

## Sonowood Maple (*Acer Pseudoplatanus*)

Density [kg/m <sup>3</sup> ]	1'200 – 1'400
Brinell Hardness <sup>a)</sup> [N/mm <sup>2</sup> ]	> 80
Colour	Mocha
Dimensional Stability (Diff. swelling [% per % moisture content change])	Height ~ 0.7 Width ~ 0.3
Sound Velocity <sup>b)</sup> [m/s]	> 4'400
Damping (Log. decrement)	~ 0.053
Elastic Modulus <sup>c)</sup> [N/mm <sup>2</sup> ]	> 23'000

## Sonowood Spruce (*Picea Abies*)

Density [kg/m <sup>3</sup> ]	1'300 – 1'400
Brinell Hardness <sup>a)</sup> [N/mm <sup>2</sup> ]	> 100
Colour	Caramel
Dimensional Stability (Diff. swelling [% per % moisture content change])	Height ~ 0.75 Width ~ 0.33
Sound Velocity <sup>b)</sup> [m/s]	> 5'500
Damping (Log. Decrement)	~ 0.04
Elastic Modulus <sup>c)</sup> [N/mm <sup>2</sup> ]	> 39'000

## Comparison values of Ebony

Density [kg/m <sup>3</sup> ]	1'100 – 1'200
Brinell Hardness <sup>a)</sup> [N/mm <sup>2</sup> ]	~ 84
Sound Velocity <sup>b)</sup> [m/s]	~ 4'500

a) perpendicular to grain direction b) in grain direction  
c) determined via sound velocity

**Swiss Wood Solutions** was founded in 2016 as a spin-off from ETH Zurich and Empa. Our interdisciplinary team of scientists and wood technologists develop novel wood modification technologies to improve domestic woods, thus meeting contemporary as well as future needs.

In the musical instrument market, we offer **Sonowood** to substitute endangered tropical woods. Sonowood, sourced sustainably, matches the favourable properties of tropical woods and even outperforms them in terms of hardness and sound quality.

We thank our **Sonowood** project partners Wilhelm Geigenbau and Bois d'Harmonie, our music ambassadors Pacific Quartet Vienna (PQV), the Gebert Rűf foundation and the European Commission's Research and Innovation programme Horizon 2020 for their valuable support.

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swiss wood solutions





## Sonowood

Overexploitation of tropical woods has led to the need for an alternative wood material with competitive properties. Swiss wood solutions has developed a completely sustainable substitute: **Sonowood**.

In a two-step physicochemical process, various domestic woods such as spruce, maple and others are modified.

**Sonowood** offers a range of **advantages** and is suited ideally for the manufacturing of musical instruments:

- natural wood (no composite)
- high density
- high hardness
- dimensional stability
- good processability
- scratch resistance
- **superior sound characteristics**  
(high sound velocity, low damping)
- sustainable production
- no trade and travel restrictions
- various wood species



*Violin with the full set of Sonowood Maple (fingerboard, pegs, tailpiece and chin rest).*

## Our product range

Our current **Sonowood** instrument fittings are made of maple and spruce. Fittings from maple feature a mocha colour, whereas spruce is available in caramel.

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**Fingerboards:** semi-finished and finished fingerboards, as well as square timbers for making fingerboards of violin, viola and cello.

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**Pegs:** for violin, viola and cello in Sonowood maple.

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**Tailpieces:** for violin, viola, cello and double bass in Sonowood maple and spruce.

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**Chinrests:** in Sonowood maple and spruce.

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**Full Set:** We offer a full set of violin parts out of Sonowood maple.

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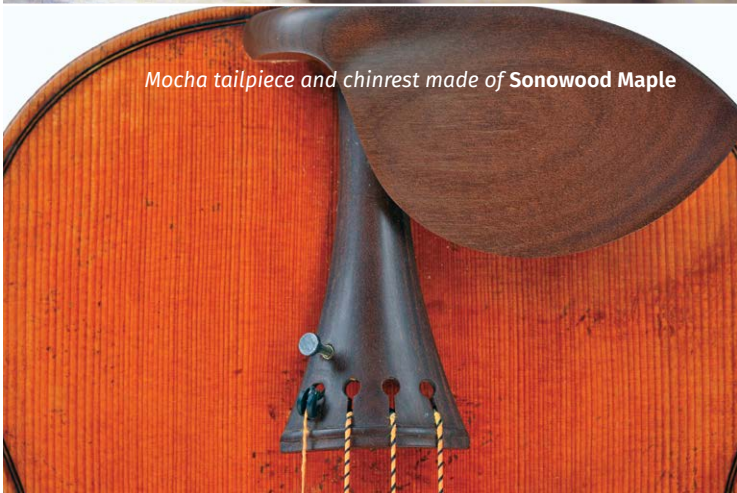
No matter which property matters to you – surface hardness, density, sound velocity or colour – you will surely find the product of your choice. Please don't hesitate to contact us: [info@swisswoodsolutions.ch](mailto:info@swisswoodsolutions.ch)



*Caramel colour fingerboard made of Sonowood Spruce*



*Mocha pegs made of Sonowood Maple*



*Mocha tailpiece and chinrest made of Sonowood Maple*