FloorStore Direct
Online Flooring

ESCO ENGINEERED FLOORING INSTALLATION GUIDE

PLEASE ALWAYS CONSULT THE FULL MANUFACTURER'S GUIDE INCLUDED IN EVERY BOX PRIOR TO INSTALLATION

1. INITIAL SUBFLOOR PREPARATION

A flawless flooring installation is entirely dependent on the quality and preparation of the subfloor. Shortcuts at this stage are the leading cause of floor failure. All subfloors must be mechanically prepared to be clean, dry, smooth, and entirely free from laitance.

Mechanical Laitance Removal

Laitance is a weak, friable layer of fine particles deposited on the surface of new concrete or screeds as water evaporates. This layer must be mechanically removed via floor grinding or heavy-duty sanding to expose the solid aggregate. Failure to remove laitance will prevent adhesives and smoothing compounds from bonding, leading to catastrophic floor delamination.

2. DAMP PROOFING (DPM)

Residual construction moisture is the primary enemy of wood. A Damp Proof Membrane (DPM) creates an impermeable barrier that suppresses moisture, preventing boards from warping, cupping, or swelling.

> **UZIN PE 404:** High-quality 1-component moisture vapor suppressant.

> **UZIN PE 480:** 2-component epoxy DPM for high-moisture or problematic subfloors.

3. PRIMING SYSTEMS

Primers regulate subfloor suction and bind residual micro-dust. Without a primer, the subfloor can "draw" moisture out of the smoothing compound too quickly, causing it to crack and lose structural integrity.

> **UZIN PE 360:** Dispersion primer for absorbent masonry subfloors.

> **UZIN PE 280:** Rapid-drying film-forming primer for non-absorbent surfaces or over epoxy DPMs.

4. SMOOTHING COMPOUNDS

Flatness is essential. ESCO flooring requires a subfloor flat to 3mm over a 2m span to eliminate noise and movement. Smoothing compounds provide the final finish necessary for a professional adhesive key.

> **UZIN NC 151:** A high-performance, heavy-duty smoothing compound designed for mineral-based subfloors. It offers excellent flow properties and a high-strength finish, providing the ideal substrate for direct adhesive bonding.

> **UZIN NC 196:** A premium, fiber-reinforced smoothing compound with extreme structural integrity. The integrated fibers provide internal reinforcement, making it the superior choice for high-stress environments.

> **CRITICAL PLYWOOD REQUIREMENT:** If smoothing over a **Plywood or Timber** subfloor, you **MUST** use **UZIN NC 196**. Standard compounds lack the necessary flexibility; the fiber-reinforcement in NC 196 is specifically engineered to accommodate

the natural movement, expansion, and deflection of wood-based substrates without cracking or bond failure.

5. MOISTURE CONTENT & UFH COMMISSIONING

Before installation begins, moisture levels must be verified using Relative Humidity (RH) and Carbide Method (CM) testing. Professional records should be kept for warranty validation.

SUBFLOOR MATERIAL TYPE	MAX RELATIVE HUMIDITY (RH)	MAX CM MOISTURE CONTENT
Sand & Cement Screed (Concrete)	75% RH	**3.5%**
Anhydrite Screed	75% RH	0.5%

Underfloor Heating (UFH) Protocol

Commissioning: The UFH system **MUST** be fully commissioned and run through a complete thermal cycle before any flooring is delivered to the site. This process ensures the screed is fully stabilized.

Installation Phase: The heating system must be **turned OFF for 48 hours** prior to installation and remain off for 48 hours after completion. To re-introduce heat, increase the temperature gradually by no more than 2°C per day until the desired level is reached.

6. COMPREHENSIVE INSTALLATION METHODS

Mandatory Expansion Gaps

Wood is a natural material that reacts to seasonal changes. An expansion gap of **10-12mm must be maintained around all 4 sides** of the installation. This includes radiator pipes, door frames, and all fixed vertical objects. This gap is covered by skirting boards or finishing trims.

METHOD A: GLUE DOWN (FULL ADHESIVE BOND)

The glue-down method is the gold standard for engineered flooring. It provides the best structural stability, a solid "walk" sound, and the most efficient heat transfer for UFH systems.

- **Adhesive:** We exclusively recommend **Pallmann P4** silane adhesive.
- **Application:** Apply adhesive to the prepared subfloor using the specified notched trowel to ensure 100% transfer to the back of the planks. Ensure there are no air pockets under the boards.
- **Expansion:** Even in glue-down scenarios, the 10-12mm perimeter gap is essential to allow for natural cross-grain expansion.

METHOD B: FLOATING INSTALLATION

In this method, boards are joined to each other but not fixed to the subfloor. The selection of underlay is critical for performance:

- **No Underfloor Heating:** Use a high-density **Acoustic Rubber Underlay** for maximum noise reduction.
- **With Underfloor Heating:** Use **Thermalay** or **Acoustica Bronze** to ensure heat can pass efficiently through the floor.
- **Joints:** All T&G joints must be bonded with a high-quality D3 PVA glue. Ensure the glue is applied consistently along the tongue.

CRITICAL WARNING: WHEN USING A FLOATING INSTALLATION, THE FLOOR ACTS AS A SINGLE RAFT. YOU MUST NOT FIT ANY HEAVY OR FIXED OBJECTS SUCH AS FITTED KITCHENS OR KITCHEN ISLANDS TO THE TOP OF THE FLOORING. THESE OBJECTS WILL "PIN" THE FLOOR, PREVENTING MOVEMENT AND LEADING TO JOINT FAILURE. THESE ITEMS MUST BE FITTED TO THE SUBFLOOR WITH THE FLOOR INSTALLED AROUND THEM.

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