Roof System Assessment Report of Wind Uplift Resistance (ISO 17025)

Document Number:	PUB-DRU303359
Publication Date:	2015-06-02
Revised:	
Revaluation Date:	2018-06-02

Supplier:

Firestone BUILDING PRODUCTS

RubberGard™ EPDM RMA mechanically attached System, Mechanically Attached Roof System (MARS)

Roofing System Summary :

- Membrane: EPDM membrane or allowable products
- Cover board: Polyisocyanurate board or allowable products
- Insulation: Polyisocyanurate or allowable products
- Vapour barrier: Membrane or allowable products
- Thermal barrier: Optional
- Decking: Steel Deck

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

Description	Test observation reading	With SF of 1.5
System A	-4.8 kPa (-100 psf)	**-3.2 kPa (-67 psf)**

Notes :

Allow products:
Only equivalent products included into the roofing system's report are admissible.

Optional components:
Components of the roofing system designated as optional may be included or excluded from the roofing system which will not change the published dynamic uplift resistance (DUR).

Safety factor:
As required by in the CSA A123.21 Standard, the published dynamic uplift resistance (DUR) are reduced by a safety factor of 1.5 (SF of 1.5)

Admissible wind uplift load calculation:
An online calculator is available at www.sigders.ca. The user will have to provide the following information:

- building location;
- building geometry;
- building exposure;
- building openings;
- building importance factor.

The calculator will display the allowable design load of the roof's field surface, edges and corners as well as the dimensions of the edge and corner zones.

Technical Advisories:
Assessment reports must be read in conjunction with technical advisories issued by **exp** Services Inc.

Values
For this document, the metric values are the standard and values in parentheses are for information only.

Notice
Exp Services inc. reserve their right to withdraw, without prior notice, the test report performed as per CSA A123.21 Standard.

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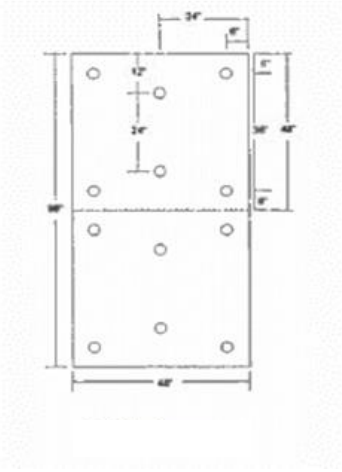
Roofing System's Specific Data:

Membrane:

- Allowable product:	**Firestone**		
	RubberGard™ EPDM	Platinum EPDM	EcoWhite membranes
	RubberGard™ MAX EPDM	EPDM PT membranes	
- **Attachment mode:**	Mechanically attached		
Mechanically attached Pattern	Row spacing	Fasteners spacing	
for System A result	**1828 mm (72 in.) o.c.**	**305 mm (12 in.) o.c.**	
- Attachment type:	Fasteners #14 (W56RAC4239) and plates (W56RAC4182)		
- **Attachment mode:**	**QuickSeam R.M.A. Strip (W56RAC1610)**		
- Pullout fastener resistance:	Minimal reference resistance base on test: **600** lbf or **272.2** Kg		
- Attachment supplier:	**Firestone**		

Cover board:

- Allowable product:	**Firestone**		
	ISOGard HD	HailGard	
	CGC / USG		
	Securock Gypsum Fiber Roof Board		
- Allowable thickness:	Between 3 mm (1/8 in.) to 15.9 mm (5/8 in.)		
Mechanically attached Pattern	Row spacing	Fasteners spacing	
for System A result	**12 fasteners per 32 ft²**	**As fastener drawing pattern**	
- Attachment type:	Fasteners #14 (W56RAC4239) and plates (W56RAC4190)		
- Pullout fastener resistance:	Minimal reference resistance base on test: **749,4** lbf or **340** Kg		
- Attachment supplier:	**Firestone**		



Fastener Drawing Pattern

Insulation:

- Allowable products:	**Firestone**		
	ISO 95+	Resista	
- Allowable thickness:	Between 25 mm (1 in.) to 203 mm (8 in.)		
- **Attachment mode:**	**Loose laid or adhered or mechanically attached**		

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Vapour Barrier:

- Allowable products:	**Firestone**		
	V-Force	Basegard SA	
	Generic		
	Polyethylene	Kraft paper	
- **Attachment mode:**	**Adhered or loose laid**		
- Attachment type:	Self-adhering membrane or loose laid or adhered		

Thermal Barrier (optional): *See optional products table*

Decking:

- Type:	Galvanized construction steel or coated with an aluminum/zinc alloy or PVC in accordance with ASTM A653, ASTM A792, ASTM A1008 or CSSBI 10M Standards.
- Supplier:	Generic
- Thickness:	0.76 mm (0.03 in.) minimum, with a yield strength of 230 MPa (33 ksi) and a tensile strength of 310 MPa (45 ksi) commonly defined as being of a 22 gauge minimum thickness.
- Attachment method:	The deck's fastening to the supporting structure must be strong enough to resist wind uplift loads (adjusted as per NBC requirements).
- Fastening uplift resistance (CSA S136.F04):	2.09 kN (470 pf)
- -Equivalence:	Steel deck thickness of 18 to 22 gauges or wood deck or concrete deck with pullout resistance equal or higher than the Fastening uplift resistance specified above.

Optional Products Table:

Thermal Barrier:

- Allowable product:	**Georgia Pacific**		
	DensDeck	DensDeck Prime	
	CGC / USG		
	Securock Gypsum Fiber Roof Board		
- Allowable thickness:	Between 6 mm (¼ in.) to 15.9 mm (5/8 in.)		
- **Attachment mode:**	**Loose laid or adhered or mechanically attached**		