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ENGINEERED WOOD FLOORING

INSTALLATION INSTRUCTIONS

GENERAL INFORMATION:

Dyerich Flooring Designs, Ltd. (Dyerich) makes no warranty or guarantee of the quality of work performed by a selected installer. Dyerich disclaims all liability for imperfect installation of its product. This warranty does not cover material with visible defects once they are installed in error. Dyerich declines responsibility for failure resulting from or connected with sub-floor or jobsite damage or deficiencies. Hardwood flooring is a beautiful product with natural variations in color, tone and grain. We cannot warrant against color variations within a floor nor variations between samples and the installed floor. Subfloors must be dry, level and clean. Flooring as well as room where the floor is being installed must be properly acclimated to temperature and humidity conditions. Not recommended for bathroom or other high moisture installations.

Wood flooring is a product of nature and therefore not perfect. Dyerich wood floors are manufactured in accordance with industry acceptable standards, which permit grading deficiencies not to exceed 5%. These deficiencies may be in manufacturing in natural type.

It is the owner/installers responsibility to do a final inspection as to the grade, manufacture and factory finish.

Beautiful wood floors are a product of nature, and therefore, not perfect. Our wood floors are manufactured in accordance with accepted industry standards, which permit grading deficiencies not to exceed 5%. These grading deficiencies may be of a manufacturing or natural type. When flooring is ordered, 5% must be added to the actual square footage needed for cutting and grading allowance (10% for diagonal installations).

Caution Wood Dust: Sawing, sanding and machining wood products can produce wood dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as nasal carcinogen in humans.

COLOR VARIATION

Oak is a natural material; therefore variations in color naturally occur. Each box should be inspected for differences in color. Mix boards from different cartons to maintain natural color and pattern variation and achieve an optimal visual blend.

ACCLIMATION

Leave Dyerich wood floors in their sealed boxes until their time of actual installation. During the installation period it is important that temperature and humidity levels be maintained in

terra legno

ENGINEERED WOOD FLOORING

accordance to those expected to exist after installation. Optimum installation conditions are 70°F (21°C) at 40-60% humidity.

JOB SITE CONDITIONS

The building should be enclosed with all outside doors and windows in place. All interior work including concrete, masonry, framing, drywall, wall covering, painting and any other wet work should be thoroughly dry. Basements and crawl spaces must be dry and well ventilated.

Crawl spaces must be a minimum of 18" from the ground to underside of joists. Ground cover of 6-20 mil black polyethylene film must be used as a vapor barrier with joints lapped 6" and sealed with moisture resistant tape. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space sf.

Permanent air conditioning and heating should be in place and operational. The recommended room temperature and humidity levels must be in place 14 days prior to installation and until occupied.

SUBSTRATE PREPARATION

Underlayment-grade Plywood and Man-made Board Substrates must be clean, level, dry, and free of contaminations. Optimum results will be achieved through use of ¾" CDX plywood substrate. Fill any low spots with appropriate filler and sand any high spots. For building with a raised foundation, install ground cover for 6 mil polyethylene over the earth in crawl space. **The moisture content of the sub-floor must be between 6-10%, as measured by a moisture meter.**

Concrete Substrate is required to be sound, smooth, level and flat with a maximum variation of 1/8" in 10". Fill any low spots with appropriate filler and scrape any high spots. Sub-floor must be properly cured and tested for moisture content. Slab must be properly cured. Flooring must not be installed if vapor pressure exceeds 3lbs. per 1000 square feet in 24 hours as tested according to ASTM F 1869 (calcium chloride test method). Preferably the slab should be tested according to ASTM F 2170 (Standard Testing Method for Determining Relative Humidity in Concrete Floor Slabs Using In Situ Probes). All concrete subfloors should be tested and results should be documented for moisture content.

Check moisture content of subfloor especially adjacent to exterior walls and plumbing fixtures. **Moisture content of subfloor must not exceed 12% or have more than a 4% difference than moisture level of product being installed.** If more than a 4% difference, determine the source of moisture and remedy prior to installation.

All substrate must level within 3/16" in 10' and/or 1/8" in 6'.

terra legno

ENGINEERED WOOD FLOORING

To protect your investment and to assure that your floors provide lasting satisfaction, we recommend the following:

- **Heating Season (Dry)** - A humidifier is recommended to prevent excessive shrinkage in wood floors due to low humidity levels. Wood stoves and electric heat, in particular, 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.

INSTALLATION

Choose your installation method. The nail-down method may be used on plywood or OSB sub-floors, while the glue-down method may be used over concrete or plywood or OSB sub-floors.

For best appearance, Dyerich wood floors should be installed parallel to the longest wall of the space. A ½”(12mm) expansion space must be left around the entire perimeter. For rooms with a dimension exceeding 20ft.(6M) add 1/16”(2mm) per additional 3ft.(1m). It is important that the tongue and groove of each plank fit together tightly at all seems and butt joints

Undercut door casings using a handsaw and a scrap of flooring to gauge the height. If using the nail-down or floating method of installation, lay a 6 mil polyethylene moisture barrier over the sub-floor. Overlap and tape edges by 8inches.

Starting your installation

Make sure subfloor is tested for moisture first and is properly prepared. Since wood expands with any increase in moisture content, always leave at least a 3/8" expansion space between flooring and all walls and any other permanent vertical objects, (such as pipes and cabinets). This space will be covered up once you reapply base moldings around the room. Use wood or plastic spacers during installation to maintain this 3/8" expansion space.

When laying flooring, stagger end joints from row to row by at least 8". When cutting the last plank in a row to fit, you can use the cut-off end to begin the next row. If cut-off end is 8" in length or less, discard it and instead cut a new plank at a random length and use it to start the next row. Always begin each row from the same side of the room.

Work from several open boxes of flooring and “dry lay” the floor before permanently laying the floor. (But never open more than a few boxes in advance) This will allow you to select the varying grains & colors and to arrange them in a harmonious pattern. It also allows you the opportunity to select out very dark/light pieces for use in hidden areas in order to create a more uniform floor. Remember, it is the installers’ responsibility to set the expectations of what

terra legno

ENGINEERED WOOD FLOORING

the finished floor will look like with the end user first and then to cull out pieces that do not meet those expectations.

To draw planks together, always use a tapping block, (a short piece of flooring), and hammer, as tapping the flooring itself will result in edge damage. When near a wall, you can use a pry bar to pry close the side and end joints. Take care not to damage edge of flooring.

Begin installation next to an outside wall. This is usually the straightest and best reference for establishing a straight working line. Establish this line by measuring an equal distance from the wall at both ends and snapping a chalk line. The distance you measure from the wall should be the width of a plank plus about 3/8" for expansion space. You may need to scribe cut the first row of planks to match the wall in order to make a straight working line if the wall is out of straight. You may want to dry lay a few rows, (no nails), before starting installation to confirm your layout decision and working line.

Floating floor Installations (for 7" wide planks only)

Starter row must be held firmly in place with wedges, Apply a thin bed of polyvinyl acetate glue to the top inside edge of groove at side and end of each board. Press boards firmly together, using tapping block as necessary. Tape glued boards together at side and end seams. Allow first two rows to set and dry before continuing to lay subsequent rows in the same fashion, using a sufficient number of wedges and spacers to keep planks tightly fitted together. The last plank may need to be trimmed in width. Remember to maintain the expansion space between the last plank and the wall. Insert the last plank firmly in place with the help of a small pry-bar and secure with spacers. Remove spacers only when glue is dry.

NOTE: It is important not to allow glue onto plank surface. If glue does spill or leak onto surface of flooring, please consult adhesive manufacturer for appropriate corrective action.

Existing Wood Flooring (All Install Methods)

Existing engineered flooring must be bounded/fastened. When gluing over existing wood flooring of any thickness, the finishing material must be abraded or removed to foster an adequate adhesive bond. When flooring is to be mechanically fastened, the existing engineer hardwood flooring must be a minimum of 3/8" thick installed over wood/wood composite underlayment that has been properly fastened. When installing over engineered flooring that is glued to concrete, the minimum thickness of that flooring must be 1/2" to allow for the length of the fastener.

Existing solid hardwood flooring that exceeds 6" in width must be covered with 3/8" approved underlayment and fastened as required. Do not install over solid flooring attached directly to the concrete as moisture might be an issue in this case.

terra legno

ENGINEERED WOOD FLOORING

In all of the above cases, it is the owner/installers responsibility to make sure that the existing floors have the proper moisture levels and that there is not more than 2% difference in moisture between the existing floor and the new floor being installed.

Staple/Nail Down Installation

We recommend nailing or stapling on 8" centers along edge and then nailing a maximum of 3" in from the end of every piece.

Caution: When first starting to nail the flooring down and after nailing down a small section of approx. 25 sqft, please make sure that this initial test section of flooring, once nailed to the subfloor, is firmly affixed. In particular, please check to make sure that the groove side of each piece, being held down only by the tongue of the adjacent piece, does not rock up and down if weight is placed on it and then removed. If the groove side does exhibit up/down movement STOP!!!

This movement will not sand out nor can this up & down movement be corrected later on! It will be necessary to glue this floor down in addition to nailing it in order to correct this condition, which is caused by a too loose tongue and groove. Loosely milled flooring may be nailed and installed in beads of a non-hardening construction adhesive such as "a Liquid Nails caulking type" laid on 8" centers or the flooring may be laid with a full mastic spread in addition to nailing.

It is the installers responsibility to ascertain whether this "too loose of a T & G" condition exists in the flooring prior to installation. If the flooring is found to have a "too loose T & G condition" Dyerich Flooring will, upon notification from the installer prior to installation, correct the problem as follows. At Dyerich Flooring's option, Dyerich Flooring will either replace the flooring, refund the purchase cost of the flooring, or compensate the installer for the extra cost of the adhesive/mastic now necessary to insure a good installation. Dyerich Flooring shall not be responsible for replacing any flooring in excess of the 25 sqft nailed down as the test section and then found to have excessive up and down movement.

Always use the recommended stapler for the specific product being installed. Use a minimum 1-1/4" (3 cm) staple recommended by the stapler manufacturer 1"-2" (2.5-5 cm) from the ends, spaced at 3"-4" (8-10 cm) intervals.

Set compressor at 70 PSI. If tongue damage occurs, lower air pressure. Fasten several sacrificial boards to the floor. At least two boards, stapled side by side, must be used to indicate proper machine adjustments. Check for surface damage, air-pressure setting, tongue damage, edge blistering, etc., before proceeding. Make all adjustments and corrections before installation begins. Once proper adjustments have been made, remove and destroy the boards.

Glue Down Installation

Open and curing times of all adhesives vary depending upon subfloor porosity, air movement and room humidity and temperatures. Urethane adhesive has a shortened working time in

terra legno

ENGINEERED WOOD FLOORING

high humidity environments. The adhesive should not be applied if subfloor or room temperature is below 60° F. Working time will vary depending on job site conditions. The flooring can be glued directly to concrete with a minimum compressive strength of 3000 PSI. Do not install over a concrete sealer or painted concrete. If present, remove by grinding or sanding. Do not install over slick, heavily troweled or burnished concrete.

All concrete subfloors should be tested and results documented for moisture content. Visual checks may not be reliable. Test several areas, especially near exterior walls and walls containing plumbing. These tests do not guarantee a dry concrete slab year round. With that in mind, a moisture barrier using a minimum of 6 mil poly film should have been installed between the ground and concrete.

Acceptable test methods for subfloor moisture content include:

- **3% Phenolphthalein in Anhydrous Alcohol Solution**-Do not apply solution directly to concrete surface. First, chip 1/4" deep into concrete test area and apply several drops of the solution. If any change in color is observed, further testing is required.
- **Calcium Chloride**-Moisture transfer should not exceed 3 lbs/1,000 square feet with this test. One test must be performed every 250 square feet.
- **Tramex Concrete Moisture Encounter Meter**-Moisture readings using a metering device should not exceed 4.5 on the upper scale.

To determine a straight first starting row, use a snap line the width of a few boards plus 3/8" expansion space from the wall. To keep first rows straight and in place, nail a straight 1" x 2" or 1" x 4" holding board on the first snap line. Make another snap line at about 24" from the holding board. Spread adhesive in first working area. Do not spread more adhesive than can be covered within 20 minutes. When the first section is complete, strike another parallel snap line from the last row installed, spread the adhesive and complete the section. Repeat section by section until the job is finished. Remove the starting board, spread adhesive and complete the area from the starting board to the wall. To fit the last piece, lay it upside-down with the tongue edge parallel to the tongue edge of the piece next to it, the short end butting up against the wall. Mark the cutting line on the back of the board and cut it to the correct width (save the cut off piece for the second row). Turn it over, fit it and glue in place.

During the installation, occasionally remove a piece of flooring from the subfloor and inspect the back for proper adhesive transfer.

Check for a tight fit between all edge and ends of each plank. End joints of adjacent rows should be staggered 4-6" when possible to ensure a more favorable overall appearance.

terra legno

ENGINEERED WOOD FLOORING

AFTER INSTALLATION

If you decide to cover the floor (to allow the other construction trades to continue working), in order to protect the floors prior to final cleanup and turnover to the owner, use rosin paper to cover the floors and only use 3M Blue Tape to hold the rosin paper to the floor. Do NOT USE plastic film or other non breathing type coverings as this can cause the floor to become damaged from humidity buildups. Also, only use the 3M Blue Tape as this tape is designed for use on finishes and other tapes may pull and damage the finish when removing it.

Remove expansion spacers and reinstall base and/or quarter round moldings to cover the expansion space.

Install any transition pieces that may be needed (reducer, T-moldings, nosing, etc.).

Dust mop or vacuum your floor to remove any dirt or debris.

NOTE: It is important not to allow glue onto plank surface. If glue does spill or leak onto surface of flooring, please consult adhesive manufacturer for appropriate corrective action.

NOTE: Any wood flooring, even an engineered wood floor, will expand and contract in response to changes in temperature and humidity. There should be no more than 2% maximum

difference in moisture content between the sub-floor and surface flooring material. The amount of movement is dependant upon temperature, dimensional stability of the material involved, and moisture content of both the surface flooring and sub-floor. Visible gaps at seems and joints will vary seasonally.

MAINTENANCE AND CLEANING

Buying a quality floor covering and proper floor maintenance, is the key to lasting beauty. You floor is a long-term investment since in most cases with hard surfaces flooring, when a house is sold and/or redecorated, the floor will remain.

CLEANING TIPS

- To eliminate fine particles of dirt and grit that act like sandpaper and will scratch any floor, vacuum or sweep regularly.
- Clean regularly with a damp mop. Occasionally,(after cleaning the bulk of dirt with the water only) you can use wood floor cleaners diluted in water.
- Spills should be wiped up immediately.
- Use walk-off mats at entrance doors and in front of kitchen sink. Avoid rubber backed or other non-ventilated mats or rugs.
- In the kitchen, use a rug in front of the working areas such as in front of the stove and sink to prevent local premature damage.

terra legno

ENGINEERED WOOD FLOORING

- Install proper protector under “feet” of furniture.
- Caster-wheeled chairs should have wide casters.

- Periodically floor for signs of wear.
- Be careful of high heels! Due to the concentration of weight on such a small surface, an average size woman in high heels can exert 2000 pounds per square inch of pressure on the floor that could possibly indent any floor permanently.