

Installation Instructions
1/4" & 5/16" Solid Oak Parquet Products
For Glue-Down Installations

INSTALLER/OWNER RESPONSIBILITY

Beautiful hardwood floors are a product of nature and therefore, not perfect. Our wood floors are manufactured in accordance with accepted industry standards, which permit a defect tolerance not to exceed 5%. The defects may be of a manufacturing or natural type.

- The installer assumes all responsibility for final inspection of product quality. This inspection of all flooring should be done before installation. Carefully examine flooring for color, finish and quality before installing it. If material is not acceptable, do not install it and contact the seller immediately.
- Prior to installation of any hardwood-flooring product, the installer must determine that the job-site environment and the sub-surfaces involved meet or exceed all applicable standards and recommendations of the construction and materials industries. These instructions recommend that the construction and subfloor be dry, stiff and flat. The manufacturer declines any responsibility for job failure resulting from or associated with sub-surface or job-site environment deficiencies.
- Prior to installation, the installer/owner has final inspection responsibility as to grade, manufacture and factory finish. The installer must use reasonable selectivity and hold out or cut off pieces with defects, whatever the cause.
- Use of stain, filler or putty stick for defect correction during installation should be accepted as normal procedure.
- When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance.
- Should an individual piece be doubtful as to grade, manufacture or factory finish, the installer should not use the piece.
- Use of appropriate products for correcting subfloor voids should be accepted as a normal industry practice.

TOOLS & ACCESSORIES NEEDED

WARNING: Metal wires are embedded in solid oak parquet flooring and extreme care and caution should be used when cutting or trimming this flooring to avoid the risk of personal injury. Do not use circular saws. Approved safety goggles or glasses should be worn at all times.

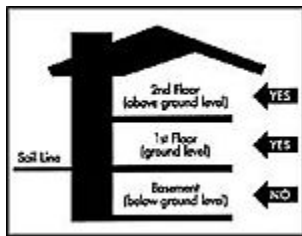
- Broom
- Tape Measure
- Chalk line & chalk
- Hand saw
- Band Saw or Saber Saw
- Moisture meter (wood, concrete or both)
- Carpenter Square
- Hammer

- Recommended Adhesive & Adhesive Remover
- Recommended Hardwood Flooring Cleaner
- Recommended Trowel

PRE-INSTALLATION PROCEDURES

Job Site Inspection

- The building should be closed in with all outside doors and windows in place. All concrete, masonry, framing members, drywall, paint and other "wet" work should be thoroughly dry.
- The wall coverings should be in place and the painting completed except for the final coat on the base molding. When possible, delay installation of base molding until flooring installation is complete.



- Exterior grading should be complete with surface drainage directing water away from the building. All gutters and downspouts should be in place.
- Solid oak parquet may be installed on or above grade level only. Do not install in full bathrooms.
- Basements and crawl spaces must be dry and well ventilated.
- Crawl space must be a minimum of 24" (600 mm) from the ground to underside of joists. A ground cover of 6-8 mil black polyethylene film is essential as a vapor barrier with joints lapped six inches and taped. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation (see figure #1).



- Subfloor must be checked for moisture content using the appropriate testing method.
- Permanent air conditioning and heating systems should be in place and operational. The installation site should have a consistent room temperature of 60-75° F and humidity of 35-55% for 14 days prior, during and until occupied, to allow for proper acclimation.

STORAGE AND HANDLING

Handle and unload with care. Store in a dry place being sure to provide at least a four-inch air space under cartons which are stored upon "on-grade" concrete floors. Flooring should not be delivered until the building has been closed in with windows and doors in place and until cement work, plastering and all other "wet" work is completed and dry. Concrete should be at least 60 days old. Solid oak parquet flooring should be stored in the environment in which it is expected to perform. Air conditioning/heating systems should be in place and in operation at least 14 days prior, during and after installation of the flooring. Check adhesive label for storage limitations.

SUBFLOOR REQUIREMENTS

SUBFLOORS MUST BE:

- **CLEAN** - Scrape, broom clean, and smooth. Free of wax, paint, oil, sealers, adhesives, curing agents and other debris.
- **LEVEL/FLAT** - Within 3/16" in 10' and/or 1/8" in 6'. Sand high areas or joints, fill low areas (no more than 1/8" at a time) with a cementitious leveling compound or milk additive latex patch of 3,000 PSI minimum compressive strength. Follow the instructions of the leveling compound manufacturer. Leveling compounds must be tested for moisture to ensure they are properly cured and within the manufacturer's specified requirements for proper installation.
- **STRUCTURALLY SOUND** - Nail or screw any loose areas that squeak. Replace any water-damaged, swollen or delaminated subflooring or underlayments. Avoid subfloor with excessive vertical movement unless they have been properly stiffened prior to the installation of the wood flooring.
- **DRY** - Check moisture content of the subfloor with a reliable moisture meter.

RECOMMENDED SUBFLOOR SURFACES

- **PREFERRED:** ¾" (19 mm) CDX grade plywood ¾" (23/32") OSB PS2 rated underlayment
MINIMUM: 5/8" CDX grade plywood
- Existing solid wood flooring
- Concrete slabs
- Ceramic, terrazzo, slate and marble
- Vinyl, resilient tile, cork flooring
- ¾" chip, waferboard, particleboard
- Acoustic concrete
- Cork (Acoustic)
- Metal

CONCRETE SLABS

Solid parquet flooring can be glued directly to concrete. Do not use a concrete sealer nor install over one. Surface preparation using mechanical methods such as sanding or scouring with open coat paper or a titanium disk is preferred. The concrete must be of high compressive strength. All concrete subfloors should be tested for moisture content. Visual checks are not reliable. Acceptable test methods for subfloor moisture content include:

NOTE: Test several areas, especially near exterior walls and walls containing plumbing.

- A 3% Phenolphthalein in Anhydrous alcohol solution. Chip the concrete at least ¼" deep (do not apply directly to the concrete surface) and apply several drops of the solution to the chipped area. If any color change occurs, further testing is required.
- Calcium Chloride test. The maximum moisture transfer must not exceed 3 lbs./1000 square feet with this test.
- Tramex Concrete Moisture Encounter meter (figure #2). Moisture readings should not exceed 4.5 on the upper scale. (Figure #2 shows an unacceptable reading of over 4.5)



Figure #2

A "DRY" SLAB, AS DEFINED BY THESE TESTS CAN BE WET AT OTHER TIMES OF THE YEAR. THESE TESTS DO NOT GUARANTEE A DRY SLAB. ALL CONCRETE SLABS SHOULD HAVE A MINIMUM OF 6 MIL POLY FILM MOISTURE BARRIER BETWEEN THE GROUND AND THE CONCRETE.

Moisture Barrier System: If moisture is present, inexpensive sheet vinyl or "slip-sheet" (PVC) may be installed. Use a premium grade, alkaline resistant adhesive and a full spread application system to properly bond the vinyl to the subfloor. Follow the sheet vinyl manufacturer instructions for installation procedures. A patch test may be required as an adhesion test. Install several small areas (3' x 3') and allow the vinyl to set for 72 hours. Remove the vinyl; if the backing remains attached to the concrete, the subfloor should be acceptable for sheet vinyl installation. If you have any questions regarding installation or the handling of moisture problems, please contact the distributor/retailer from whom the goods were purchased.

ACOUSTIC CONCRETE

Acoustic concrete normally contains large quantities of gypsum that may inhibit the adhesive's capability to properly bond. Acoustic concrete must be primed with the concrete manufacturer's recommended primer/surface hardener.

WOOD SUBFLOORS & WOOD STRUCTURAL PANEL SUBFLOORS

Plywood: Must be APA grade rated sheathing or CDX minimum.

Oriented Strand Board (OSB): Must be PS2 rated installed sealed side down.

Particleboard: Must be a minimum 40-LB density, stamped underlayment grade and $\frac{3}{4}$ " thick.

Make sure existing floor or subfloor is dry and well nailed or screwed down every 6" along each joist to avoid squeaking or popping before the floor is installed. The wood subfloor must not exceed 13% moisture content. Measure moisture content of both subfloor and wood flooring to determine proper moisture content with a reliable wood moisture meter (figure #3). The difference between the moisture content of the wood subfloor and the wood flooring must not exceed 4%.



Figure #3

Optimum performance of hardwood floor covering products occurs when there is no horizontal or vertical movement of the subfloor. The MINIMUM subfloor recommendations described above are for 16" O/C joist spacing. The thicker, PREFERRED subfloor recommendations described above will allow 19.2" joist spacing if the joist manufacturer's recommended span is not exceeded. Spacing in excess of 19.2" O/C may not offer optimum results. Install flooring perpendicular to the floor joists when possible. Installations should not be made parallel to the floor joists or on joist spacing that exceeds 19.2" O/C unless the subfloor has been properly stiffened. Stiffening may require the addition of a second layer of subflooring material to bring the overall thickness to at least 1-1/8".

All underlayment panels should be spaced 1/8" apart to insure adequate expansion space. This can be achieved by using a circular saw set at the depth of the underlayment and cutting around the perimeter of the panel. T&G panels normally have built in expansion; DO NOT cut around the perimeter of T&G panels. Do not install over existing glue-down wood floors. Do not install over nailed floors that exceed 3-1/4" in width. Wide width floors must be overlaid with plywood. When installing over existing wood floors parallel with the flooring, it may be necessary to install an additional 1/4" layer of plywood to stabilize the flooring or install the wood floor at right angles. Applicable standards and recommendations of the construction and materials industries must be met or exceeded.

RESILIENT TILE, RESILIENT SHEET VINYL & CORK FLOORING

If the tiles or sheet goods are well bonded, clean the surface thoroughly with a good quality household detergent. De-gloss flooring as necessary to create a good adhesive bond using an abrasive pad. If vinyl appears to have a coating of wax or other maintenance materials, it must be removed with the appropriate floor stripper. Allow ample drying time.

(NOTE: Do not sand any resilient products for they may contain asbestos fibers, which may be harmful.) Do not install over floors that exceed two layers. Cork floors must have all sealers and surface treatments removed before installation begins.

CERAMIC, TERRAZZO, SLATE & MARBLE

All grout joints and broken corners that exceed 3/16" must be filled with a cementitious leveling compound mixed with Latex additive. The surface should be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-adhered to the subfloor or filled as above. Remove all sealers and surface treatments.

CORK (ACOUSTIC)

Solid oak parquet flooring can be glued directly over full-spread, permanently bonded acoustic cork. The cork should have a density of no less than 11.4 lb./cubic foot and no more than 13 lb./cubic foot. The cork, in general, should be pure cork combined with a polyurethane binder. Cork thickness is to be no more than 1/4" (6 mm). Install cork in accordance with the manufacturer's recommendations.

METAL

Abrade metal floors as necessary to remove all maintenance materials and sealer coats.

RADIANT HEATED SUBFLOORS

- System must be operational and heated for at least 7 days prior to beginning installation.
- Turn off heat and let subfloor cool down to room temperature 3-4 hours prior to starting the job.
- Radiant heated floors must be temperature controlled or engineered for the R-rating of the floor covering product installed upon them. BEFORE installation begins, ascertain that the system is designed and controlled for wood flooring. Failure to do so may cause excessive heat damage and shrinkage. Install floor per the application instructions.
- After installation, turn system back on immediately to its normal room temperature setting. The subfloor surface must not exceed 85° F throughout the life of the floor.

DOORWAY AND WALL PREPARATION

Undercut door casings. Remove any existing base, shoe mold or doorway thresholds. These items can be replaced after installation. All door casings should be notched out (figure #4) or undercut to avoid difficult scribe cuts.



GENERAL INFORMATION ON ADHESIVES

NOTE: When installing UNFINISHED SOLID OAK PARQUET flooring, allow a minimum of 72 hours adhesive curing time before applying seals, stains and finishes to unfinished flooring. Trowel filling and fillers are required to reduce the possibility of panelization caused by the finish "gluing" the slats together. Test the moisture content of the wood in accordance with the stain/finish manufacturer's recommendations. Avoid installing from the surface of the flooring. If necessary distribute weight using a kneeler board.

- Maximum Adhesive Working Times
- Urethane Adhesive - 60 minutes (Always read container label before proceeding)
- Polymeric Resin Adhesive - 90 minutes (Always read container label before proceeding)
- Open times and curing times of ALL adhesives vary dependant upon subfloor porosity, air movement, humidity and room temperature. Urethane adhesive has a shortened work time in high humidity environments whereas polymeric resin adhesive working time will be lengthened. In areas of low humidity, open time will be longer with urethanes and shorter with polymeric resins. Adjust the amount of adhesive spread accordingly. The adhesive should not be applied if subfloor or room temperature is below 65° F (20° C).
- Spread sufficient amounts of recommended adhesive (shown in header on page 1) with the recommended trowel (figure #5) in an area that can be covered in 60-90 minutes.



Figure #5

- Hold the trowel at a minimum 45° angle (figure #6) firmly against the subfloor to obtain a 50-60 sq. ft. per gallon spread rate.

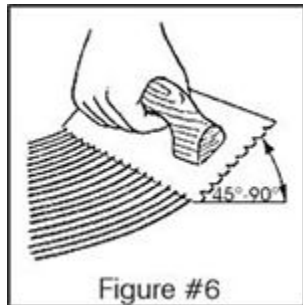


Figure #6

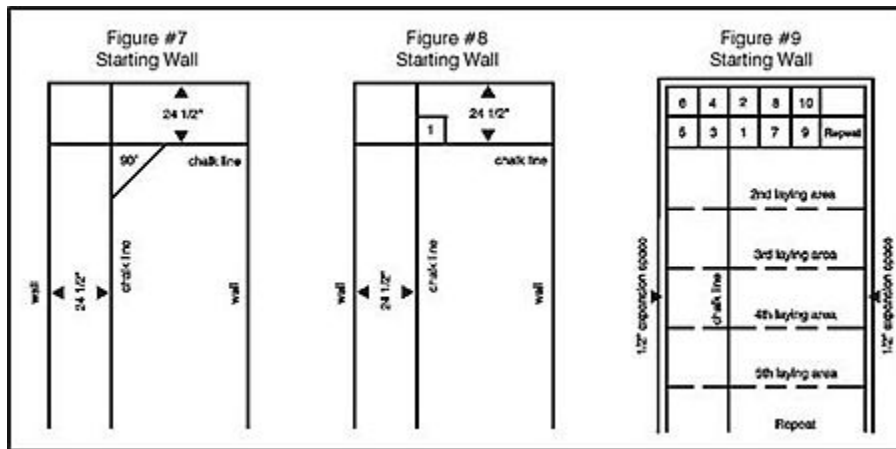
- When not in use, keep the adhesive container tightly closed to prevent thickening. Thickening of the adhesive will cause difficulty in spreading the adhesive.
- Proper ventilation within the room must be provided. An electric fan is helpful.
- The floor should be installed from several cartons at the same time to ensure good color and shade mixture.

INSTALLING THE FLOOR

STEP 1: ESTABLISH A STARTING POINT

- In at least two places 12"-16" from the corner, measure out and establish a chalk line parallel to and 24½" away from the starting wall opposite the entrance doorway. THE ½" IS FOR EXPANSION SPACE (figure #7).

- Snap a second chalk line 90° to the first chalk line, 24½" away from the right angle wall (figure #7). THE ½" IS FOR EXPANSION SPACE. Check accuracy with builder's square.
- Make any necessary adjustments to allow for crooked walls before proceeding.



STEP 2: SPREADING THE ADHESIVE

- After both chalk lines (at 90° to each other and 24½" from the wall) have been snapped, start spreading the adhesive in the 24½" wide area next to the starting wall.
- Continue spreading the adhesive along the entire length of the starting wall. Be careful not to spread adhesive beyond the 24½" chalk line.

NOTE: Clean adhesive from the surface of the floor frequently using the recommended adhesive cleaner. Use clean towel, changed frequently to prevent haze and adhesive residue.

STEP 3: INSTALLING THE PARQUET FLOORING

- Immediately lay the floor tiles on the newly spread adhesive. DO NOT lay the floor tiles on dry adhesive (Always lay the floor tiles on wet adhesive). If the adhesive becomes too dry, scrape up the old adhesive and spread more. Installing on wet adhesive eliminates rolling the floor with a heavy roller. The working time for the adhesive is 60-90 minutes. Working time will vary depending on the job site conditions.
IMPORTANT: Stand or kneel on the subfloor during the installation to avoid shifting the tiles.
- PROPER PLACEMENT OF THE FIRST FLOOR TILE IS THE KEY TO THE ENTIRE INSTALLATION. Carefully place a 12" x 12" parquet tile at the intersection of the two chalk lines (figure #8). Do not use the edge of the tongue for aligning the tile on the chalk lines.
- Lay the second floor tile ahead of the first tile to fit ½" from the starting wall. Gently lock in the tongue and groove between the first and second floor tiles (figure #9).
- Re-check to be sure both floor tiles are properly lined up with the chalk line. This is to assure a square starting area (see figure #9).
- Continue laying the balance of the 12" x 12" floor tiles along the starting wall area (see figure #9). Put each floor tile in place and gently push the floor tiles together to interlock the tongue and groove. Align each floor tile squarely.
- Do not push or shove the floor tiles too strenuously as this could cause the first and second floor tiles to move. Simply realign them and proceed with the installation.

- Avoid hammering or forcing the floor tiles together as this will destroy the built-in expansion spaces and may destroy the squareness of the floor tile.
- After laying the floor tiles across the first 24½" starting area, trim the last floor tiles as needed to obtain the proper ½" expansion space next to the walls. Use a small band or saber saw for final trimming. Firmly secure each floor tile when cutting with a saber saw.
- During the installation, occasionally remove a piece of flooring from the subfloor and inspect the back for proper adhesive transfer. Adequate adhesive transfer is necessary to ensure sufficient holding strength.

STEP 4: COMPLETING THE INSTALLATION

- When the starting area has been completed, including cutting to the wall, proceed to the second laying area.
- The second laying area is quite simple as you now have sufficient floor tiles installed to resist floor tile movement.
- Again, cut the last floor tiles to allow a ½" expansion space from the end wall.
- Proceed by laying areas 3,4,5, etc., repeating the installation procedure of the starting area. Trim out each laying area before proceeding to the next area.
- Maintain the ½" expansion space around the perimeter of the room and around all fixed objects.
- Avoid pressing heavily or stepping on the recently laid floor tile as this may destroy the rigging of the adhesive and positioning of the tile.
- Allow a minimum of 24 hours drying time before moving furniture or walking on the newly laid parquet floor.

INSTALLERS - ADVISE YOUR CUSTOMER OF THE FOLLOWING

SEASONS: HEATING AND NON-HEATING

Recognizing that wood floor dimensions will be slightly affected by varying levels of humidity within your building, care should be taken to control humidity levels within the 35-55% range. To protect your investment and to assure that your floors provide lasting satisfaction, we have provided our recommendations below.

- Heating Season (Dry) - A humidifier is recommended to prevent excessive shrinkage in wood floors due to low humidity levels. Wood stoves and electric heat tend to create very dry conditions.
- Non-Heating Season (Humid, Wet) - Proper humidity levels can be maintained by use of an air conditioner, dehumidifier, or by turning on your heating system periodically during the summer months. Avoid excessive exposure to water from tracking during periods of inclement weather. Do not obstruct in any way the expansion joint around the perimeter of your floor.

ALL INSTALLATIONS

STEP 5: COMPLETING THE JOB

- Clean floor with the recommended wood flooring cleaner.
- Re-install any transition pieces that may be needed, such as Reducer Strips, T-moldings, or Thresholds. The products are available pre-finished to blend with your flooring. (See moldings below)

- Re-install all base and/or quarter round moldings. Nail moldings into the wall, not the floor. Inspect the floor, filling all minor gaps with the appropriate blended filler.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.
- Leave warranty and floor care information with the owner. Advise them of the product name and code number of the flooring they purchased.
- To prevent surface damage avoid rolling heavy appliances and furniture on the floor. Use plywood, hardboard or appliance lifts if necessary.

MOLDINGS

- **Reducer Strip:** a teardrop shaped molding. Used around fireplaces, doorways, as a room divider, or as a transition between Parquet and adjacent floor coverings that are thinner. Fasten down with adhesive or double-faced tape.
- **Threshold:** a molding undercut for use against sliding door tracks, fireplaces, carpet, ceramic tile, or existing thresholds to allow for expansion space and to provide a smooth transition in height difference. Fasten to subfloor with adhesive and/or nails through the heel. Pre-drill nail holes to prevent splitting. Always leave expansion beneath the undercut.
- **Stair Nosing:** a molding undercut for use as a stair landings trim, elevated floor perimeters, and stair steps. Fasten down firmly with adhesive and nails or screws. Pre-drill nail holes to prevent splitting.
- **Quarter Round:** a molding used to cover expansion space next to baseboards, case goods, and stair steps. Pre-drill and nail to the vertical surface, not into the floor.
- **Combination Base and Shoe:** a molding used when a base is desired. Used to cover expansion space between the floor and the wall. Pre-drill and nail into the wall, not the floor.
- **T-Molding:** a molding used as a transition piece from one flooring to another or to gain expansion spaces. Fasten at the heel in the center of the molding. Leave expansion beneath the undercut on both sides.