

Engineered Hardwood Installation Guide

This guide provides step-by-step instructions to ensure a successful, long-lasting installation. Please read through thoroughly before starting, and refer to guidelines from the National Wood Flooring Association (NWFA) at www.nwfa.org. When these instructions differ from NWFA recommendations, follow this document.

Before You Begin

It is the installer's responsibility to:

- Verify all General Conditions are met (see below).
- Follow specific instructions for your chosen installation method: Glue Down, Nail Down, Floating Floor, or Radiant Heat Systems.
- Inspect the flooring for defects, color, grade, and gloss. Do not install damaged planks. Installing a plank constitutes acceptance of its condition.

Note: This engineered flooring is not warranted for installations over electric radiant heat systems. Only hydronic (water-based) systems are acceptable. Also, when installing planks wider than 7", use full-spread adhesive along with nails to prevent movement and squeaking. Failure to follow these steps may void the warranty.

General Conditions for All Installations

Environmental Conditions

Wood expands and contracts with moisture changes. To minimize these effects, ensure the following:

- The building is enclosed, with exterior walls, windows, and doors installed.
- All wet work (painting, drywall, masonry) is complete and dry.
- Basements and crawl spaces are dry and ventilated. Crawl spaces should be at least 18" high with a 6-10 mil plastic vapor barrier covering the ground, sealed with waterproof tape. Ventilation openings must equal 1.5% of the crawl space's square footage.
- Exterior grading directs water away from the structure, with a slope of at least 3" per 10'.

Acclimation

- The permanent HVAC system must be operational, maintaining 60-75°F and 30-50% humidity for at least 7 days before, during, and after installation.

- Deliver flooring to the job site at least 48 hours prior, leaving the packages unopened to acclimate.
 - Use a humidifier or dehumidifier as necessary to maintain proper humidity, particularly over radiant heat systems.
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Subfloor Requirements

Subfloors must be:

1. Clean – Remove debris, dust, and dirt. This ensures proper plank fit and adhesive bonding.
 2. Flat – The subfloor must be within 3/16" flatness over a 10' span or 1/8" over a 6' span. Use a straight edge or laser level to check. Sand, grind, or fill high and low spots.
 3. Dry – Check for moisture using a calibrated moisture meter:
 - Plywood/composite subfloors: Moisture content should not exceed 10%, with no more than a 2% variance between the subfloor and flooring.
 - Concrete: Must be fully cured (at least 60 days). Conduct ASTM F1869 Calcium Chloride or in-situ Relative Humidity (RH) tests. Results should not exceed 3 lbs/24 hours per 1000 sq. ft. or 75% RH.
 - Use a moisture barrier on concrete subfloors if recommended by the adhesive manufacturer.
 4. Structurally Sound – Secure loose boards and eliminate squeaks. Acceptable subfloor types include:
 - CDX Plywood – Minimum 5/8" thick (16" joist spacing) or 3/4" (19.2" spacing).
 - OSB – At least 3/4" thick, PS 2-92 or PS 1-95 rated.
 - Concrete Slab – Must be at least 3000 psi for Glue Down installations.
 - Ceramic Tile – Suitable for Floating installations only. Must be flat and adhered.
 - Vinyl/Resilient Tile – Suitable for Glue Down or Floating installations (non-urethane-coated).
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Preparing the Perimeter

1. Undercut door trim, jambs, and casings to accommodate the flooring and any underlayment.
2. Leave an expansion gap around all vertical obstructions, including walls, door frames, and cabinets. This gap will be covered by base molding.
 - For 9/16" – 3/4" flooring: Leave a 5/8" gap.

- For 5/16" – 1/2" flooring: Leave a 1/2" gap.
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Layout Planning

For wood subfloors fastened to joists, install the flooring perpendicular or at a 45° angle to the joists. No area should exceed 30' in width or 50' in length without additional expansion space and a transition molding.

Tools Needed for Installation

- Basic Tools: Pencil, tape measure, safety glasses, utility knife, moisture meter, shims, wedges.
- Specialty Tools: Tapping block, rubber mallet, carpenter's square, pull-bar, scraper, dust mask.
- Recommended Saws: Power miter saw, table saw, jamb saw.

PRO TIP: Use only 3M Scotchblue Delicate Surfaces tape, removing it within 20 minutes to avoid finish damage.

Installation Methods

1. Nail Down Installation (For planks up to 7" wide)

- Additional Tools Needed: Finish nails, nailer/stapler, compressor (if pneumatic), Aquabar underlayment.
1. Mark a chalk line along the starting wall, accounting for the plank width and expansion gap.
 2. Lay the first row along the line, tongue side out. Face-nail the row 3/4" from the groove side.
 3. Continue installation, blind/edge nailing every 4-6" and 2-3" from end joints. Stagger joints by 8".
 4. Trim the last row and face-nail near the finish wall. Install base moldings to cover gaps.
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2. Glue Down Installation

- Additional Tools Needed: Bostik adhesive, adhesive remover wipes, trowel.
1. Mark a chalk line and install backer boards as guides.
 2. Dry lay the first rows. Apply adhesive with a trowel and install the planks, pressing the tongue into the groove.
 3. Continue across the room, cleaning excess adhesive as you go.

4. Remove backer boards, complete edge rows, and install base moldings.
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3. Floating Floor Installation

- Additional Tools Needed: Tongue-and-groove glue, underlayment, waterproof tape.
1. Lay underlayment parallel to the starting wall. Mark a chalk line.
 2. Apply glue to plank grooves and assemble the first rows. Use shims to maintain the expansion gap.
 3. Continue installation, staggering joints by 8". Use tape to hold rows in place while glue sets.
 4. Remove tape, complete installation, and install base moldings.
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Radiant Heat Systems

Approved Species: American Cherry, Red Oak, Walnut, White Oak.

Requirements:

- The system must be hydronic and have temperature sensors.
- Maintain subfloor temperature below 82°F.
- Operate the system for 14 days before installation.
- Maintain humidity between 30-50% at all times.

Surface checking, gapping, and slight cupping are normal and do not indicate defects.