Bulletin

Roof Testing Laboratory (ISO 17025)



Roof System Dynamic Wind Uplift Resistance Results

File number:	SIPZ-252757
Test date:	2019-11-11
Publication date:	2020-11-27
Last revision date:	N/A
Reappraisal date:	2023-11-27



SIPLAST ALL ADHERED INSULATED MOD-BIT SYSTEM WITH THERMAL BARRIER (AARS) ADHESIVE APPLIED ROOFING SYSTEM

Tested Roofing System Summary

Cap sheet membrane:	Modified bitumen membrane / Fused
Base sheet membrane:	Modified bitumen membrane / Semi-adhered from adhesive stripes
Cover board:	High density polyisocyanurate foam coverboard (4 x 8 ft x ½ in) / Adhered
Insulation (top row):	Polyisocyanurate foam insulation board (4 x 4 ft x 1½ in) / Adhered
Insulation (bottom row):	Polyisocyanurate foam insulation board (4 x 4 ft x 1½ in) / Adhered
Vapour barrier:	Modified bitumen membrane / Fused
Thermal barrier:	Moisture and fire-resistant gypsum board (4 x 8 ft x ½ in) / Adhered
Decking:	Steel deck

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

System Designation	Measured Value	Computed Value (To Include 1.5 Experimental Factor)
Α	- 5,9 kPa (-123 psf)	-3,9 kPa (-82 psf)

SCC Accredited
LAB
LAB
Accredite CCN

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



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

Products

CAP SHEET MEMBRANE TESTED PRODUCT: Membrane composed of lightweight random fibrous glass mat and SBS modified bitumen. (ASTM D6163, Type 1, Grade G / CSA-A123.23-15, Type A, Grade 1)							
System	(NOTWI BOTOO, Type	Application Method					
A	Fused						
		ELIGIBLE PRODUCT(S)					
	Paradiene 30 FR TG	Paradiene 30 HT FR TG	Paradiene 40 FR TG	Parafor 30 TG			
SIPLAST	Parafor 50 LT	Parafor 50 TG	Veral AL				

BASE SHEET MEMBRANE TESTED PRODUCT: Membrane composed of lightweight random fibrous glass mat and SBS modified bitumen, bottom side							
		ghtweight random fibrous g ripes. (ASTM D6163, Type					
System	Application	on Method	Row spacing	Fasteners spacing			
Α		dhered n adhesive stripes)	N/A	N/A			
		ELIGIBLE PRODUCT(S)					
	Paradiene 20 TS SA	Paradiene 20 EG SA	Paradiene 20 HT SA	Paradiene 20 SA			
SIPLAST	Paradiene 20 SA F	Paradiene 20 TS SA F					



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

_			
		COVER BOARD	
TESTED PR		olyisocyanurate foam cor C1289, Type II, Class 4, G	re bonded to inorganic coated glass facers. Grade 1)
System	Application	n Method	Fastening Rate
Α	Adhe	red	6 in (150 mm) o.c. beads
	El	LIGIBLE THICKNESS(ES	S)
		½ in (13 mm)	
		FASTENING METHOD	
	Pa	arafast Insulation Adhesiv	/e
		FASTENING PATTERN	
	3" 6" 6" 6" 6" 6" 6	" 6" 6" 6" 6" 6" 6	5" 6" 6" 6" 6" 6" 5"
	111111	1 1 1 1 1	1 1 1 1 1 1 1 1
		$I \mid I \mid I \mid I$	
.0		I I I I I I	
		I I I I I I	
		I I I I I I	
		96"	
	*	30	*
		ELIGIBLE PRODUCT(S)	
ATLAS	ACFoam-III HD		
SIPLAST	Coverboard Paratherm HD		
IKO	IKOTherm CoverShield	Protectoboard (top	
		primed with PA 917)	
GAF	EnergyGuard HD		



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

		INSULATION (Top Row)	
TESTED PRODU	CT: Polyisocyanurate foam	insulation board laminated	on both sides with fiber reinforced organic felt. C-S704 Type 2 (3), Class 3)
System		on Method	Fastening Rate
Α	Adh	ered	6 in (150 mm) o.c. beads
	E	ELIGIBLE THICKNESS(ES	;)
		1½ in (38 mm) minimum	
		FASTENING METHOD	
	F	Parafast Insulation Adhesiv	е
		FASTENING PATTERN	
		48"	
ATLAS	ACFoam-II	ACFoam-III	
SIPLAST	Paratherm	Paratherm CG	
-		1	

EnergyGuard Ultra

GAF

EnergyGuard



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

		OUL ATION (Additional Ba	
TESTED PROD		SULATION (Additional Roinsulation board laminated	ow) on both sides with fiber reinforced organic felt.
	(ASTM C1289, Type II, Clas	ss 1, Grade 2 (3) / CAN/UL	C-S704 Type 2 (3), Class 3)
System		on Method	Fastening Rate
Α		ered	6 in (150 mm) o.c. beads
	<u> </u>	ELIGIBLE THICKNESS(ES	5)
		1½ in (38 mm) minimum	
		FASTENING METHOD	
	F	Parafast Insulation Adhesiv	ve
		FASTENING PATTERN	
		48"	
	7		1
		ELIGIBLE PRODUCT(S)	
ATLAS	ACFoam-II	ACFoam-III	
SIPLAST	Paratherm	Paratherm CG	
IKO	IKOTherm II	IKOTherm III	
		 	

EnergyGuard Ultra

GAF

EnergyGuard



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

VAPOUR BARRIER							
TESTED PROD	TESTED PRODUCT: Membrane composed of lightweight random fibrous glass mat and SBS modified bitumen.						
System	Fastenin	g Method	Primer				
Α	Fus	sed	N/A				
	ELIGIBLE PRODUCT(S)						
SIPLAST	IREX 40	IREX HT	Paradiene 20 TG	Paradiene 20 HT TG			
SIPLAST	Paradiene 20 HV TG	Paradiene 20 EG TG					



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

						THEF	RMAL	BAR	RIER	!									
TED PRODUCT: M	loisture a	and fir	e-res	istant	gyps	um bo	oard v	vith n	on-co	mbus	stible	fiberg	lass f	acers	and	l non-	-asph	altic c	oat
System			A	pplica	ation	Meth	od				Fastening Rate								
Α				A	dhere	ed							6 in ((150 r	mm)	o.c. k	oeads		
					ELI	GIBL	E TH	ICKN	ESS(ES)									
						∕₂ in ('	13 mr	n) mir	nimun	1									
					F	AST	ENIN	G ME	THO)									
					Par	afast	Insula	ation <i>i</i>	Adhes	sive									
					FA	STEN	NING	PAT1	ERN	(S)									
-	3" 6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	13"			
+	-													_					
	Ш															Ш			
	Ш															Ш			
	Ш															Ш			
	Ш															Ш			
.84	Ш															Ш			
	Ш															Ш			
	Ш															Ш			
	Ш															Ш			
	Ш															Ш			
*		_		_				96"							_				
-	1							90								1			
					E	LIGIE	LE P	ROD	JCT(S)									
Georgia Pacific	De	ensDe	ck Pr	ime															
CGC		Seci	urock																



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

FASTENERS

TESTED PRODUCT(S): N/A

ADHESIVE						
TESTED	TESTED PRODUCT: Quick curing, two components, bead applied, polyurethane foam adhesive.					
System	Ribbon's	spacing	Primer			
Α	6 in (150	mm) o.c.	N/A			
	ELIGIBLE PRODUCT(S)					
SIPLAST	Parafast Insulation Adhesive	Parastick Adhesive	Parafast C Adhesive	Parafast T Adhesive		



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

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). Tests could be performed on concrete deck or standard 4' x 8' x 5" 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:

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.



Roof System Dynamic Wind Uplift Resistance Results

SIPZ-252757

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 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.

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:

2020-11-27

Prepared	by:	
EXP Se	rvices Inc.	
		2020-11-27

Serge Rochon, P. Eng. O.I.Q. Nº: 114865 P.E.O. Nº: 100023274

Provincial Manager - Building Science and CSA Laboratory

First edition

Date