

Document Number:	PUB-DRU292360
Publication Date:	2014-12-02
Revised:	2015-04-22
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**Supplier:**



**Single ply TPO membrane Induction attached System, Mechanically Attached Roofing System (MARS)**

**Roofing System Summary :**

- membrane: Membrane TPO or allowable products
- Insulation: Polyisocyanurate or allowable products
- Vapour barrier: Self-adhering membrane
- Thermal barrier: Optional
- Decking: Steel deck

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

Description	Test observation reading	With SF of 1.5
<b>System A</b>	-7.5 kPa (-157 psf)	<b>-5 kPa (-105 psf)</b>

*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](http://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.

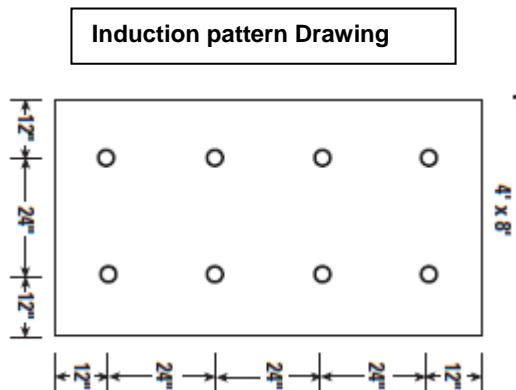
## Roof System Assessment Report of Wind Uplift Resistance (ISO 17025)

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### Roofing System's Specific Data:

<b>Membrane:</b>			
- Allowable products:	<b>Johns Manville</b>		
	JM-TPO-45 mil	JM-TPO- 60 mil	JM-TPO- 80 mil
<b>Induction attached Pattern</b>	Row spacing		Fasteners spacing
<b>for System A result</b>	<b>8 RhinoPlates per panel 32sq<sup>2</sup></b>		<b>As Induction pattern drawing</b>
- Attachment type:	Induction welded		
- Attachment supplier:	<b>Johns Manville</b>		

<b>Insulation :</b>			
- Allowable products:	<b>Johns Manville</b>		
	ENRGY 3	ENRGY 3 AGF	ENRGY 3 CGF
	ENRGY 3 .E	ENRGY 3 FR	ENRGY Foil Faced
	Fesco Foam	Nailboard	Valutherm Roof Insulation
	Vented Nailboard		
- Allowable thickness:	Up to 203 mm (8 in)		
<b>Induction attached Pattern</b>	Row spacing		Fasteners spacing
<b>for System A result</b>	<b>8 fasteners and plates per panel 32sq<sup>2</sup></b>		<b>As Induction pattern drawing</b>
- Attachment type:	High Load #15 & TPO RhinoPlates 76 mm (3 in )		
- Pullout fastener resistance:	216 psi or 589 lbf or 2620 Newton		
- Attachment supplier:	<b>Johns Manville</b>		



<b>Vapour Barrier:</b>			
- Allowable product:	<b>Johns Manville</b>		
	JM Vapor barrier SA		
<b>Adhered Attached Pattern</b>	Adhesion mode		Adhesive spacing
<b>For System A result</b>	<b>Fully adhered</b>		<b>No spacing</b>
- Attachment type:	Self-adhering membrane		



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

<b>Decking:</b>	
- 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:

<b>Thermal barrier:</b>	
- Allowable product:	<b>Georgia Pacific</b>
	Dens deck      Dens deck Prime
	<b>CGC</b>
	Securock Gypsum Fiber Roof Board
- Allowable thickness:	12.7 mm (1/2 in)
- Attachment mode:	Loose laid, adhered or mechanically attached