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Supplier:



Mod-Bit Unilay 750 mechanically attached System, Mechanically Attached Roof System (MARS)

Roofing System Summary :

- Cap sheet membrane: Modified Bituminous Membrane
 - Cover board: Optional
 - 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	-3.0 kPa (-62 psf)	-2.0 kPa (-41psf)
System B	-4.3 kPa (-90 psf)	-2.9 kPa (-60 psf)
System C	-6.0 kPa (-126 psf)	-4.0 kPa (-84 psf)
System D	-7.8 kPa (-162 psf)	-5.2 kPa (-108 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:

Cap Sheet Membrane:

- Allowable products:	Soprema Unilay 750		
- Attachment mode:	Heat welded		
Mechanically attached Pattern for System A result	Row spacing 787 mm (31 in) o.c.	Fasteners spacing 610 mm (24 in) o.c.	
- Attachment type:	Fasteners #14 with #3 deep recesses Phillips head composed of hardened carbon steel and covered with an anticorrosion coating. 20 gauge round barbed plate of 50 mm (2 in), with Galvalume finish		
- Pullout fastener resistance:	214 psi or 442 lbf or 1967 Newton		
- Attachment supplier:	Soprema		
Mechanically attached Pattern for System B result	Row spacing 787 mm (31 in) o.c.	Fasteners spacing 457 mm (18 in) o.c.	
- Attachment type:	Fasteners #14 with #3 deep recesses Phillips head composed of hardened carbon steel and covered with an anticorrosion coating. 20 gauge round barbed plate of 50 mm (2 in), with Galvalume finish		
- Pullout fastener resistance:	214 psi or 442 lbf or 1967 Newton		
- Attachment supplier:	Soprema		
Mechanically attached Pattern for System C result	Row spacing 787 mm (31 in) o.c.	Fasteners spacing 305 mm (12 in) o.c.	
- Attachment type:	Fasteners #14 with #3 deep recesses Phillips head composed of hardened carbon steel and covered with an anticorrosion coating. 20 gauge round barbed plate of 50 mm (2 in), with Galvalume finish		
- Pullout fastener resistance:	214 psi or 442 lbf or 1967 Newton		
- Attachment supplier:	Soprema		
Mechanically attached Pattern for System D result	Row spacing 787 mm (31 in) o.c.	Fasteners spacing 152 mm (6 in) o.c.	
- Attachment type:	Fasteners #14 with #3 deep recesses Phillips head composed of hardened carbon steel and covered with an anticorrosion coating. 20 gauge round barbed plate of 50 mm (2 in), with Galvalume finish		
- Pullout fastener resistance:	214 psi or 442 lbf or 1967 Newton		
- Attachment supplier:	Soprema		

Cover board (optional): See optional products table

Insulation:

- Allowable products:	Soprema Sopra-Iso SopraRock DD Plus Atlas Roofing Corp. ACFoam II Johns Manville ENRGY 3 Hunter Panels H-Shield	Sopra-Iso + ACFoam III	SopraRock DD ACFoam IV
- Allowable thickness:	Between 25 mm (1 in) to 203 mm (8 in)		
- Attachment mode:	Loose laid or adhered or mechanically attached (1 fastener per 4 f²)		

Vapour Barrier:

- Allowable products:	Soprema Sopravap'R	Sopralene Stick Adhesive
- Attachment mode:	Adhered	
- Attachment type:	Self-adhering membrane	



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

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Or Vapour Barrier:

- Allowable products:	Soprema		
	Elastophene PS 2.2 mm	Sopralene 180 PS 3.5 mm	
- Attachment mode:	Heat welded (required a primer on allowable thermal barrier or concrete deck with Elastocol 500)		

Or Vapour Barrier:

- Allowable products:	Soprema		
	Xpress Vap'R Board	Soprastop	
- Attachment mode:	Loose laid, adhered or mechanically attached		

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:

Cover board:

- Allowable product:	Soprema		
	Sopraboard	Soprarock MD	Soprarock MD+
	Georgia Pacific		
	DensDeck	DensDeck Prime	
	CGC / USG		
	Securock Gypsum Fiber Roof Board		
	Unifix		
	PermaBase Dek		
- Allowable thickness:	Between 3 mm (1/8 in.) to 15.9 mm (5/8 in.)		
- Attachment mode:	Loose laid or adhered or mechanically attached		

Thermal barrier:

- Allowable product:	Georgia Pacific		
	DensDeck	DensDeck Prime	
	CGC / USG		
	Securock Gypsum Fiber Roof Board		
	Unifix		
	PermaBase Dek		
- Allowable thickness:	Between 6 mm (1/4 in.) to 15.9 mm (5/8 in.)		
- Attachment mode:	Loose laid or adhered or mechanically attached		