELIGIBLE PRODUCT(S)				
IKO Industries	Torchflex TP-250-Cap	Torchflex TP-250-Cap 5 mm	Torchflex Ultra TP-HD Cap	Prevent Premium TP-250-Cap
	PrevENt TP-250-Cap	Armourcool TP-250-Cap	Torchflex TP-HD-Cap	ArmourCool Granular PrevENt TP-HD-Cap
	ArmourCool Granular TP-HD	PrevENt TP-HD-Cap		

BASE SHEET MEMBRANE
TESTED PRODUCT: Included to cover board.

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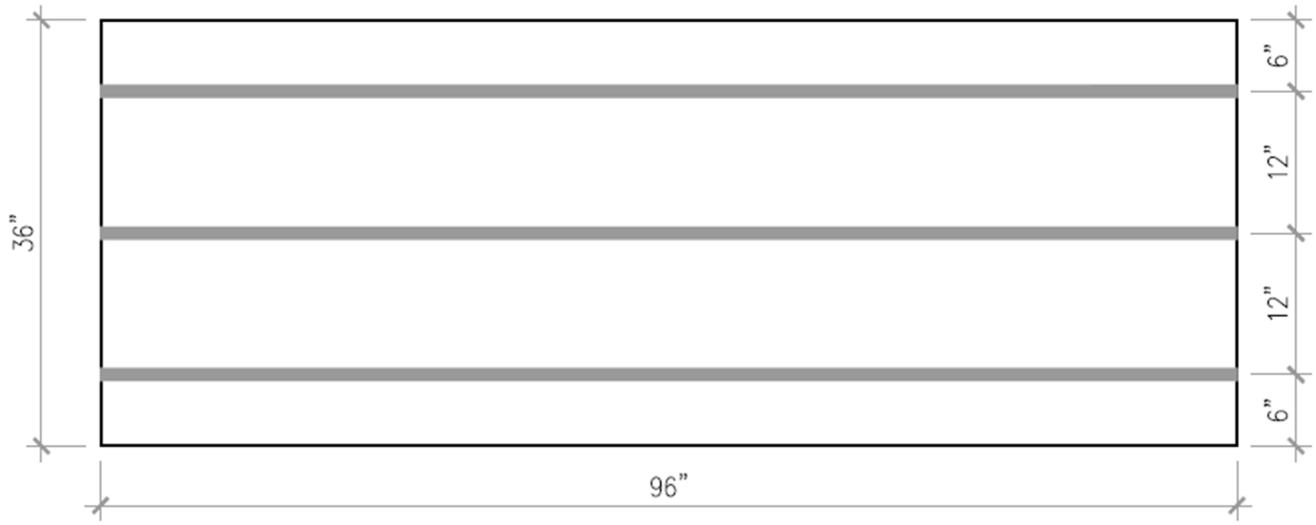
COVER BOARD		
TESTED PRODUCT: Board composed of a polyisocyanurate insulation board that is factory laminated to a 180-weight polyester reinforced SBS modified bitumen base sheet.		
System	**Securement Method**	**Securement Rate**
A	Adhered	Ribbons at 12 in o.c.
ELIGIBLE THICKNESS(ES)		
½ in minimum		
SECUREMENT METHOD		
Millennium Adhesive		
SECUREMENT PATTERN		



ELIGIBLE PRODUCT(S)				
IKO Industries	ShieldBase 180			

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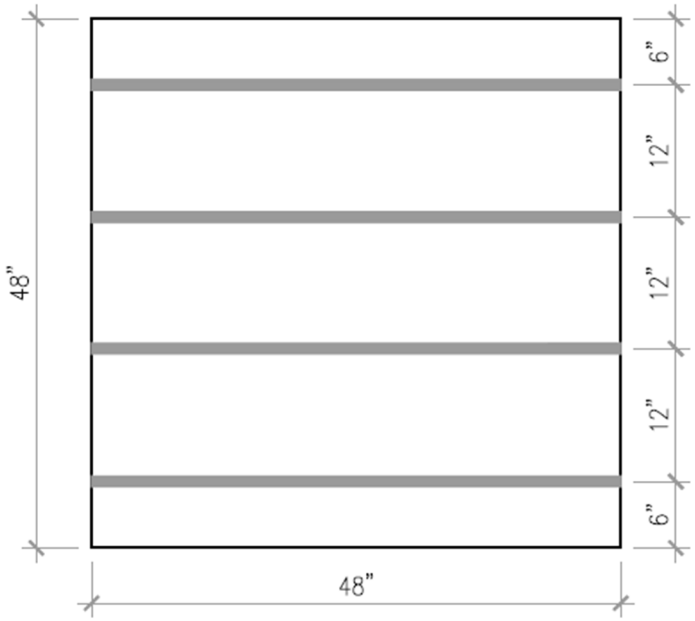
INSULATION (top)		
TESTED PRODUCT: Rigid insulation board composed of a closed-cell polyisocyanurate core foamed between two fiber-reinforced organic facers.		
System	**Securement Method**	**Securement Rate**
A	Adhered	Ribbons at 12 in o.c.
ELIGIBLE THICKNESS(ES)		
1½ in minimum		
SECUREMENT METHOD		
Millennium Adhesive		
SECUREMENT PATTERN		



ELIGIBLE PRODUCT(S)				
IKO Industries	IKOTherm	IKOTherm III	IKOTherm 25 PSI	IKOTherm III 25 PSI
	*IKOTherm Tapered	*IKOTherm III Tapered	*IKOTherm 25 PSI Tapered	*IKOTherm III Tapered 20 PSI

*Always respect board minimum eligible thickness.

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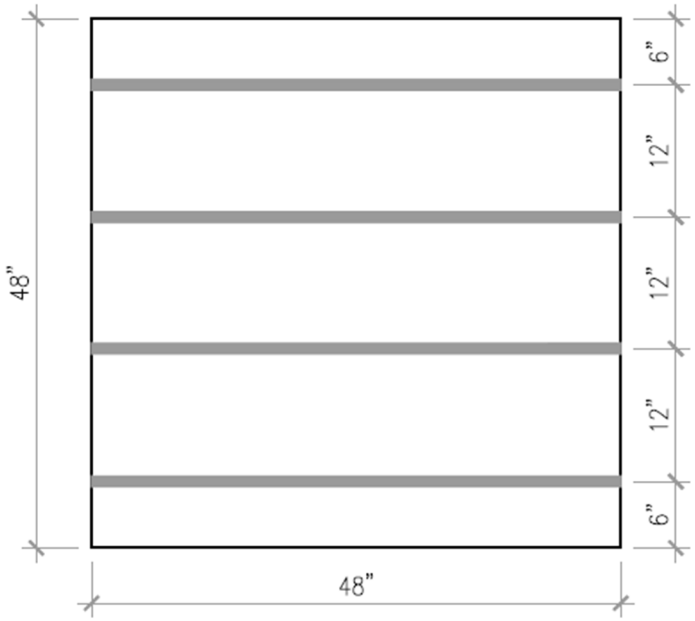
ADDITIONAL INSULATION (bottom and/or additional)		
TESTED PRODUCT: Rigid insulation board composed of a closed-cell polyisocyanurate core foamed between two fiber-reinforced organic facers.		
System	**Securement Method**	**Securement Rate**
A	Adhered	Ribbons at 12 in o.c.
ELIGIBLE THICKNESS(ES)		
1½ in minimum		
SECUREMENT METHOD		
Millennium Adhesive		
SECUREMENT PATTERN		



ELIGIBLE PRODUCT(S)				
IKO Industries	IKOTherm	IKOTherm III	IKOTherm 25 PSI	IKOTherm III 25 PSI
	*IKOTherm Tapered	*IKOTherm III Tapered	*IKOTherm 25 PSI Tapered	*IKOTherm III Tapered 20 PSI

*Always respect board minimum eligible thickness.

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VAPOUR BARRIER				
TESTED PRODUCT: Primerless, self-adhering, non-permeable membrane.				
System	**Securement Method**		**Primer**	
A	Self-adhered		n/a	
ELIGIBLE PRODUCT(S)				
IKO Industries	AcrylicStick SA	MVP Sand*	Armourbond Flash Sand*	

*These membranes require IKO S.A.M. Adhesive

THERMAL BARRIER
TESTED PRODUCT: n/a

FASTENERS
TESTED PRODUCT(S): n/a

ADHESIVE				
TESTED PRODUCT: Foamable elastomeric adhesive.				
System	**Application details**		**Primer**	
A	12 in o.c.		n/a	
ELIGIBLE PRODUCT(S)				
IKO Industries	Millennium Adhesive			

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).				

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General Notes

1. **Source:**

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

2. **Deck equivalency products:**

   Steel deck greater than 22 gage and/or 33 ksi. Wooden deck which testing gives equivalent or superior pull-out resistance than the measured value specified in the “Fasteners Pull Out Resistance” section. For concrete deck, communicate with EXP for possibilities and guidelines.

3. **Fasteners Pull Out Resistance:**

   Tests conducted according to ANSI/SPRI FX-1 standard, over 22 gage, 33 ksi steel deck (unless stated otherwise).

4. **Adhesive Pull Resistance (when applicable):**

   Tests conducted 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 bead spacings be distributed in reasonably straight lines on the substrate, 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, among other things, the width of the bead.

6. **Liquids, primers, and adhesives:**

   Observe all application rates specified by the manufacturers, as well as any additional requirements when applying liquids, 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 can compute the Wind Load of any given building, for field, perimeter, 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 multiplying 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:**

2024-07-17	First edition.

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