

MAPLE WOOD FLOORING FOR GYMNASIUMS GUIDE

BY THE
QUEBEC WOOD
EXPORT BUREAU
(QWEB)



Why the QWEB guide?

Sugar Maple owes its name to the sap harvested in the spring, which once boiled becomes maple syrup. However, in addition to this very delicious function, maple trees not used for this purpose yield high quality wood, with incomparable hardness and exceptional colour.

The QWEB decided to establish a guide for gymnasium hardwood flooring to highlight maple wood's exceptional reputation.

There is no association that oversees the manufacturing of gymnasium flooring in Canada. However, the guide is an excellent means to guarantee the quality of the product supplied or purchased in Quebec.

Limitations

This guide only applies to the wood flooring delivered. Installation is not covered by this guide.

The flooring is deemed to be in excellent condition when it leaves the mill. As a result, if it is damaged during transport, on-site storage, installation or finishing, the guide does not apply.

In addition, the cushioning system under the wood flooring is not covered by the guide.

Authenticity

To ensure that the supplier offers you gymnasium hardwood flooring that meet QWEB's guide, you must ensure that the manufacturer is a QWEB member and has an up-to-date compliance certificate.

To comply with the classification guide for gymnasium flooring, it is necessary to be a member in good standing of QWEB and undergo a quality audit once a year, conducted by a third party chosen by QWEB.

In addition, to be certified, the wood used for the flooring must be Hard Maple (*Acer saccharum* March.).

Certification

Members that follow this guide are deemed to provide FSC-certified wood. They are able to provide the necessary documents to prove their registration with the Forest Stewardship Council (FSC).



Why purchase gymnasium hardwood flooring from Quebec?

Physical characteristics

Hard Maple that grows in the north, i.e. in Quebec, grows slower so it is denser and stronger. The appendix presents the characteristics of maple according to North American standards and the latest tests conducted in Europe according to European Community standards.

Appearance

Hard Maple, also known as Sugar Maple, has a wonderful colour. Its sapwood is ivory white with a slight reddish-brown tinge. Its heartwood is greyish brown to dark tan. Moreover, it has a close and uniform grain.

Environment

Quebec, like Canada, is considered low-risk for illegally sourced wood. As a result, wood respects both the European Union Timber Regulation (EUTR) and the Lacey Act so there is no reason to be concerned. In addition, members that comply with this standard are FSC-certified.

Furthermore, all wood in Quebec is harvested under a sustained yield principle, therefore forests are sustainable. There is such an abundance of legislation in Quebec to protect forests that timber should be available forever. Its forests are not overharvested.

In addition, as shown in the appended table, Hard Maple releases very little volatile organic compounds (VOCs). And those that are released are not harmful to human health. This has been proved by an independent research institute in Japan.

Colour

Hard Maple comes in several colours. Regular is a grade featuring a nice combination of brown and white on a same board, courtesy of the whims of Mother Nature. However, it is possible to find boards that are exceptionally white.

The wood flooring produced in Quebec stands out from other sources by its tight grain and pale and uniform colour.

Wood characteristics

Colour variations in no way affect the quality or strength of hardwood flooring. Colour only adds a distinctive characteristic. And, in some regards, it is an indication that it is actually dense maple that grew in the north.

Since maple grows in the north, it grows slowly and therefore the heartwood's colour darkens over the years. The colour variation is a good indicator of the maple's origin. However, it is important not to generalize and say that if the boards are only white, the wood is not from Quebec. Wood density and the distance between growth rings are the best indicators of the wood's origin. The closer the annual rings are to each other, the denser the wood.

Dimensions—Thickness

Gymnasium flooring can be produced in various thicknesses: 3/4" (19 mm), 25/32" (19.8 mm) and 33/32" (26.1 mm).

Dimensions—Normal widths

2 1/4" (57.1 mm); 3 1/4" (82.5 mm)

Random lengths

Gymnasium floor boards are sold in random lengths, which allows for a more attractive appearance.

Kiln drying

Boards are graded once the wood is profiled after drying. Moisture content must be between 6 and 9%.

End matching

All gymnasium floors must be end-matched unless otherwise specified in the agreement with the customer.

Minimum length of boards by quality group (grade)

Wood boards cannot be shorter than 10" (25.4 cm). The quality of the floor is not related to board length. It is only a matter of aesthetics.

Average percentage for 2 1/4" x 3/4" flooring in inches					
Quality	42" and over	Between 30 and 42"	Between 18 and 30"	Under 18"	Minimum length accepted
Select	33%	15%	23%	29%	10"
1 Common	21%	12%	31%	36%	10"
2 Common	11%	14%	19%	56%	10"
Average percentage for 2 1/4" x 33/32" flooring in inches					
Quality	42" and over	Between 30 and 42"	Between 18 and 30"	Under 18"	Minimum length accepted
Select	25%	19%	28%	28%	10"
1 Common	23%	17%	30%	30%	10"
2 Common	5%	9%	25%	61%	10"



Compliance control mechanisms

Auditing

Once a year, an independent auditor identified by QWEB conducts an audit to ensure compliance of documents and grades in relation to products. The auditor verifies that the average volume contained in the boxes corresponds to information on the label.

The auditor submits a report to QWEB and the audited manufacturer. In cases where there is one or more non-compliances reported by the auditor, the manufacturer will have one month to make the necessary changes. After this month, the auditor will return and do a more extensive sampling, at the manufacturer's expense.

If the problem is not addressed, the name of the manufacturer is removed from the list of certified companies and the certificate is withdrawn for three months.

Disputes

Before a dispute arises with a manufacturer, it is important to know that the following rules apply:

- A shipment is considered as compliant if at least 95% of the shipped volume corresponds to the grade purchased. The margin of error is therefore 5%.
- Colour variations are natural in all trees since they are living and influenced by their environment.
- The contract signed by the manufacturer and customer is considered as the basis of the agreement.

Handling of complaints

First, it is important to understand that in Canada there are mechanisms in place to solve disputes between businesses. The QWEB does not want to interfere in a business relationship sealed by a contract between two consenting parties. QWEB cannot intervene directly since it seeks to remain neutral and avoid any conflict of interest.

If the customer thinks that the manufacturer did not deliver what was in the contract then the customer must promptly notify the manufacturer in writing.

If the problem is related to non-compliance with the guide and the manufacturer and customer fail to agree, then a third party will go examine the product and give an opinion on whether the problem involves installation or wood quality.

If the problem is related to installation, the QWEB guide does not apply. The parties must agree or turn to the courts.

If the problem is related to the QWEB guide, the inspector mandated by QWEB will go to the manufacturer and examine the wood by taking twice the number of samples normally taken at the annual sampling. This is to ensure the problem is not major.

Should tests show that all samples do not correspond to the QWEB guide, the name of the manufacturer is removed from the list of certified manufacturers for two years. The manufacturer must demonstrate, after this period, that all its samples are fully compliant and do so at its own expense.

Recommendations

To avoid problems during transport and storage, here are some tips that can contribute to preserving quality:

- Do not unload, truck or transfer flooring in the rain or snow. If the weather is foggy or damp, cover with a tarpaulin.
- Do not store flooring in leaking or open enclosures.
- Do not unload flooring outside of a shelter at the jobsite.
- Do not overlook providing protected ventilation to keep relative humidity at a minimum.
- Do not store or lay flooring in a cold, damp building or directly on a concrete slab. Wait until plastering and cement work are thoroughly dried and woodwork and trim are installed.

Flooring should be delivered to the premises a minimum of seven days before installation, or as required for acclimation. All flooring should be placed in the area in which it is to be installed to ensure proper acclimation to the environmental conditions of the facility.



Hard Maple

Properties

Density at 12% in kg/m ³ (Standard: EN 408)	740
Compressive strength in N/mm ² (Standard: NF B1-007 - EN 408,)	61
Flexural strength in N/mm ² (Standard: NF EN 408)	147
Bending modulus in N/mm ² (Standard: NF EN 408)	14000
Brinell hardness, perpendicular to grain in N/mm ² (Standard: EN 1534)	53
Monnin hardness mm ⁻¹ (Standard: NF B51-013)	5.1
Impregnability / Perfect wood (Standard: EN 350-1)	Impregnable
Stability in service (Standard: B51-006)	Low to average stability
Tangential shrinkage in % (Standard: B51-006)	9.41
Radial shrinkage in % (Standard: B51-006)	5.29
Volumetric shrinkage in % (Standard: B51-006)	14.68
Conductivity in W/(m.k) (Standard: EN 10456)	0.18
Withdrawal resistance of screws in kN (Standard: 1382)	5.40 (with pre-drilling) 6.11 (without pre-drilling)

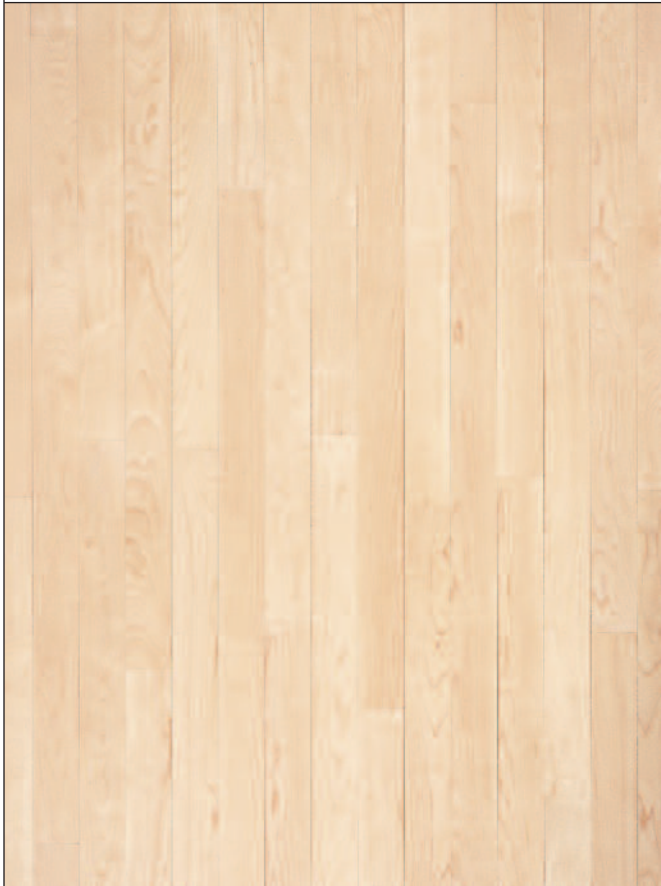
Source: Critt Bois test n 2013-460/Epinal, October 24, 2013 + main characteristics tested

Volatile organic compound

TVOC (µg/m ³)	1 hour	72 hours	360 hours
Hard Maple SAP	627.0	497.1	124.2
Hard Maple—Regular	307.0	278.0	75.0

Source: Forestry and Forest Products Research Institute, Tsukuba, Japan

Grade specification for hardwood boards for gymnasium flooring



Clear

- Best appearance
- Selected for uniformity of light colour
- Slight variation in the natural sapwood colour (sticker stain is not considered a defect)
- Limited small character marks
- Pin knots allowed
- Mineral streaks of less than 1/8" x 1" (3 x 25 mm)
- No checks or splits
- Minimum length: 10" (25.4 cm)

Select & Better

- Combination of clear and select grades
- The most standard high grade hardwood flooring sold on the world market
- Excellent appearance
- Variation in the natural sapwood colour (sticker stain is not considered a defect)
- Limited character marks
- Sound knots of less than 1/8" (3 mm)
- Mineral streaks of less than 1/8" x 4" (3 x 100 mm)
- No stains, checks, or splits
- Minimum length: 10" (25.4 cm)

		
	1 Common	2 Common
	<ul style="list-style-type: none"> ■ Variegated appearance ■ All colour variations allowed ■ Sound knots less than 3/8" (10 mm), flags, worm holes, and mineral streaks allowed ■ No splits, holes, or voids ■ Minimum length: 10" (25.4 cm) 	<ul style="list-style-type: none"> ■ Rustic appearance ■ All colour variations allowed ■ All characteristics of the species allowed ■ A serviceable floor after knot holes, worm holes, checks, splits, and other imperfections are filled and finished ■ Minimum length: 10" (25.4 cm).
	<p>These characteristics are minimal. A company that wants to offer a higher quality is able to do so if it clearly describes its standards and has a quality control system.</p>	<p>The following defects are not allowed, regardless of quality (grade): Stains, frayed wood, mould, burn on exposed surface, heated wood.</p>



Quebec Wood Export Bureau

The Quebec Wood Export Bureau (QWEB) is a non-profit organisation showcasing wood products from Quebec in export markets. Representing more than 200 manufacturers in 8 sectors, QWEB provides you with direct access to Quebec's vast array of wood products.

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Partner:  **Canada Wood**
Produits de bois canadien

What can QWEB do?

- **CONNECT** you with suppliers that have what you want at the right price.
- **PROVIDE** technical and promotional information about wood products and the companies that manufacture them.
- **TELL** you what you need to know about the characteristics and uses of wood products from Quebec.
- **INFORM** you on codes and standards that apply to wood products from Quebec.
- **GIVE** you prompt Internet bids from our members for prices and product availability.
- **LINK** you to our members through:
www.quebecwoodexport.com

QWEB wood flooring manufacturers

BOA-FRANC

boa-franc.com



lauzonltd.com



mercierwoodflooring.com



pgmodel.com



preverco.com



vaucluse.org



wickhamhardwood.com

Tools and nails



primatch.ca