

Bulletin

Roof Testing Laboratory



Roof System Dynamic Wind Uplift Resistance Results

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ADHERED XPRESS BOARD

(AARS) ADHESIVE APPLIED ROOFING SYSTEM

Roofing System Summary

Cap sheet membrane:	Modified bitumen membrane / Torch applied
Base sheet membrane:	Included to cover board
Cover board:	Composite board consisting of a bitumen membrane and rockwool board / Adhered
Insulation:	Polyisocyanurate foam insulation board / Adhered
Vapour barrier:	Self-adhesive membrane
Thermal barrier:	Optional
Decking:	Steel deck

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

System Designation	Measured Value	Computed Value (To Include 1.5 Experimental Factor)
A	-2,7 kPa (-56 psf)	-1,8 kPa (-37 psf)
B	-2,9 kPa (-60 psf)	-1,9 kPa (-40 psf)
C	-3,6 kPa (-75 psf)	-2,4 kPa (-50 psf)

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Products

CAP SHEET MEMBRANE				
TESTED PRODUCT : Membrane composed of a non-woven polyester reinforcement and SBS modified bitumen.				
System	Application Method			
A, B, C	Torch applied			
ELIGIBLE PRODUCT(S)				
Soprema	Sopralene Flam 250 GR	Sopralene Flam 180 GR	Soprastar Flam HD GR	Sopralene Flam 180 FR GR
	Sopralene Flam 250 FR GR	Soprastar Flam HD FR GR	Sopralene Mammouth GR	Sopraply Traffic Cap 560
	Sopraply Traffic Cap FR 561			

BASE SHEET MEMBRANE				
TESTED PRODUCT : N/A				
Included to cover board				

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COVER BOARD				
TESTED PRODUCT : System A: Composite board consisting of a modified bitumen base sheet membrane with non-woven polyester reinforcement laminated to an insulation rockwool board and impregnated with a layer of bitumen on the underside (Xpress Board Coated)				
TESTED PRODUCT: System B: Composite board consisting of a modified bitumen base sheet membrane with non-woven polyester reinforcement laminated to an insulation rockwool board (Xpress Board)				
TESTED PRODUCT: System C: Composite board consisting of a modified bitumen base sheet membrane with non-woven polyester reinforcement laminated to a high density insulation rockwool board (Xpress Board HD)				
System	Application Method		Fastening Rate	
A, B, C	Adhered		Ribbons at 305 mm (12 in) O.C	
ELIGIBLE THICKNESS(ES)				
12,7 mm (½ in)				
FASTENING METHOD				
Duotack adhesive				
FASTENING PATTERN				
<p>Systems A, B, C</p>				
ELIGIBLE PRODUCT(S)				
Soprema	Xpress Board Coated	Xpress Board	Xpress Board HD	

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INSULATION (Top Row)				
TESTED PRODUCT : Polyisocyanurate foam insulation board laminated on both sides with fiber reinforced organic felt.				
System	Application Method		Fastening Rate	
A, B, C	Adhered		Ribbons at 305 mm (12 in)	
ELIGIBLE THICKNESS(ES)				
38 to 102 mm (1½ to 4 in)				
APPLICATION METHOD				
Duotack adhesive				
FASTENING PATTERN				
<p>Systems A, B, C</p>				
ELIGIBLE PRODUCT(S)				
Soprema	Sopra-ISO	Sopra-ISO Plus		
Atlas Roofing Corp.	ACFoam II	ACFoam III	ACFoam IV	
Johns Manville	ENRGY 3	ENRGY 3 CGF		
Hunter Panels	H-Shield	H-Shield CG		

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INSULATION (Bottom Row)	
TESTED PRODUCT : N/A	

VAPOUR BARRIER			
TESTED PRODUCT : Self-adhesive membrane composed of a trilaminated woven polyethylene and SBS modified bitumen.			
System	Application Method		Primer
A, B, C	Self-adhered		N/A
ELIGIBLE PRODUCT(S)			
Soprema	Sopravap'R	Sopralene Stick Adhesive	
Application method: Adhered (Steel deck excepted, all substrates must be primed with Elastocol Stick or Elastocol Stick Zero)			
Soprema	Elastophene SP 2.2	Sopralene 180 SP 3.5	
Application method: Torch applied (All substrates must be primed with Elastocol 500)			

THERMAL BARRIER	
TESTED PRODUCT : Optional	

FASTENERS PULL OUT RESISTANCE	
TESTED PRODUCT(S) : N/A	

ADHESIVE			
TESTED PRODUCT : Low-rise, two-component, polyurethane adhesive.			
System	Ribbon's spacing		Primer
A, B, C	305 mm (12 in)		N/A
ELIGIBLE PRODUCT(S)			
Soprema	Duotack		

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General Notes

1. Decking:

The tests performed by **EXP** services inc. («**EXP**») were performed over a standard roll formed steel deck profile, with a galvanized or aluminum / zinc alloy coating finished, as per ASTM A653, A792, A1008 or CSSBI 10M standards, bearing a thickness of 0.76 mm (0.03 inch) minimum (commonly defined as 22 gauge), corresponding to the ASTM A653M grade SS 230, having a yield point of 230 MPa (33 ksi) and a tensile strength of 310 MPa (45 Ksi).

Equivalency; tests have demonstrated that the self-adhered vapour retarder in the system herein described is suitable for application over properly prepared concrete deck primed with Elastocol Stick or Elastocol Stick Zero.

Tests could be conducted on 4' x 8' x 5/8" standard plywood deck to assess eligibility for possible equivalencies.

The deck's fastening to the supporting structure must be strong enough to resist wind uplift loads (as defined per NBC requirements).

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:

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:

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:

Follow all guide lines or supplementary instructions from the manufacturer regarding adhesive application.

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.

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9 Building Wind Load Calculation:

An online calculator is available at <http://www.exp.com/fr/rooftesting>.

The calculator will compute, the Wind Load of any given building, for field, perimeter and corners, as per 2015 CNB 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.

12 Version tracking table:

2015-09-29	First edition
2017-12-18	New presentation layout, adding two systems

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Date