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

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:

<table>
<thead>
<tr>
<th>Description</th>
<th>Test observation reading</th>
<th>With SF of 1.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>System A</td>
<td>-3.0 kPa (-62 psf)</td>
<td>-2.0 kPa (-41 psf)</td>
</tr>
<tr>
<td>System B</td>
<td>-4.3 kPa (-90 psf)</td>
<td>-2.9 kPa (-60 psf)</td>
</tr>
<tr>
<td>System C</td>
<td>-6.0 kPa (-126 psf)</td>
<td>-4.0 kPa (-84 psf)</td>
</tr>
<tr>
<td>System D</td>
<td>-7.8 kPa (-162 psf)</td>
<td>-5.2 kPa (-108 psf)</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Document Number:</th>
<th>PUB-DRU168549</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication Date:</td>
<td>2010-07-28</td>
</tr>
<tr>
<td>Revised:</td>
<td>2015-04-30</td>
</tr>
<tr>
<td>Revaluation Date:</td>
<td>2018-04-30</td>
</tr>
</tbody>
</table>

Roofing System’s Specific Data:

**Cap Sheet Membrane:**

<table>
<thead>
<tr>
<th>- Allowable products:</th>
<th>Soprema</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Attachment mode:</td>
<td>Unilay 750</td>
</tr>
</tbody>
</table>

**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.
- **Pullout fastener resistance**: 214 psi or 442 lbf or 1967 Newton
- **Attachment supplier**: Soprema

### 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.
- **Pullout fastener resistance**: 214 psi or 442 lbf or 1967 Newton
- **Attachment supplier**: Soprema

### 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.
- **Pullout fastener resistance**: 214 psi or 442 lbf or 1967 Newton
- **Attachment supplier**: Soprema

### 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.
- **Pullout fastener resistance**: 214 psi or 442 lbf or 1967 Newton
- **Attachment supplier**: Soprema

**Cover board (optional):** See optional products table

**Insulation:**

<table>
<thead>
<tr>
<th>- Allowable products:</th>
<th>Soprema</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Attachment mode:</td>
<td>Sopra-Iso</td>
</tr>
<tr>
<td>- Attachment mode:</td>
<td>Sopra-Iso Plus</td>
</tr>
<tr>
<td></td>
<td>SopraRock DD</td>
</tr>
<tr>
<td></td>
<td>SopraRock DD Plus</td>
</tr>
<tr>
<td></td>
<td>Atlas Roofing Corp.</td>
</tr>
<tr>
<td></td>
<td>ACFoam II</td>
</tr>
<tr>
<td></td>
<td>ACFoam III</td>
</tr>
<tr>
<td></td>
<td>ACFoam IV</td>
</tr>
<tr>
<td></td>
<td>Johns Manville</td>
</tr>
<tr>
<td></td>
<td>ENRGY 3</td>
</tr>
<tr>
<td></td>
<td>ENRGY 3 CGF</td>
</tr>
<tr>
<td></td>
<td>Hunter Panels</td>
</tr>
<tr>
<td></td>
<td>H-Shield</td>
</tr>
<tr>
<td></td>
<td>H-Shield CG</td>
</tr>
</tbody>
</table>

- **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 ft)

**Vapour Barrier:**

<table>
<thead>
<tr>
<th>- Allowable products:</th>
<th>Soprema</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Attachment mode:</td>
<td>SopraVap'R</td>
</tr>
<tr>
<td>- Attachment mode:</td>
<td>Sopralene Stick Adhesive</td>
</tr>
</tbody>
</table>

- **Vapour Barrier mode:** Loose laid or adhered or mechanically attached (1 fastener per 4 ft)
Roof System Assessment Report
of Wind Uplift Resistance (ISO 17025)

<table>
<thead>
<tr>
<th>Document Number:</th>
<th>PUB-DRU168549</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publication Date:</td>
<td>2010-07-28</td>
</tr>
<tr>
<td>Revised:</td>
<td>2015-04-30</td>
</tr>
<tr>
<td>Revaluation Date:</td>
<td>2018-04-30</td>
</tr>
</tbody>
</table>

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 psf)
- **Equivalent:** 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