

SFN Team · Dec 17, 2024

Installing the Right Flooring for Squash Courts: A Practical Checklist



There’s no question – the floor in a squash court must be top-notch. Fast-paced rallies demand flooring that supports free movement, ensures consistent ball bounce, and protects against injury.

At first glance, many squash floors look alike. In reality, differences in construction, wood species, surface treatment, and installation can have a big impact on performance and durability. Understanding these factors before you buy prevents costly mistakes down the line.

The Squash Facilities Network (SFN) has identified seven key criteria to guide you through the selection process:

1. International Standard EN 14904 for Sport Floors
2. Different Floor Types
3. Different Wood Species
4. Wood Quality (Grades)
5. Squash-Specific Requirements
6. Installation Requirements
7. Sustainability

Consider these points carefully to ensure your courts offer an optimal playing experience.

1. Insist on Floors Complying with EN 14904

EN 14904, originally an European standard, has gained worldwide recognition as the benchmark for sports flooring. Even the International Olympic Committee (IOC) mandates EN 14904 compliance for all Olympic venues, underscoring its global importance.

For squash courts, aiming for Category A3 or A4 ensures defined standards for shock absorption and surface deflection. EN 14904 sets strict parameters for friction, rolling load, vertical deformation, and ball bounce—factors vital to player comfort, safety, and game quality.

Don't settle for vague claims of compliance. Insist on seeing an official test certificate. A properly certified floor not only improves overall playability but also reduces the risk of joint problems, encouraging players—especially older ones—to keep coming back.

2. Know the Differences Between Floor Types

You'll generally encounter two main types: solid wood and engineered floors.

- **Solid Wood Floors:** Typically about 21 mm thick, these provide a durable and stable playing surface. Within solid wood floors, there are two subcategories:
 - **Individual Solid Floor Strips:** Delivered loose and assembled on-site, these boards vary in length and are sorted during installation.



Individual Solid Floor Strips - single strips in random length

- **Prefinished Solid Sports Floor Boards:** These have uniform lengths and widths, with two or three wooden strips glued together into one board. This allows for quicker installation.



Prefinished Solid Sports Floor Boards - boards consisting of 2 or 3 strips

- **Engineered Floors:** Featuring a top hardwood layer (around 3.6 mm thick) bonded to multiple plywood layers, these floors are cost-effective and dimensionally stable.



Engineered Floors - three layers of wood glued together

While engineered floors offer cost-effectiveness and resistance to humidity fluctuations, solid wood floors provide a thicker wear layer that can be sanded multiple times, ensuring a longer service life.

Regardless of the floor type, humidity levels must always be considered. Squash floors treated only with penetrating oil are more sensitive to high humidity. Solid floors, laid with expansion gaps, better handle large humidity swings, although they may show visible expansion joints.

3. Pick the Right Hardwood Species

Hard and stable wood species are essential for squash flooring. Traditionally, Canadian Maple has been a popular choice, but other hardwoods like Ash, Hevea, Beech, and Oak are also commonly used today. It is important that the chosen wood belongs to the hardwood category, which is determined by its Brinell hardness.

The **Brinell hardness** is a measure of a material's resistance to mechanical stress, specifically its ability to withstand indentation by hard objects. This value indicates how hard or soft a wood is and is expressed in **Newtons per square millimeter (N/mm²)** or **Kilopond per square millimeter (kp/mm²)**. For squash floors, Brinell hardness is a critical factor as it directly impacts the durability and longevity of the court surface. A wood with a Brinell hardness exceeding 30 N/mm² qualifies as a hardwood.



Ash: Brinell hardness ~4.0 kp/mm² or 39,2 N/mm²



Beech: Brinell hardness ~3.8–4.0 kp/mm² or 37.3-39.2 N/mm²



Canadian Maple: Brinell hardness ~4.5–4.8 kp/mm² or 44.1–47.1 N/mm²



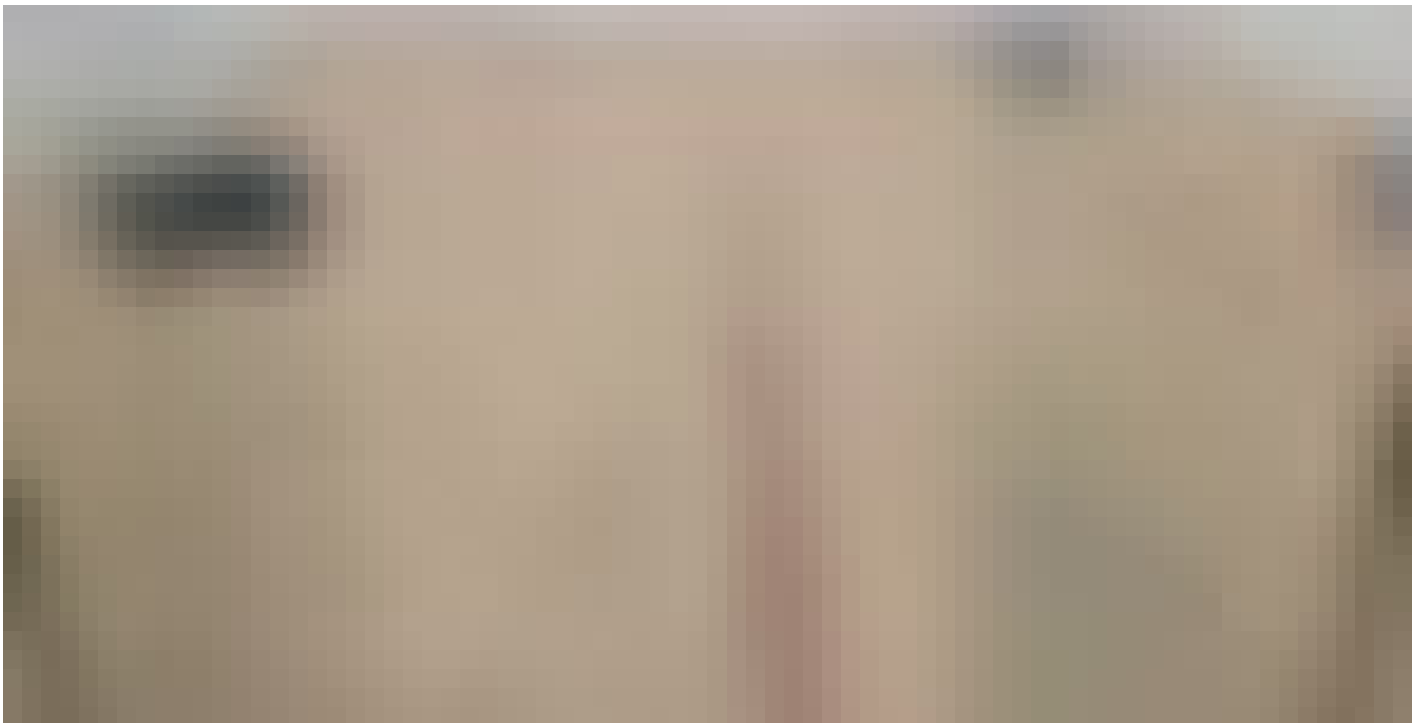
Oak - Brinell hardness ~3.7–3.9 pk/mm² or 36.2–38.2 N/mm²

Other local species with similar hardness values can also work. The goal is a surface tough enough to handle intense play while providing the right feel underfoot.

4. Choose a Suitable Wood Grade

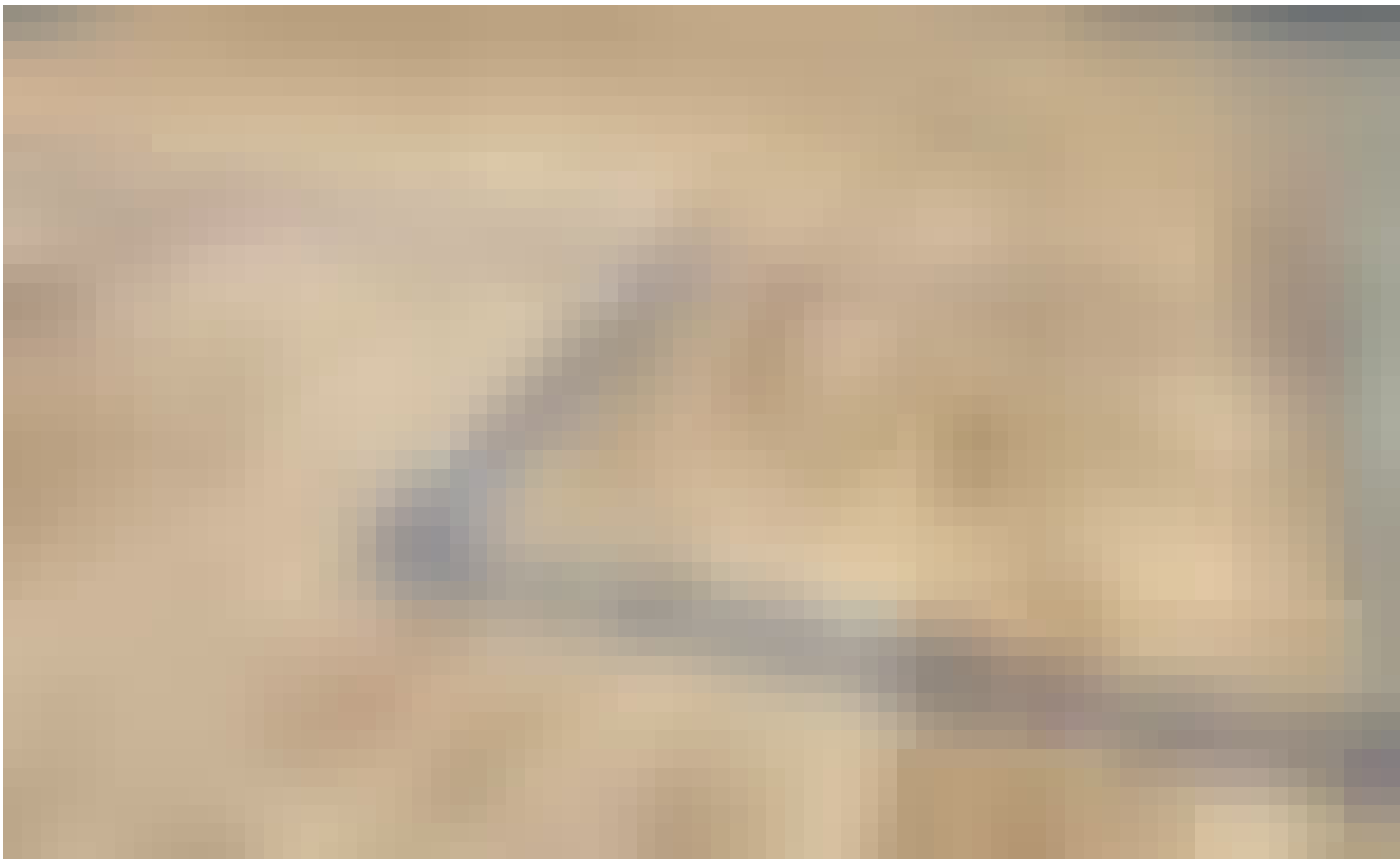
Wood floors are offered in various grades that mainly differ in appearance rather than performance:

- **Grade A:** Minimal colour variations, no heartwood, no knots.



Example for a floor with the wood grade A

- **Grade B:** Some natural colour differences and small knots.
- **Grade C:** More noticeable variations, knots, and colour contrasts.



Example for a floor with the wood grade C

While Grade A may cost slightly more, it enhances the court’s visual appeal. Investing in a higher-grade floor gives your facility a professional, high-quality look that often outweighs the small extra cost.

5. Finish the Floor to Squash-Specific Standards

Squash floors require a textured finish to ensure excellent grip and stability. Typically, this involves a final sanding with 40–50 grit paper, creating just the right surface roughness.

Unlike basketball floors, which are often sealed for smoothness, squash floors should remain unsealed and be treated with a slip-resistant, two-component, non-yellowing, water-based polyurethane lacquer. This preserves the wood’s natural properties and ensures reliable friction levels, even when moisture, such as sweat, is present.

Over time, players’ shoes naturally “sand” the floor, maintaining its texture. Regular care and impregnation treatments help preserve this ideal surface.

6. Prepare and Install the Floor with Care

- Proper preparation prevents unexpected expenses and delays. Key considerations include:
- **Construction Height:** Ensure the total construction height aligns with doors, thresholds, and other facility elements.
 - **Subfloor Flatness:** Verify that the subfloor meets the flatness criteria set by the flooring manufacturer.
 - **Moisture Control:** Check subfloor moisture levels and allow ample drying time for new concrete or screed. Neglecting this step can lead to long-term damage and costly repairs.

By paying attention to these details, you ensure a stable, durable, and trouble-free flooring foundation.

7. Sustainability Requirements Need to Be Considered

Sustainability has become a key consideration for sports facilities, and squash flooring is no exception. When selecting materials, it is essential to ensure they meet recognised environmental standards. Two of the most important certifications for squash flooring are **PEFC** (Programme for the Endorsement of Forest Certification) and **FSC®** (Forest Stewardship Council). These certifications guarantee that the wood originates from sustainably managed forests, meeting internationally recognised criteria for responsible forestry practices. By choosing PEFC and FSC®-certified timber, you are not only ensuring the long-term availability of quality hardwood but also supporting sustainable forest ecosystems.

In addition to sourcing sustainable wood, attention must also be given to the environmental impact of treatments and finishes. A key document to request is the **Environmental Product Declaration (EPD)**, which provides detailed insights into the environmental impact of materials used, particularly regarding chemical treatments such as penetrating oils. The EPD ensures that the impregnating treatments applied to the wood are environmentally friendly, contributing to a safer and healthier indoor playing environment.

If your goal is to achieve a **green building certification** or meet sustainability standards (e.g., for regulatory compliance, corporate sustainability targets, or investor obligations under the EU Taxonomy Regulation), requesting EPD documentation becomes even more critical. By verifying the sustainability credentials of both the timber and the finishing products, you can align your facility with green building requirements. Not only does this set a strong environmental statement, but it also ensures a healthy, comfortable environment for players, enhancing the overall appeal and reputation of your squash facility.

©2025 SFN (Squash Facilities Network) / [Privacy Policy](#) / [Accessibility Statement](#)

Conclusion

Quality flooring is fundamental to a top-performing squash court. By insisting on floors that meet established standards, choosing the right hardwood and grade, ensuring correct surface treatment, and paying attention to installation requirements, you’ll create a superior playing environment and protect your long-term investment.

The Squash Facilities Network (SFN) has made a summarized the seven key criteria to guide you through the selection process:

FACTOR	WHAT TO CONSIDER	SUMMARY
1. International Standard	The EN 14904 is worldwide the standard for sport floors.	Use only floors with a test certificate according to the EN 14904 .
2. Different Floor Types	Solid wood: Durable, can be sanded multiple times.	Ensure proper attention to humidity levels and confirm the chosen floor type suits long-term usage.
	Engineered: Cost-effective, stable, but limited sanding.	

3. Hardwood Species

Use hard, stable wood species like Canadian Maple, Ash, Hevea, Beech, or Oak.

Select any hardwood with an **appropriate Brinell hardness** rating.

Check Brinell hardness for durability.

4. Wood Quality (Grades)

Grades affect appearance, not performance.

Evaluate whether the additional cost for **Grade A** wood enhances the court’s appeal.

Understand Grade A, B, and C distinctions.

5. Squash-Specific Requirements

Final sanding with 40–50 grit paper ensures proper grip and stability.

Consider that **squash floors are specifically textured** for grip and differ from smoother sports surfaces.

Treat with a slip-resistant, water-based polyurethane lacquer to preserve surface roughness.

6. Installation Requirements

Control moisture levels, especially with new screeds.

Coordinate closely with the floor supplier and constructor to avoid delays and ensure correct installation.

Consider that squash floors will be installed on the highest point of the subfloor.

7. Sustainability Requirements

- Sustainability has become a key factor for sports facilities.

The wood should have **PEFC** and **FSC®** certification. Ensure the floor finish has **EPD** documentation.

SFN Marketplace - Court elements



COURTWALL™ is building squash courts of excellence worldwide for over 40 years.

Buy Now