Sapisol® product line

Technical Assessment ventilated roof 5/15-2443
Technical Assessment unventilated roof 5.2/19-2649_V1

Insulating panels
Energy efficient
Outcome of over 35 years of know-how and experience in design and manufacture of wood components for construction, Sapisol® self-supporting panels provide you with complete, efficient and sustainable solutions for your building’s insulation.

Summary

The product line
Applications
Advantages
Eco-friendly
Finishes of the undersides
Sapisol®
Sapisol® acoustic underside - Sapiliège®
Achievements

Spruce - Profile n°2 - Spread of flame B-s1, d0 - Red wine painting
Spruce - Profile n°1 - Sanded - Natural
Oak - Profile n°2 - Chalk white

- p 3
- p 4 - 5
- p 6
- p 7
- p 8 - 9
- p 10
- p 11
- p 12 à 15

Spruce - Profile n°2 - White stain
Spruce - Profile n°2 - Sanded - White paint
Spruce - Profile n°2 - White paint
• **Description**

Made of two wood facings and a polystyrene core (or cork), Simonin insulating panel comes with different thicknesses for all types of projects private, public, industrial...

• **Build up**

**Sapisol®**

*Roof and facade application*

- Roofing support
- Wood 20 mm or 27 mm Spruce
- Graphited EPS
- Finished ceiling
- Wood 20 mm or 27 mm Spruce, Old-wood spruce, Larch, Oak, ...

**Sapisol® acoustic underside**

*(or Sapiphone*) - *Roof application*

- Roofing support
- Wood 20 mm or 27 mm Spruce
- Graphited EPS
- Wood 20 mm ou 27 mm
- Finished ceiling
- Spruce, Old-wood spruce, Larch, Oak, ...

**Sapiliège®**

*Roof and facade application*

- Roofing support
- Wood 20 mm Spruce
- Cork
- Finished ceiling
- Wood 20 mm Spruce, Old-wood spruce, Oak, ...
Applications

Concordia station in Antarctica at 3000 m altitude

Hotel complex in Qatar

New - Theater in Morteau

Hotel - Restaurant in Congo

Tile roofing (See technical documents)

Green roof (See technical documents)

Church in Equatorial Guinea

Dome in Oman

Worldwide

New or Renovation

Exceptional works

All types of roofing

Photo credit: IPEV / Claire LE CALVEZ
Applications

Straight gable roof
- Vertical installation
- Horizontal installation

Flat roof

Curved roof

Cone-shaped roof or slightly waved roof

Steel framework
Advantages

**STRUCTURAL**

- Wide spans

  Spans up to 6 m between supports:
  - saving wood economy in main structure
  - enlarges volume
  - gain in living space

  *Span of 6 m with Sapisol® S200 (according to Technical documents).*

**INSULATING**

- Insulation without any thermal bridge
- Acoustic requirements
- No deformation, no settlement over time (reliability)

**SUSTAINABLE**

- Reduce your energy costs
- Designed for low energy housing
  (Conforms Thermal Regulation 2012)
- + 19% than a traditional solution
- Meets the airtightness test

- Cut and milled in the workshop (Reliability - Speed)
  - Square cut
  - Corner cut
  - Various cut

- Up to 17 m

- Sapisol® adapts to:
  - any environment (sensitive and extremely sensitive)
  - all altitudes and at all latitudes

**FINISHED WOOD SOFFIT**

In one operation:
- high performance insulation
- wood ceiling and eaves fully finished
- reliable roofing support and resistant

**LOW CONSUMPTION**

- Zero waste on site

- Up to 1m80

**CANTILEVERED**

- Continuous insulation

- Carried by hand

- Performant

- Sound and long lasting

Photo credit: IPEV / Claire LE CALVEZ
Eco-friendly

- Natural
- Recyclable
- Renewable
- Carbon storer
- Low energy consumption for its production

WOOD

- Natural
- Recyclable
- Renewable
- Carbon storer
- Low energy consumption for its production

- 98% air for 2% of material (Light and handy)
- Water vapor expansion (Long lasting)
- Chemical-free manufacturing: no CFC, HFC, HCFC... no heavy metals (Non-polluting)
- 100% recyclable

EPS

- Non-irritating and harmless (Neutral for the indoor air quality of buildings)
- Non-toxic (Use in the food industry...)
- Fireproof (Doesn’t ignite during a fire and doesn’t release any gas)
Finishés of the undersides

• Wood species

- Spruce
  - Profile n°1 - Sanded - Natural

- Spruce old-wood
  - Profile n°2 - Brushed - Natural

- Larch
  - Profile n°2 - Sanded - Natural

- Oak
  - Profile n°2 - Sanded - Chalk white
• **Textures**

- Sanded
- Brushed

• **Finishes**

- Natural
- Colourless
- Spread of flame
- White paint
- White stain

- Spruce - Profile n°2 - Sanded - White stain
- Low voltage led integration

- Spruce - Profile n°2 - Sanded - Natural

- Spurce - Profile n°2 - Spread of flame B-s1, d0
- Red wine painting

- Other colours on request
Sapisol®

• The product line

Sapisol® roof insulating panel fits to all types and shapes of roofs, ensuring perfect insulation without any thermal bridging.

• Sapisol® with boards thickness 20 mm (House)

<table>
<thead>
<tr>
<th>Type = total thickness (mm)</th>
<th>S 86</th>
<th>S 106</th>
<th>S 136</th>
<th>S 160</th>
<th>S 186</th>
<th>S 220 f</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood + EPS + Wood (mm)</td>
<td>20+46+20</td>
<td>20+66+20</td>
<td>20+96+20</td>
<td>20+120+20</td>
<td>20+146+20</td>
<td>20+180+20</td>
</tr>
<tr>
<td>Useful width (mm)</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
</tr>
<tr>
<td>Length*</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Weights (kg/m²)</td>
<td>18,70</td>
<td>19,3</td>
<td>20,20</td>
<td>20,90</td>
<td>21,70</td>
<td>22,70</td>
</tr>
<tr>
<td>Thermal values R* (m² x K/W)</td>
<td>1.79</td>
<td>2.44</td>
<td>3.40</td>
<td>4.18</td>
<td>5.02</td>
<td>6.11</td>
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<tr>
<td>Coefficient R* with phonic under-coverage</td>
<td>35 mm</td>
<td>2.59</td>
<td>3.23</td>
<td>4.20</td>
<td>4.97</td>
<td>5.81</td>
</tr>
<tr>
<td></td>
<td>60 mm</td>
<td>3.15</td>
<td>3.80</td>
<td>4.76</td>
<td>5.54</td>
<td>6.38</td>
</tr>
<tr>
<td>Fire reaction classification</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D-s1, d0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* (Also available in standard length of 5.50 ml useful with groove and tongue at the ends)

• Sapisol® with boards thickness 27 mm (Public buildings with B-s1, d0)

<table>
<thead>
<tr>
<th>Type = total thickness (mm)</th>
<th>S 100</th>
<th>S 120</th>
<th>S 150</th>
<th>S 174</th>
<th>S 200</th>
<th>S 220 e</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood + EPS + Wood (mm)</td>
<td>27+46+27</td>
<td>27+66+27</td>
<td>27+96+27</td>
<td>27+120+27</td>
<td>27+146+27</td>
<td>27+166+27</td>
</tr>
<tr>
<td>Useful width (mm)</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
<td>205</td>
</tr>
<tr>
<td>Length</td>
<td></td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Weights (kg/m²)</td>
<td>24,60</td>
<td>25,20</td>
<td>26,10</td>
<td>26,80</td>
<td>27,60</td>
<td>28,20</td>
</tr>
<tr>
<td>Thermal values R* (m² x K/W)</td>
<td>1.90</td>
<td>2.54</td>
<td>3.51</td>
<td>4.29</td>
<td>5.13</td>
<td>5.77</td>
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<tr>
<td>Coefficient R* with phonic under-coverage</td>
<td>35 mm</td>
<td>2.69</td>
<td>3.34</td>
<td>4.31</td>
<td>5.08</td>
<td>5.92</td>
</tr>
<tr>
<td></td>
<td>60 mm</td>
<td>3.26</td>
<td>3.91</td>
<td>4.88</td>
<td>5.65</td>
<td>6.49</td>
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<tr>
<td>Fire reaction classification</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D-s1, d0 (B-s1, d0 on demand)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

* Doesn’t take into account superficial thermal resistances.
Sapisol® acoustic underside said "SapiPhone"

• The product line

Perfect for buildings whose interior sound must be corrected (swimming-pool, media library, library, restaurant, gym...).

Sabine absorption coefficient:
Weighted sound absorption index $\alpha_{\text{Sabine}} = 0.25$

• Characteristics

<table>
<thead>
<tr>
<th>Type = Total thickness (mm)</th>
<th>SP 108</th>
<th>SP 158</th>
<th>SP 200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood + EPS + Wood (mm)</td>
<td>20+22+46+20</td>
<td>20+22+96+20</td>
<td>26+28+120+26</td>
</tr>
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<tr>
<td>Weights kg/m²</td>
<td>23.97</td>
<td>25.47</td>
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</tr>
<tr>
<td>Fire reaction classification</td>
<td>D-sl, d0</td>
<td>D-sl, d0</td>
<td>(B-sl, d0 on demand)</td>
</tr>
</tbody>
</table>

* Doesn’t take into account superficial thermal resistances.

Sapiliège®

• The product line

Sapiliège® panels are both wide span roofs and floors and decorative ceilings.
Ideal for roofs, they perfectly fit all interior designs: old, contemporary, modern, …
Spruce - Profile n°2 - Sanded - Natural

Spruce - Profile n°2 - Walnut paint

Paneled oak - Profile n°2 - Sanded - Chalk white

Spruce - Acoustic profile - Sanded - Natural

Spruce - Profile n°1 - Sanded - Colourless

Spruce - Profile n°1 - Sanded - Colourless
Achievements

Spruce - Profile n°2 - White stain

Spruce - Profile n°2 - Spread of flame B-s1, d0 - Red wine painting

Spruce - Profile n°2 - Brushed - White stain

Spruce - Profile n°2 - Sanded - Natural

Spruce - Profile Acoustic - Sanded - Colourless

Spruce - Profile n°1 - Sanded - Natural

www.simonin.com
Spruce - Profile n°2 - Colourless

Spruce - Profile n°1 - Colourless

Oak - Profile acoustic - Sanded - Natural

Spruce - Acoustic profile - Sanded - B-s1, d0 - White

Spruce - Profile n°2 - Brushed - White stain

Spruce - Profile n°2 - Colourless
Curved roof
Kiosk - Spain

Roofing vertical installation
Hotel - Italy

Oak - Profile n°2 - Sanded
Colourless

Spruce - Profile n°2 - Brushed
White paint