Mod-Bit Soprafix 630 Ventilated wood deck mechanically attached System, Mechanically Attached Roof System (MARS)

Roofing System Summary:
- Cap sheet membrane: Modified Bituminous Membrane or allowable products
- Base sheet membrane: Modified Bituminous Membrane
- Cover board: Optional
- Insulation: Optional
- Decking: Standard wood(plywood) 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>-2.4 kPa (-50 psf)</td>
<td>-1.6 kPa (-33 psf)</td>
</tr>
<tr>
<td>System B</td>
<td>-2.9 kPa (-60 psf)</td>
<td>-1.9 kPa (-40 psf)</td>
</tr>
<tr>
<td>System C</td>
<td>-4.8 kPa (-100 psf)</td>
<td>-3.2 kPa (-67 psf)</td>
</tr>
</tbody>
</table>

Note:
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.
Roofing System’s Specific Data:

**Cap Sheet Membrane:**

- **Allowable products:**
  - Soprema
    - Sopralene Flam 180 GR
    - Sopralene Flam 250 GR
    - Soprástar Flam HD GR
    - Sopralene Flam 180 FR GR
    - Sopralene Flam 250 FR GR
    - Soprástar Flam HD FR GR
    - Sopralene Mammouth GR
    - Soprafix Traffic Cap 660
    - Soprafix Traffic Cap FR 661

- **Attachment mode:** Heat welded

**Base Sheet Membrane:**

- **Allowable products:**
  - Soprema
    - Soprafix Base 630

**Mechanically attached Pattern for System A result:**

<table>
<thead>
<tr>
<th>Attachment type</th>
<th>Row spacing</th>
<th>Fasteners spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible attach</td>
<td>890 mm (35 in.) o.c.</td>
<td>457 mm (18 in.) o.c.</td>
</tr>
</tbody>
</table>

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

**Mechanically attached Pattern for System B result:**

<table>
<thead>
<tr>
<th>Attachment type</th>
<th>Row spacing</th>
<th>Fasteners spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible attach</td>
<td>890 mm (35 in.) o.c.</td>
<td>305 mm (12 in.) o.c.</td>
</tr>
</tbody>
</table>

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

**Mechanically attached Pattern for System C result:**

<table>
<thead>
<tr>
<th>Attachment type</th>
<th>Row spacing</th>
<th>Fasteners spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexible attach</td>
<td>890 mm (35 in.) o.c.</td>
<td>152 mm (6 in.) o.c.</td>
</tr>
</tbody>
</table>

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

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

**Insulation (optional):** See optional products table

**Decking:**

- **Supplier:** CANPLY

- **Decking type:** Exterior Douglass fir plywood in accordance with CSA 0121, CSA 0151, CSA 0153 standards, like EASY T&G, DFP select grade.

- **Thickness:** 17 mm (5/8 in.) minimum, correspondent to CSA 0121, CSA 0151, CSA 0153 standards with a load limit of L/180; 6 kPa (125 psf).

- **Equivalence:** Other deck with pull-out resistance equivalent to the one specified below.

- **Attachment method:** The deck’s fastening to the supporting structure must be strong enough to resist wind uplift loads (adjusted as per NBC requirements).
## Optional Products Table:

### Cover board:

<table>
<thead>
<tr>
<th>Allowable product</th>
<th>Soprema</th>
<th>Sopra-iso</th>
<th>Sopra-iso+</th>
<th>SopraRock DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sopra-iso board</td>
<td>Sopra-iso MD</td>
<td>Sopra-iso MD+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Georgia Pacific</td>
<td>DensDeck</td>
<td>DensDeck Prime</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CGC / USG</td>
<td>Securock</td>
<td>Gypsum Fiber Roof Board</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unifix</td>
<td>PermaBase Dek</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Allowable thickness:** Between 6 mm (¼ in.) to 19.5 mm (5/8 in.)
- **Attachment mode:** Loose laid or adhered or mechanically attached

### Insulation:

<table>
<thead>
<tr>
<th>Allowable products</th>
<th>Soprema</th>
<th>Sopra-iso</th>
<th>Sopra-iso+</th>
<th>SopraRock DD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sopra-iso board</td>
<td>Sopra-iso MD</td>
<td>Sopra-iso MD+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atlas Roofing Corp.</td>
<td>ACFoam II</td>
<td>ACFoam III</td>
<td>ACFoam IV</td>
<td></td>
</tr>
<tr>
<td>Johns Manville</td>
<td>ENRGY 3</td>
<td>ENRGY 3 CGF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hunter Panels</td>
<td>H-Shield</td>
<td>H-Shield CG</td>
<td></td>
<td></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