



FORTÉ FLOORING
LUXURY EUROPEAN HARDWOODS

Forté Flooring: Comprehensive Insights and Guidelines

1.1 Understanding Wood Flooring Characteristics

Wood flooring possesses a unique quality due to its hygroscopic nature, meaning it naturally absorbs and releases moisture from its environment. This characteristic makes wood responsive to fluctuations in moisture, temperature, and humidity. Recognizing this trait is crucial for ensuring the longevity and performance of wood floors. At Forté Flooring Ireland, we understand the paramount importance of maintaining an environment that supports the optimal performance of wood floors, especially during installation.

Environmental Balance

- **Moisture Content Management:** Our meticulously crafted wood floors undergo a kiln-drying process to achieve a moisture content range of 8% to 12%. This range aligns harmoniously with environments featuring a relative humidity of 40% to 60% and temperatures spanning 15°C to 26°C. These conditions are deemed ideal for maintaining equilibrium moisture content (EMC), which is essential for preventing the adverse effects of moisture fluctuations.
- **Consistent Environmental Control:** To ensure uninterrupted performance, it is vital to consistently control these environmental parameters, even during unoccupied periods. Consider regional and seasonal variations that may affect these conditions. When geographical locations experience deviations beyond these recommended parameters, our expert fitters account for potential expansion or contraction during installation. This becomes especially critical when incorporating underfloor heating systems, which typically lower the moisture content of wood flooring to 6% to 8%.

- **Risks of Environmental Neglect:** It is crucial to note that neglecting environmental control can lead to detrimental consequences such as excessive expansion, shrinkage, distortion, or even structural damage to the flooring. These issues can compromise the aesthetic and functional integrity of the wood floor.

1.2 Acclimatization: A Vital Preparatory Step

Acclimatizing wood flooring before installation is a critical preparatory step. Allowing the wood to adapt to the normal living conditions of the installation site by controlling humidity and moisture content is pivotal for ensuring long-term performance and stability.

Pre-Installation Acclimatization

- **Acclimatization Process:** All wood flooring should be acclimated on-site to ensure it reaches a moisture equilibrium with the environment. This process typically involves storing the flooring in the installation area for a period of 2 to 3 days, allowing the wood to adjust to the temperature and humidity of the space.
- **Environmental Control:** Ensure the building is enclosed and maintained at normal living conditions for temperature and humidity. Ideally, permanent heating and/or air-conditioning systems should be operational at least five days before installation. If permanent systems are not available, temporary heating or dehumidification measures should be employed to simulate expected post-occupancy conditions.



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Post-Installation Stabilization

- **Site-Finished Wood Flooring:** For site-finished wood flooring, a stabilization period post-installation is recommended before applying finishing touches. This allows the flooring to settle and stabilize, minimizing the risk of moisture-related issues during the finishing process.
- **Avoid Uncontrolled Storage:** Storing wood flooring in uncontrolled environments at the job site, especially those prone to excessive moisture, such as garages, basements, or exterior patios, can adversely affect the material's integrity. Always ensure storage in a controlled environment to maintain wood quality.

1.3 Installer's Obligations: Ensuring Impeccable Installation

At Forté Flooring, we prioritize meticulousness in installation, placing significant responsibility on the installer to conduct a comprehensive inspection before the final installation phase. This step is crucial to confirm the suitability of the product in terms of color, grade, quality, manufacturer specifications, and factory finish.

Pre-Installation Inspection

- **Product Suitability:** Before installation, every piece of flooring warrants scrutiny for color consistency, finish quality, and overall excellence. Multiple packs of flooring must be opened simultaneously to facilitate a harmonious mix of color and grade across the installation. Prudent selection of boards and the removal or exclusion of pieces with deficiencies, regardless of their cause, is essential for an impeccable finish.
- **Collaborative Review:** Prior to the conclusive installation, a thorough review alongside the end-user is imperative. This consultation ensures the correct product has been supplied and meets the expectations of the end-user.

- **Unsatisfactory Products:** Should the product be deemed unsatisfactory for any reason, installation must not proceed, and immediate contact with Forté Flooring is necessary. Once the product has been laid, any subsequent discovery of incorrect product selection or boards with defects or visual irregularities, which should have been identified during installation, cannot be considered for financial assistance or product return.

Installation Technique

- **Attention to Detail:** Our team of expert wood floor fitters adheres to stringent guidelines and practices, ensuring meticulous acclimatization, precise installation techniques, and attention to detail. These practices guarantee the longevity and flawless performance of your exquisite wood flooring investment.
- **Final Walkthrough:** Upon completion, a final walkthrough and inspection with the client are essential to ensure satisfaction and address any potential concerns. This step reinforces our commitment to quality and client satisfaction.

1.4 Facilitating Ideal Wood Flooring Installation: A Collaborative Approach

The successful installation of wood flooring under optimal conditions demands a comprehensive understanding among all involved stakeholders regarding project requirements and their implications. To guarantee this understanding, an extensive consultation process is imperative, involving parties at every level of the project, including subcontractors and material suppliers.



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Comprehensive Consultation Process

- **Early-Stage Dialogue:** The collaborative effort begins with early-stage dialogue, ensuring alignment and clarity regarding the project's intricacies. This consultation is crucial from the initial design phase through the entire contract duration, serving as a proactive measure, especially when project requirements or timelines undergo alterations or when new contract work is initiated.
- **Ongoing Communication:** As the project evolves, ongoing consultation remains pivotal to address any modifications or new requirements that may arise. This continuous exchange fosters a harmonious workflow and facilitates the seamless integration of all facets of the project.
- **Inclusive Stakeholder Engagement:** A culture of ongoing and inclusive communication among stakeholders is essential to ensure that wood flooring installation adheres to the highest standards within the appropriate conditions.

1.5 Critical Jobsite Prerequisites for Wood Flooring Installation

Construction Sequence and Preparation

- **Priority in Construction Sequence:** Wood flooring installation should occur as one of the final tasks in the construction process to preserve its integrity. Minimize foot traffic on finished wood flooring to prevent damage.
- **Pre-Installation Site Evaluation:** Conduct a comprehensive assessment of the jobsite for potential issues before wood flooring delivery and installation. Ensure adequate insulation or positioning of water pipes and electrical wires within the subfloor to avoid compromising the installation or subsequent impact on the timber.
- **Subfloor Compliance:** Subfloors, whether wood or concrete, must comply with designated standards to ensure optimal conditions for wood flooring installation.

Environmental and Safety Considerations

- **Moisture Content Evaluation:** Verify subfloor moisture content aligns with specifications detailed in the Moisture Testing guidelines (Chapter 2).
- **Debris Prevention:** Ensure no wood shavings or debris accumulate under the floor to prevent fire hazards or vermin infestation.
- **Surface Drainage:** Direct surface drainage away from the building to prevent moisture-related issues that could affect the flooring.

Acceptance and Responsibility

- **Installation Acceptance:** Unless specified otherwise, installation implies acceptance of the substrate conditions, ambient temperature, relative humidity, and all factors influencing wood floor performance. The installer assumes responsibility for ensuring these conditions are met prior to commencing work.
- **Enclosed Building Requirement:** Wood flooring should only be delivered and installed after the building is fully enclosed, providing a controlled environment for installation.

Temperature and Humidity Control

- **Environmental Conditions:** Wood flooring delivery and installation should align with the appropriate temperature and humidity conditions expected post-occupancy. Utilize temporary systems if permanent heating/air-conditioning is unavailable to maintain consistent conditions.
- **Completion of Prior Tasks:** Ensure the completion of concrete, masonry, plastering, drywall, texturing, and painting primer coats before wood flooring installation to avoid exposure to moisture and other construction-related risks.



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Design and Barrier Considerations

- **Barrier Matting:** During design, contemplate incorporating barrier matting, especially in entrances open to the outside, to prevent dirt and moisture ingress.
- **Ground Level Consideration:** If the exterior soil or any feature is more than 75mm above the floor, consider treating the floor as below ground level, using engineered flooring only to prevent moisture-related issues.

Storage Precautions

- **Onsite Storage:** When jobsite conditions permit, wood flooring can be delivered and stored in the rooms earmarked for installation. Store packs flat on the floor or on battens (not upright) to allow airflow around the stacks.
- **Room-Specific Segregation:** For multiple-room deliveries, segregate packs based on individual room quantities and store them in their respective rooms to facilitate organization and efficient installation.

1.6 Additional Jobsite Conditions for Pre-Finished Flooring

Pre-Finished Flooring Preparation

- **Completion of Wall Coverings and Painting:** Ensure all wall coverings and painting are finished before installation to prevent damage to the flooring surface. Note that skirting or scotia can be installed and completed after the flooring installation.

Post-Installation Protection

- **Floor Protection:** If post-installation floor protection is chosen, cover the entire floor using a floor protection product, especially for light-

sensitive wood species. Uncovered areas might undergo color changes due to exposure.

- **Adhesive Considerations:** For glue-down applications, be cautious as some adhesives may not cure properly under coverings. Follow both the flooring and adhesive manufacturer's recommendations. Use vapor-permeable covering materials to prevent moisture entrapment.
- **Coverage Materials:** Consider reinforced builder's paper, ensuring it's taped with low-adhesion tape to the base or skirting. Avoid taping directly onto the finished flooring. When taping papers or sheets together, ensure they are taped to each other rather than to the floor.

Inspection Standards

- **Inspection Protocol:** Prior to the final handover, it's essential to conduct a thorough inspection of the floor in accordance with BS8201-2011 standards when working with Forté Flooring. Regular inspections during the installation phase allow for early identification and rectification of any potential issues, preventing delays until completion.
- **Assessment Criteria:** Assess the floor from a standard viewing position—standing or seated—to identify immediately obvious features that could be considered potential defects by any independent observer. Please note that using unconventional lighting or unusual viewing angles, like crouching or kneeling, wouldn't be considered reasonable criteria for spotting visual defects.
- **Consistency Assurance:** The overall appearance of the floor, in terms of both the product and installation, should exhibit consistency unless intentional as part of the product's design or pattern. This careful inspection process ensures the high quality and integrity of the Forté Flooring installation.



Chapter 2: Moisture Testing

Moisture testing is a critical component of the installation process for Forté Flooring. It involves conducting comprehensive moisture tests on all subfloors before bringing the flooring into the property. This process ensures the subfloor conditions are suitable for installation and helps prevent moisture-related issues.

2.1 Wood Subfloors

2.1.1 Moisture Testing

- **Testing Procedure:** Conduct moisture tests at multiple locations within the room, with a minimum of 20 points per 93 square meters. Average the results to obtain an accurate assessment of the subfloor's moisture content.
- **Moisture Meter Usage:** Employ an electrical resistance moisture meter for moisture testing, ensuring that probes are aligned with the wood grain for accurate readings.
- **Target Moisture Content:** The targeted moisture content for wood subfloors should not exceed 12% or vary by more than 2% from the moisture content of the flooring.
- **Addressing High Readings:** Elevated readings in specific areas signal underlying issues that require immediate attention, particularly around exterior walls and plumbing. These areas should be addressed before proceeding with installation.

2.1.2 Vapor Retarders

- **Recommended Materials:** Forté Flooring recommends using Sisalkraft 728 Builders paper for nail-down installations. Our vapor retarder underlays offer added advantages, including minimizing wood-on-wood contact, facilitating easier plank positioning, mitigating the impact of seasonal humidity changes, and potentially reducing dust and noise levels.
- **Avoiding Impermeable Materials:** Avoid using impermeable vapor retarder materials, such as Forté Flooring's Moisture Screen Foil or similar impermeable materials, over wood subfloors, as they might trap moisture within or beneath the wood, leading to potential damage.

2.2 Concrete Slabs

2.2.1 Types of Tests for Measuring Moisture Content

Several methods are available for measuring the moisture content of a concrete screed. Each method has its own set of advantages and drawbacks:

- **Concrete Encounter:** This is a non-destructive, rapid surface test that provides immediate moisture readings. It is suitable for quick assessments but may not offer the same depth of analysis as other methods.
- **Calcium Carbide Test:** This method is destructive but offers quick and highly accurate results. It involves taking a small sample of the screed and analysing its moisture content.
- **Relative Humidity (RH):** This non-destructive method is slower but provides highly accurate readings. Note that this differs from the Relative Humidity of the ambient atmosphere in the room. RH testing measures the moisture content within the concrete itself.



2.2.2 Recommended Testing Approach

- **Industry Standards:** While industry standards suggest utilizing Relative Humidity testing for concrete subfloors, Forté Flooring recommends employing the Calcium Carbide method for testing purposes due to its accuracy and reliability in assessing moisture content.

2.3 Moisture Testing Guidelines for Concrete Screeds

Preliminary Requirements

- **Concrete Screed Age:** The concrete screed must be a minimum of 30 days old before commencing moisture testing. This allows sufficient time for the initial curing and drying process.
- **Drying Time Guidelines:** For effective drying, a general rule is to allow one day per millimeter of new concrete screed thickness up to 40mm (minimum 30 days). Beyond this, add an extra two days per millimeter. For screeds like Anhydrite or Calcium Sulphate, remove the surface layer (laitance) soon after curing to facilitate moisture escape, following the same drying time guidelines.

Test Location Selection

- **Strategic Placement:** Strategically select test locations across the entire concrete floor slab to understand moisture distribution. Include test spots within 1 meter of each exterior wall for slabs on or below ground. Perform ten tests within the first 93m² and one test for each additional 93m² thereafter.
- **Surface Cleanliness:** Ensure the test area is clean and devoid of foreign substances by employing approved removal practices for existing flooring materials and debris.

Testing Protocol

- **Identifying High Readings:** High readings in specific areas indicate underlying problems that require rectification, especially around exterior walls and plumbing.
- **Meter Calibration:** Always adhere to the meter manufacturer's instructions and calibrate the meter correctly for the method and material being tested to obtain accurate moisture content readings.

Target Moisture Content

- **Concrete Screeds:** For concrete screeds, the target moisture content should not exceed 2%.
- **Gypsum/Anhydrite Screeds:** Aim for a moisture content below 0.5%. If underfloor heating is employed, ensure it remains below 0.3% after removing any laitance layers.



Chapter 3: Acclimatization Procedures

3.1 Acclimatization Recommendations

Forté Flooring recommends a thorough acclimatization process for optimal floor installation. This process ensures the wood flooring adapts to the environmental conditions of the installation site, minimizing the risk of moisture-related issues.

Site Checks

- **Prerequisite Verification:** Before introducing the timber onto the site, it's essential to verify that the prerequisites outlined for Jobsite Conditions and Moisture Testing have been adequately addressed.

Acclimatization Period

- **On-Site Acclimatization:** Acclimatize all flooring packs within the room they will be installed in for 2 to 3 days. This allows the floor's temperature to align with its environment, ensuring adherence to job site conditions.
- **Controlled Environment:** Ensure the building is enclosed and maintained at normal living conditions for temperature and humidity. Ideally, ensure that permanent heating and/or air-conditioning systems operate at least five days before installation as per building codes. This facilitates proper acclimatization.

Contingency Measures

- **Temporary Systems:** If permanent heating or air-conditioning systems cannot operate before, during, and after installation, consider
- employing temporary heating or dehumidification systems to replicate standard temperature and humidity conditions. This enables smooth installation until the permanent systems are operational.

Stacking and Storage

- **Storage Method:** Store packs flat on the floor or on battens (not upright) to allow airflow around the stacks. This prevents warping or distortion of the wood due to uneven exposure.
- **Room-Specific Segregation:** For multiple-room deliveries, segregate packs based on individual room quantities and store them in their respective rooms. This organization facilitates efficient installation and minimizes handling errors.

Additional Consideration for Underfloor Heating

- **Extended Acclimatization:** Note that underfloor heating may necessitate extended acclimatization periods. Ensure thorough acclimatization to prevent any adverse effects from the additional heat source.
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This comprehensive guide provides detailed insights and best practices for high-end wood flooring installation and estimation, ensuring that Forté Flooring products perform to the highest standards. By following these guidelines, installers can achieve impeccable results, satisfying clients and maintaining the integrity of Forté Flooring's products.

Forté Flooring-

Inspired By Nature, Crafted in Time

Sincerely,

Nick Dolan.

MD.

Client Signature

Floor Fitter Signature