Sonowood Maple *(Acer Pseudoplatanus)*

Density [kg/m³]	1'200 – 1'400
Brinell Hardness[a)] [N/mm²]	> 80
Colour	Mocha
Dimensional Stability (Diff. Swelling [% per % moisture content change])	Height ~ 0.7 Width ~ 0.3
Sound Velocity[b)] [m/s]	> 4'400
Damping (Log. Dekrement)	~ 0.053
Elasticity Modul[c)] [N/mm²]	> 23'000

Sonowood Spruce *(Picea Abies)*

Density [kg/m³]	1‘300 – 1‘400
Brinell Hardness[a)] [N/mm²]	> 100
Colour	Caramel
Dimensional Stability (Diff. Swelling [% per % moisture content change])	Height ~0.75 Width ~0.33
Sound Velocity[b)] [m/s]	> 5‘500
Damping (Log. Dekrement)	~0.04
Elasticity Modul[c)] [N/mm²]	> 39‘000

Comparison values for Ebony

Density [kg/m³]	1‘100 – 1‘200
Brinell Hardness [a)] [N/mm²]	84
Sound Velocity [b)] [m/s]	~ 4'500

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

swiss **wood** solutions

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

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

We thank our project partner Wilhelm Geigenbau AG, the Gebert Rüf foundation and the EU research and innovation program Horizon 2020 for their valuable support in development and marketing of **Sonowood**.

Swiss Wood Solutions AG
Stefano-Franscini-Platz 3
8093 Zürich
Switzerland

info@swisswoodsolutions.ch
www.swisswoodsolutions.ch

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Sonowood

Sonowood

Illegal overexploitation and trade regulations of tropical woods resulted in the need for an alternative 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
- higher 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

Our product range

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

Fingerboards: Currently, we offer square timbers for manufacturing of violin, viola and cello fingerboards in maple and spruce.

Pegs: Square timbers for pegs are provided for violin, viola and cello in maple mocha.

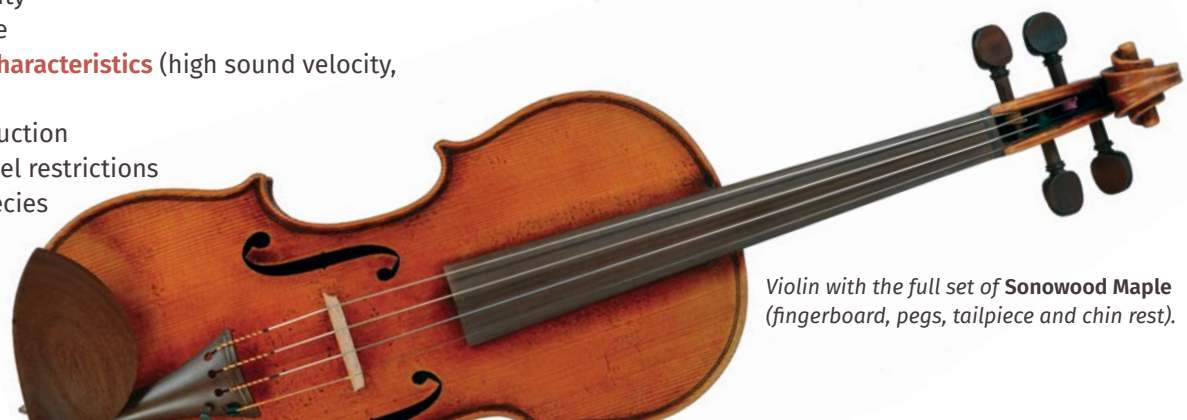
Tailpiece: Square timbers for the manufacturing of tailpieces are available for violin, viola, cello and double bass. They are available in maple mocha and spruce caramel.

Chinrest: We offer chinrests moulding in maple.

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

No matter which property matters to you – surface hardness, density, sound velocity or colour – you will surely find the product of your choice.

For sales and further information, please don't hesitate to contact us: **info@swisswoodsolutions.ch**



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

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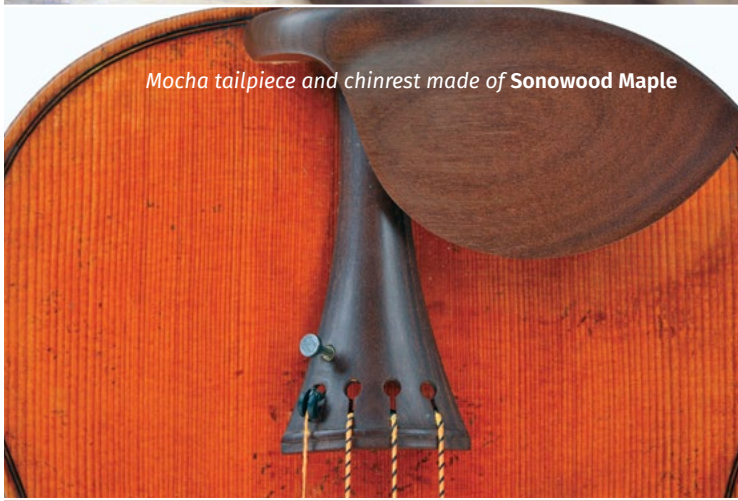
Caramel colour fingerboard made of **Sonowood Spruce**

Mocha pegs made of **Sonowood Maple**



Mocha tailpiece and chinrest made of **Sonowood Maple**