



UNFINISHED ENGINEERED FLOORING

INSTALLATION

GENERAL NOTES

Inspect all materials carefully before installation. Warranties do not cover materials with visible defects once they are installed. It is the responsibility of the installer/owner to determine if the jobsite sub floor and jobsite conditions are environmentally and structurally acceptable for wood flooring installation. Advantage Flooring declines any responsibility for wood floor failure resulting from or connected with sub floor, subsurface, jobsite damage or deficiencies after hardwood flooring has been installed. *Please refer to the NWFA Technical Manual or your Advantage Flooring Distributor for installation support. Prior to delivery of the wood flooring a site evaluation should be done: This involves taking and recording the M.C. (moisture content) of subfloor and the RH (relative humidity). If the findings are not within NWFA installations guidelines, then installing the hardwood flooring will void any warranty.

JOBSITE CONDITIONS

Wood flooring is one of the last jobs of any construction project. Prior to delivery of the wood flooring a site evaluation should be done.

Check for the following:

- The building MUST be completely enclosed.
- Ensure exterior drainage, eaves, landscape directs water away from building.
- As in some regions' humidity, temperatures can change with the seasons.
- It is important to monitor the air within the dwelling and if needed the use of a dehumidifier, or humidifier may be needed.
- All outside doors and windows must be in place and have latching mechanisms.
- Surface drainage should direct water away from the building.
- All concrete, masonry, plastering, texturing, drywall, taping, priming and final painting must be completed and dry prior to any hardwood installation.
- If any floor leveling material/compound is needed-observe the necessary dry/cure time needed before any flooring is installed.
- In warm months, the building must be well ventilated each day.
- Be sure the flooring will not be exposed to extremes of humidity or moisture.
- Interior environmental conditions must be near the average for the geographical area.
- Basements must be dry.
- Crawl spaces must be dry.

ACCLIMATION

Often there is a misconception that the flooring must acclimatize to the environment where the flooring is to be installed-however, each board will expand or contract differently to each other if the surrounding area is not within the industry guidelines.

Do not place the hardwood flooring that is to be installed in any room, dwelling that is not within the guidelines.

Recordings prior/during installation of subfloor, hardwood flooring which must be within 6 to 9% M.C.

Allowing wood moisture content to become at equilibrium with the environment in which it will perform is crucial to quality installation. Acclimation of solid ¾" flooring depends on geographic location, interior climate control and time of year. * Advantage Flooring engineered flooring does not need to be acclimated to the job site unless the flooring will be transported from one extreme relative humidity to another. If there is a severe relative humidity difference, make sure to condition the wood flooring 24 hours before the installation.

Wood is hygroscopic. It will absorb and expel moisture based on its environment. Advantage Flooring Engineered Plank is constructed with all natural hardwoods and is not immune to these changes. Although the floor's multi-ply construction will greatly reduce these changes, we recommend that the flooring be stored in a controlled environment prior to installation.

GLUE-DOWN INSTALLATION

PREPARATION

Please follow the adhesive manufacturers' installation procedures as per correct trowel size, the adhesive spreading rate, open time, setup time, temperature, R.H. & M.C.

Note for installation over ALL radiant heat systems-please again follow the adhesive guidelines. The radiant heat is to be shut off during the hardwood flooring installation to allow proper glue bond of subfloor to hardwood flooring. Too Hot will have the adhesive setup too fast and not adhere to the flooring. Once the entire installation is done then the radiant heat can again be reset to the desired temperature-note this is to be slowly turned up and do not crank up the heat as it can cause the adhesive to fry out.

Make sure you remove all foreign material from the concrete. To remedy any surface irregularities, 36 or 60 grit open coat paper may need to be used to grind a concrete floor. This will loosen any dirt, loose concrete or contaminants. Thoroughly sweep and vacuum and make sure that all previously or existing glue or adhesives are removed before installing new hardwood flooring. Any irregularities and undulation may cause any wood flooring to develop hollow spots between the flooring and the sub floor. Keep in mind that these hollow spots are not the result of any manufacturing defect in the flooring and are not covered by the Advantage Flooring warranty.

INSTALLATION

Once the dwelling, building, rooms meet the R.H. and M.C. recommended readings the hardwood flooring can be installed.

Please ensure the proper measures are in place to keep the said area within these readings year-round as hardwood is only as good as the surrounding environment.

Prior to delivery of the wood flooring a site evaluation should be done: This involves taking and recording the M.C. (moisture content) of subfloor and the H.R. (relative humidity). If the findings are not within NWFA installations guidelines, then installing the hardwood flooring will void any warranty.

When to install lay only after sheetrock and tile work are thoroughly dried and all but the final woodwork and trim have been completed. The building interior should have been dried and seasoned to a comfortable living environment and installation should be done in a similar, comfortable working environment.

As part of your sub floor preparation remove any existing base, shoe mold or doorway thresholds. These items can be replaced after installation but should be replaced in such a way as to allow room for expansion around the perimeter of the room. All door casings should be notched out or undercut to allow for expansion and to avoid difficult scribe cuts. This is easily done by placing a piece of the engineered product on the subfloor as a height guide for your handsaw or jamb sawn. Interior walls should be painted and dry and a room temperature as required by adhesive manufacturer with a relative humidity of 35-65% should be provided before any installation begins. To determine if a concrete slab is suitable for hardwood flooring. Please follow the NWFA guidelines to perform a Calcium Chloride test. If excessive moisture is present, do not lay flooring. Check floor in several locations.

Concrete sub floors must be clean, flat and sound and of sufficient compression strength (3000lbs PSI) being sure that the surface is not slick. Sections not flat such as waviness, trowel marks, etc. are to be eliminated by grinding or the use of an acceptable leveling compound. Especially along the walls, the subfloor flatness must be checked and, if necessary, improved. Flat to 1/8" in a 6' radius and /or 3/16" in a 10' radius. In addition to concrete sub floors. These products can be installed over dry, flat wood sub floors, such as plywood. If plywood is used as an overlay over an existing sub floor, the thickness of the overlay material must be such as to net a total 3/4" sub floor thickness.

New wood type sub floors should also be checked for moisture using a moisture meter. In general wood or plywood sub floors should not exceed 12% moisture content or 4% moisture content difference between wood flooring and sub floor.

WET LAY INSTALLATION

When using this method, flooring is placed into "wet" adhesive and workers do not walk on wood. Do not walk on fresh laid flooring. Proper humidity must be controlled between 35-65% for successful performance during and after installation.

ADHESIVE

Advantage Flooring recommends the following or equivalent:

See Distributor for recommended adhesive, trowel size, spread rate.

INSTALLATION

Flooring should be installed from several bundles at the same time to achieve a uniform look. Install tongue into groove. To ensure a random pattern, make sure end joints are at least 6" from the end joint of the prior row. Proceed until you have come to the final row to complete the room. When you have reached the final row, you will need to measure the width of the final planks. You may need to rip the planks to match the width of the space remaining. Use a "Last Board Puller" to snug the last row of planks with the completed second row. Lift a plank periodically to check for adhesive transfer (approx. 95-100% glue to flooring).

Please refer to the NWFA Technical Manual, your Advantage Flooring Distributor, and/or the adhesive manufacturers for installation support.

NAIL/STAPLE INSTALLATION

PREPARATION

Evaluate the job site. Always check the job site for satisfactory conditions. The sub floor must be clean, dry, firm and flat. Refer to the NWFA Technical Manual for required conditions. When you are ready to begin, open the bundles and inspect each plank for quality. Do not install planks that are not of the quality or grade purchased.

INSTALLATION

Please refer to the NWFA Technical Manual or your Advantage Flooring Distributor for installation support.

RADIANT HEAT SUB FLOOR

Graf Brothers Flooring Advantage Engineered Hardwood products, 5/6" 4mm or 3/4" 4mm thickness are approved for installation over radiant heated subfloors using Adhered installation methods for the product. We do not warranty our 6 mm wear layer over radiant heat installation.

- Nail or Staple Down installation methods are not recommended for Radiant Heated Sub Floors.
- Radiant Heating Systems used must be designed and controlled specifically for Hardwood flooring by the system manufacturer, and include an Outside Temperature Probe, and Surface Temperature Controls.
- The end consumer should be aware that minor gapping between wood planks during the heating season is a normal occurrence with hardwood flooring installed over radiant heated subfloors.
- Proper humidity controls within the home or business will help to minimize the natural wood reaction to seasonally changing climate conditions.
- Indoor climate should be maintained between 60-80° F and a relative humidity range of 35%-65%.

Adhere to the following guidelines for a successful installation:

- It is recommended to test any new radiant system to ensure they work as per manufacturers spec and are checked for any leaks prior to installing engineered hardwood flooring.
- Newly installed hydronic type radiant heated flooring systems should be in operational mode with the temperature set between 64° -72°F, for a minimum of 4 weeks to insure that all sub floor moisture has properly dried.
- Older water type radiant floor heat systems should be fully pressure tested, properly maintained, and set to a minimum of 64°F, for at least 6 days before flooring delivery; acclimation, or installation processes may begin.
- All radiant heating systems must be set to room temp. (A minimum of 64°F), for at least 6 days before flooring delivery; acclimation, or installation processes may begin.
- Always check wood sub floors to insure that the moisture content is less than 12% using an accurate wood moisture meter.
- Concrete sub floors must register "dry", using approved quantitative concrete moisture meter.
- The pH level of concrete sub floors should register between 6 and 9, on a fourteen-point pH scale.
- Sub floors must fully comply with these "dry" requirements before proceeding with the delivery, acclimation, or installation of the wood flooring at the job site.
- Install the hardwood flooring according to the instructions that pertain to the product.
- After completing the installation, do not change the radiant heat setting for 48 hrs.
- Throughout the life of the installation, 3-to-5-degree daily increments must be used when adjusting system temperature for either upward or lower adjustments; so that the hardwood flooring can adjust to the temperature changes in a gradual manner.
- Never raise the flooring surface temperature setting above 85 degrees Fahrenheit.
- Regulate the job site to insure that the relative humidity is between 35% and 65%, and that temperature is between 60° and 80° F, throughout the flooring delivery, acclimation, installation, and any required curing processes.
- Deliver and acclimate the engineered hardwood flooring, for at least 48 hours before installation begins.