

Thank you for your purchase of a quality wood floor from Duchateau. We have passion for our craft and believe that with proper professional installation, following pre-installation procedures, validation of proper site conditions, proper installation, and ongoing care and maintenance, your floor will provide you with decades of beauty, enjoyment and value.

Duchateau Hardwood Floors Installation Guidelines offered here are intended to offer general guidance as it relates to our floors and are NOT a replacement for a professional certified installer. For best results we suggest the use of a Licensed and certified Installer preferably from the National Wood Flooring Association (NWFA). For complete warranty coverage, we require the use of a licensed and certified Installer. You can search for a NWFA Professional at www.nwfa.org, or Certified Flooring Installers at www.cfiinstallers.org or check your state or local licensing agency.

Unless otherwise specified, Duchateau Floors MUST be installed according to the most current NWFA installation guidelines at time of installation for the Duchateau Hardwood Floors Warranty to be valid. Installation constitutes acceptance of the flooring and that the subfloor-substrate, required jobsite conditions including temperature and humidity and that all Installation requirements as outlined have been met and that the color, grade and quality of the flooring is acceptable. No claims associated with any of the preceding or for visual issues of any kind will be accepted after Installation. It is the responsibility of the owner and installer to determine whether their site conditions and the flooring is appropriate before Installation begins. NO incidental or consequential damages are allowed. see the warranty for complete details.

If you ever have questions about your Duchateau Hardwood Floors purchase, we are here to help; please contact us toll free at 1-888-DUCHATEAU or customercare@duchateau.com.

PLEASE READ BEFORE BEGINNING INSTALLATION: Duchateau® cannot be held responsible for site conditions.

Moisture and Humidity

The NWFA and The Hardwood Plywood and Veneer Association (hpva.org) state that wood flooring performs best and will have normal movement when the interior site environment is controlled to stay within a relative humidity range of 30% - 50% and a temperature range between 60 °F -80 °F. Warranty coverage requires that these jobsite conditions MUST be maintained for 3 days before, during and after installation and for the life of the floor. The use of humidification or dehumidification in some areas may be required. Failure to comply with these requirements may result in structural damage and void related warranties and may cause gaps, splits, splintering, cupping and checking to become visible. Flooring formats such as wood-based composites- engineered construction while offering advantages in stability and installation options, will shrink or swell outside of these conditions and are not considered a defect.

Jobsite Conditions

Wood flooring should be one of the last jobs completed on a construction project. Your professional installer should evaluate the site and ascertain it is within the requirements before the wood flooring is delivered.

Do not deliver or install wood flooring until the appropriate humidity and temperature conditions have been met and maintained for 3 days.

It is the sole and joint responsibility of the installer and owner to conduct a quality inspection of all the flooring prior to installation. All pieces of flooring should be examined for quality of manufacture, finish, grade, and character/ color acceptance. If the product quality is deemed unacceptable, it should not be installed.

Do not deliver or install wood flooring until all concrete, masonry, plastering, drywall- especially any sanding of drywall, texturing and painting primer coats are completed. In other words, after ALL wet work has been completed.

Basements and crawlspaces must be dry. Crawlspaces must have no standing water and have a vapor barrier installed and have sufficient ventilation in accordance with local building codes or adhere to NWFA guidelines.

Exterior surface drainage should be in place directing water away from the house.

Sub Floor Preparation

- All subfloors must be dry, structurally sound, clean and free from debris and contaminants such as paint, old adhesives, exposed staples and nails.
- Subfloors must be flat to within 1/8" in 6' or 3/16" in 10'. Eliminate or correct dips or crowns not meeting this measurement.
- Knowing the subfloor moisture content is critical to the performance of wood flooring. Duchateau Hardwood Floors accept no responsibility nor does it ever warrant issues that arise from too little or excessive moisture, regardless of the source.
- Our hardwood flooring products should only be installed over a wood subfloor when the difference between sub floor moisture and moisture content of the flooring is 4% or less. For cementitious subfloors, the moisture should not exceed 3lbs per ASTM F1869 Calcium Chloride test or 75% rh per ASTM F2170 or a suitable moisture mitigating system be used.
- Document the average moisture content of both the flooring- 40 readings per 1,000 sf and the subfloor- 3 per 1,000 sf and 1 every additional 1,000 sf for concrete and 20 per 1000 sf for wood subfloor. Installer should use the included form to document pre-installation moisture content readings.
- If plywood is used as a sub floor, the moisture content difference should not be more than 4% between engineered wood floor and plywood sub floor. Plywood for sub floor is suggested to be 3/4" x 48" x 48" with an 1/8" gap between panels for expansion.
- If new flooring or subfloor products are directly adhered to existing flooring such as but not limited to Stone, Ceramic, Cork or Linoleum and they are adversely impacted for any reason whatsoever, there will be no consideration under warranty for any additional costs utilizing this installation method.

Acclimation or Conditioning Guidelines

- Proper acclimation of the flooring prior to installation is one of the most important considerations to achieve a successful installation with minimal normal expansion and contraction.
- There is no one-size-fits all approach to acclimation as relative humidity varies in different parts of the country along with unique differences from jobsite to jobsite.
- Acclimation and site conditioning is not a predetermined timeframe and may not be needed in certain conditions so is best left to a wood flooring professional familiar with the averages in your region upholding the 30-50% RH requirement and carefully considering the site conditions, flooring materials and installation methods. The process takes as long as necessary, taking readings to indicate if/when the flooring and site is at the proper MC-conditions and when no further changes will occur. Document this process and time-frame on the included chart.
- Improper acclimation can cause the floor to buckle and/or the boards to shrink, gap, cup split or show checks after installation. Worst case is when material is stored in an uncontrolled environment and then immediately installed.
- Acclimation outside of the area to be installed unless it mimics the site conditions does no good and is not recommended
- Do not open packages during the acclimation period, leave boxes sealed until ready to start installation, and then only open as needed.
- Do not store/acclimate wood flooring at the jobsite under uncontrolled environmental conditions outside of the 30-50% requirement. Garages and exterior patios are not acceptable areas to store finished wood flooring.
- Do not place cartons in direct contact with subfloor. Do create an air space between the cartons and subfloor and cross stack cartons

Considerations

- Duchateau Hardwood is an authentic hardwood and expected to contain characteristics of true vintage-handcrafting processes and naturally occurring variations in color, grain, mineral deposit, knots, splits/checks, splinters, worm holes, shake, unfilled grain and other visual and naturally occurring imperfections.
- It is highly recommended keep a minimum of 2 cartons per 1,000 sf for repairs.
- Repairs cannot be guaranteed to match original flooring and is not covered under the warranty.
- Trade and Duchateau standards allow for up to a 5% margin of error for natural and manufacturing imperfections / defects. Prior to installation, the installer and owner should conduct a final inspection of grade, color, and manufacturing and finish quality of boards to ensure that the floor conforms to purchase and owner expectations.
- Allow a minimum additional 3% for cutting waste, some layouts – patterns require more.
- Accessories do not “match” the multiple shades-colors of our unique processes: they coordinate and blend with the flooring. Planks should be set aside and carefully matched with accessories/transitions prior to installation.
- Always work from and dry lay-install from several cartons at a time to blend the coloration and aesthetic.

- Wirebrushed products will exhibit some degree, up to 5% as previously stated of; torn-rough grain and splintering on board surfaces and edges. The use of a buffer or other means to remove loose fibers is normal and to be expected along with minor touch up of affected planks over time. Post Installation buffing and final detailing and touch up will remove most but not all of these normal characteristics resulting from a wire brushed surface and are not a defect covered by warranty.
- The use of color coordinated putty, filler stick or similar products are an acceptable maintenance practice for the installation and life of a genuine hardwood floor and to be expected.
- It is highly recommended that to allow for initial acclimation and oxidation of finish and color changes, you refrain from placing area rugs on your flooring initially after installation and in areas with windows allowing UV exposure.
- Always use walk-off mats at entries from exterior doorways.
- Pay careful attention to textile underlayment's to be certain they will not discolor the finish. Never use rubber backings.
- The use a mallet or other tool to directly impact the face or edges of flooring will cause damage to the finish and edge of flooring. The proper use of straps, clamps or tapping blocks is required.
- NEVER steam clean Duchateau Hardwood flooring. Please refer to our Maintenance Guidelines for complete care information.

Glue-down Installation Guidelines

Recommended method of installation for both concrete and plywood sub floor.

For Parquet and Herringbone, follow the most recent version of Ornamental Floors design and Installation Publication No. B300 from the National Wood Flooring Association. www.nwfa.org

- It is the sole and joint responsibility of the installer and owner to conduct a quality inspection of all the flooring prior to installation. All pieces of flooring should be examined for quality of manufacture, finish, grade, character and color acceptance. If the product quality is deemed unacceptable, it should not be installed.
- Do not install flooring under cabinetry or built ins. Cut around / scribe leaving expansion space covered by a transition or toe kick. Duchateau will not be responsible for removal or replacement costs in any event including a warrantable condition.
- Test/document subfloor moisture content before every installation. Duchateau accepts no responsibility nor does it ever warrant issues from either too little or excessive moisture, regardless of source unless specifically in written form.
- Guidelines state that engineered hardwood flooring products should only be installed over a wood subfloor when the difference between subfloor moisture and moisture content of the engineered flooring is less than 4%. For cementitious subfloors the moisture content should not exceed 3lbs per ASTM F1869 Calcium Chloride test or 75% rh per ASTM F2170 or a suitable moisture mitigating system be used at the sole discretion of the Installer or specifying party.
- For glue down applications with an oil finish and where additional protection against moisture and added sound attenuation are desired, DUAG87 adhesive can be used in accordance with instructions on the pail. When using a moisture mitigating system, always read the glue manufacturer's instructions, which are typically printed in detail on the glue container and choose the correct size trowel. DUAG87 cleans up wet with warm soapy water or Duchateau cleaner- NEVER use mineral spirits or other harsh chemicals on an Oil finished floor and NEVER tape directly to an oil finished floor.

Glue-down Installation Guidelines (continued)

- For bond only applications with a Urethane type of finish, DUAG71 adhesive can be used in accordance with instructions on the pail. NEVER allow Urethane Adhesives to dry on the surface of wood flooring or damage may result that is not covered under any warranty. Clean up with the recommended cleaner- DUAG71 instructions recommend a dampened cloth with Mineral Spirits and gentle wiping being careful to not damage the finish.
- Following the spread rate and curing time guidelines, spread the glue evenly on the subfloor to cover the area the installer can lay the planks in time for the best result of the glue as per manufacturer's requirements.
- Create a working line parallel to the starting wall, in multiples of our engineered plank width, to set up the baseline of installation.
- Lay one row of plank along the entire length of work line. Add each additional row of flooring, watching the pattern repeat and offsetting or staggering the joints at least 6 inches.
- A minimum 1/2" expansion space should be left around the perimeter. *Note: In climates with extreme variations in humidity, it may be necessary to leave a larger expansion space. Bound floors are not covered by warranty and are a site related condition.*
- If floor protection is used, carefully clean the floor by vacuuming and sweeping to not trap any debris, cover the entire floor since some species and finishes are light sensitive and all floors to some extent will oxidize and change color. Be certain any covering does not prohibit the adhesive manufacturer's recommendations for curing and has a suitable Perm rating (per ASTM E96) to not trap moisture or vapor on or within the flooring. NEVER tape directly to Oil finished flooring itself, tape to base or shoe moldings- transitions or to the protective covering itself.
- At completion, inspect flooring from a standing position.

Staple-Nail-Down Installation Guidelines

Only for plywood sub floor.

- NOTE WHEN INSTALLING ENGINEERED FLOORING, A MANUAL OR PNEUMATIC NAIL GUN OR PNEUMATIC STAPLE GUN DESIGNED FOR USE WITH ENGINEERED FLOORING MUST BE USED. Test a sample area to determine the correct angle and pressure to not dimple the floor, damage the edge and be sure proper seating has occurred. Use 1-1/2"-2" fasteners as is required for the selected flooring and subfloor thickness combination and make sure the nailing base-footplate is appropriate to the nails/staples used
- Fastener schedule is at least every 3-4" for staples and 4-6 for cleats and 1" from each end joint for both types of fastener.
- When utilizing the Nail or Staple installation method, some squeaking – crackling noises are inherent and are not a defect covered under warranty and should be expected. Environmental changes exacerbate this issue. To minimize noises and movement, be sure the subfloor is structurally sound, flat, has little to no deflection, is swept clean and the angle and penetration of the fastener is carefully checked AND utilize the glue assist method.
- Test subfloor before every installation. Duchateau accepts no responsibility nor does it ever warrant issues that arise from too little or excessive moisture, regardless of the source.

Staple-Nail-Down Installation Guidelines (continued)

- Guidelines state that engineered hardwood flooring products should only be installed over a wood subfloor when the difference between sub floor moisture and moisture content of the engineered flooring is less than 4%.
- NEVER install flooring under cabinetry or built ins. Cut around / scribe leaving adequate expansion space covered by a transition or toe kick. Duchateau will not be responsible for removal or replacement costs in any event including a warrantable condition for these removal or replacements.
- Create a working line to the starting wall, in multiples of plank width.
- Install the first row of wood with the groove side towards the wall using top nails as necessary to hold the first row straight, firm and square in place. Adjust as necessary.
- Add and adjust each additional row of wood planks, offset or stagger the end joints at least 6" to prevent repeating the pattern.
- A minimum 1/2" expansion space should be left around the perimeter. *Note: In climates with extreme variations in humidity, it may be necessary to leave a larger expansion space. Bound floors are not covered by warranty and are a site related condition.*
- If floor protection is used, carefully clean the floor by vacuuming and sweeping to not trap any debris, cover the entire floor since some species and finishes are light sensitive or oxidize initially and may change color. Be certain any covering does not prohibit the adhesive manufacturer's recommendations for curing and has a suitable Perm rating per ASTM E96 to not trap moisture or vapor on or within the flooring. NEVER tape directly to oil finished flooring itself, tape to base or shoe moldings- transitions or to the covering itself.
- At completion, inspect flooring from a standing position.

Floating Installation Guidelines

Only Duchateau engineered floors 7.5" wide or less may be floated.

- Test subfloor before every installation. Duchateau accepts no responsibility nor does it ever warrant issues that arise from too little or excessive moisture, regardless of the source.
- Guidelines state that engineered hardwood flooring products should only be installed over a wood subfloor when the difference between sub floor moisture and moisture content of the engineered flooring is less than 4%. For cementitious subfloors floors the moisture content should not exceed 3lbs per ASTM F1869 Calcium Chloride test or 75% rh per ASTM F2170 or a suitable moisture mitigating system be used.
- Use a suitable hardwood floating floor underlayment following that manufacturers installation instructions that is warranted for this type of product and installation.
- Floating floors are probably one of the hardest installations to start as the boards want to move around in the starting area. It is imperative the first few rows be straight, square and gap free.
- NEVER install flooring under cabinetry or built ins. Cut around / scribe leaving expansion space covered by a transition or toe kick.
- Create a working line parallel to the starting wall, in multiples of our engineered plank width, to set up the baseline of installation.

Floating Installation Guidelines (continued)

- A bead of adhesive should be applied along the top groove edge of each plank. Use a D3 adhesive type such as Cal-Flor's EuroBond, TiteBond or equal. Test to determine adequate transfer between the top and back of the joint.
- Do not flood the groove or hydraulics may prevent a gap free installation. Use straps or tapping block to close joints. NEVER use a mallet or other tool to directly contact the edge of the flooring itself or damage will occur.
- Lay one row of plank along the entire length of the work line. Add each additional row of flooring, watching the pattern repeat and offsetting or staggering the joints at least 6 inches.
- A minimum 1/2" expansion space should be left around the perimeter and any vertical obstruction. ALL doorways must be undercut or a suitable transition used.
- For runs greater than 50', additional expansion must be provided by the use of base shoe and/ or undercutting drywall and in some cases both to allow for unobstructed movement.
- Do not allow foot traffic for at least 8 hours or as directed by the Adhesive directions and leave expansion blocks or wedges in place for the same duration.
- If floor protection is used, carefully clean the floor by vacuuming and sweeping to not trap any debris, cover the entire floor since some species and finishes are light sensitive or oxidize initially and may change color. Be certain any covering does not prohibit the adhesive manufacturer's recommendations for curing and has a suitable Perm rating per ASTM E96 to not trap moisture or vapor on or within the flooring. NEVER tape directly to Oil finished flooring itself, tape to base or shoe moldings- transitions or to the covering itself.
- At completion, inspect flooring from a standing position.

NOTE: A floating floor installation method requires clean up if glue squeezes out of the tongue and groove when the boards are secured into place. Test the application along the groove carefully to avoid excess glue spillage. Excessive glue spillage may stain your Duchateau oil finished floor. Immediate cleanup with only warm water is required and glue may leave stain marks not covered under the Duchateau Warranty. Please refer to Duchateau Maintenance guidelines for cleaning and oil maintenance.

Special Instructions for Installations over Radiant Heat Systems

With radiant heat, the heat source is directly beneath the flooring, so the flooring will dry out versus a similar floor in a home with a conventional heating system. Wood flooring can be installed over radiant heat as long as you understand radiant heat and how it can impact wood flooring, what precautions to take, and what type of wood flooring to use. Radiant heat is dry heat. A humidification system may be necessary to maintain wood flooring in its required comfort zone. Engineered Oak and Walnut are the only approved species.

Moisture and Humidity – PLEASE READ BEFORE BEGINNING INSTALLATION

Duchateau cannot be held responsible for site conditions. Refer to NWFA Appendix H for complete details.

The National Wood Flooring Association <http://www.nwfa.org> and The Hardwood Plywood and Veneer Association <http://www.hpva.org> state that wood flooring performs best and will have normal movement when the interior site environment is controlled to stay within a relative humidity range of 30% - 50% and a temperature range between 60 °F -80 °F. Warranty coverage requires that these jobsite conditions MUST be maintained for 3 days before, during and after installation and for the life of the floor. The use of humidification or dehumidification in some areas may be required.

Failure to comply with these requirements may result in structural damage and void related warranties as well as cause gaps, splits, cupping and checking to become visible. Flooring formats such as wood-based composites and engineered construction while offering advantages in stability and installation options, can shrink or swell outside of these conditions and this is not considered a defect. It is recommended that a temperature and humidity data logger is placed under the floor in each room or at least in each thermostat controlled area to demonstrate that the required site conditions have been maintained at all times. In the event that a NWFA certified Inspector is called upon to make a determination about a warrantable condition, this is the only manner to determine that the appropriate site conditions have been maintained.

Important Notes:

- Floor warranty is void if radiant heat is ever allowed to exceed 82 degrees measured on the floor.
- Hydronic based systems only
- Duchateau requires the use of a working external thermostat. It is recommended that dedicated thermostats be installed in each room to allow temperatures to be accurately controlled. Thermostats need to be properly calibrated from a qualified professional independently measuring the floor temperature and adjusting as necessary.
- Expect some heating season shrinkage, i.e. gapping or cupping
- Float or Staple - Nail-Down installation over suitable wood subfloor. *See Subfloor preparation section - NWFA Guidelines.* Floating only over lightweight concrete.
- Direct Glue down only when concrete has minimum compressive strength of 3,000 psi and Heating pipes are covered at least 3cm and providing the adhesive is approved for use with radiant heat. Radiant Heating pipes must be covered at least 3cm from the surface.
- Beware of "hot spots" and pay attention to rugs and cushions as they can trap heat and damage your flooring. Always determine floor temperature independent from other sources to be sure temperatures are not exceeded.
- Regardless of installation method, we do NOT recommend the use of any adhesive tape on any oil finished floor for any period of time. Failure to comply may result in damage to the finish. Subsequent damage as a result of taping is not covered by the warranty.

Radiant Heat - Prior to the Installation of Wood Flooring:

- If the subfloor is concrete, turn the heat on to 70 degrees, regardless of season, and left at 70 degrees for at least 7 days before installation of the wood flooring. Documenting this process is required for warranty coverage.
- When in use, NEVER raise the temperature more than 2 degrees per day. Use a "set it and forget it" strategy with radiant heat even while not occupying the house.
- Make sure to acclimate/site conditions to the new wood flooring in the actual installation space(s) of the home until moisture content is within 2% or less of the subfloor moisture content and document this process.
- Just prior to installation, radiant heat should be turned off or on the lowest setting for a minimum of 24 hours.

Radiant Heat under Plywood Sub-Floor

It is recommended to either float or staple-nail (glue assist for either) the Duchateau floor when installed with this type of radiant heating. If floating installation is chosen, leave expansion spacers in place for a minimum of 8 hours to allow the type D3 T&G Adhesive to cure. Do not allow foot traffic for a minimum of 8 hours and allow a minimum of 24 hours before any furniture is placed onto the hardwood flooring. If using appropriate fasteners, carefully after checking for clearance and thickness, Blind nail at a 45 degree angle into tongue. Use the appropriate fasteners for the floor and subfloor thickness combination to not contact the heating system.

Radiant Heat - After Installation of Wood Flooring (and ongoing thereafter)

Turn the radiant heating system on again to 70 degrees and with a professional grade device measure the flooring surface temperature again and gradually increase temperature by 2 degrees per day for at least 3 days, then as needed adhering to requirements.

IMPORTANT NOTES

Duchateau Hardwood Floors Installation Guidelines are intended to offer general guidance as it relates to Duchateau flooring and are NOT a replacement for a professional, certified installer. Duchateau flooring MUST be installed according to the National Wood Flooring Association's (NWFA) installation guidelines in order for the Duchateau Warranty to be valid. The most current publication of the NWFA guidelines are available to all NWFA members, and can be found at www.nwfa.org.

Your Quality Engineered Duchateau Hardwood Floor comes fully finished from the factory with our hard-wax oil system. As a result, it is not required to apply Duchateau Maintenance Oil immediately following installation, though regular oiling still applies. It is recommended, however, that you clean your floors after installation using only Duchateau Premium Floor Cleaner and Protectant and maintain the floor with Duchateau Maintenance Oil regularly or Annually.

WARNING: Spontaneous Combustion Danger!

Oil soaked materials (rags, wool pad, sanding dust, etc.) may spontaneously combust. Immerse oil-soaked materials in water and properly dispose.