

Mohawk® Engineered Hardwood with HDF Core Direct Glue Installation Instructions

Mohawk's Engineered Hardwood Flooring with HDF Core can be installed over most properly prepared subfloors, making them suitable for installation on all grade levels where moisture conditions do not exist. We continuously make technological advancements that improve product performance or installation techniques and methods. To confirm you have the most recent installation instructions, please visit our website www.mohawkflooring.com or contact Technical Services at 888-387-9881 Option 3.



Caution: Wood Dust

Cutting, sanding or machining wood products produces *wood dust*. While wood products are not hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200), the International Agency for Research on Cancer (IARC) and the State of California have classified *wood dust* as a human carcinogen.

PROPOSITION 65 WARNING: This product produces *wood dust* when cut, sanded or machined. Wood dust is considered a carcinogen by the State of California.

Precautionary Measures: Airborne wood dust can cause respiratory, skin and eye irritation. Power tools should be equipped with a dust collector. Use an appropriate NIOSH-designated dust mask. Avoid dust contact with skin and eyes.

First Aid Measures in case of irritations: In case of irritation flush eyes with water. If needed seek medical attention. If dermatitis occurs, seek medical attention.

WARNING! DO NOT MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES.

Previously installed resilient floor covering products and the asphaltic or cutback adhesives used to install them may contain either asbestos fibers and/or crystalline silica. **The products in this carton DO NOT contain asbestos or crystalline silica.** Avoid creating dust. Inhalation of asbestos or crystalline dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structures.

INSTALLER / OWNER RESPONSIBILITY:

It is the responsibility of the installer and owner to ensure that job site environmental, sub-floor and subsurface conditions involved meet or exceed all requirements as outlined in Mohawk's installation instructions prior to installation. Mohawk declines all responsibility for product performance or installation failure due to sub-floor, substrate or environmental deficiencies or jobsite conditions.

All work involving water or moisture (plumbing, masonry, painting, plastering) must be completed prior to flooring being delivered. Building envelope must be complete and exterior doors and windows installed. Exterior grading and gutter downspouts should be completed and permanent HVAC systems in operation for 14 days prior to flooring being delivered to job site. Measures should be taken to protect floors from other trade work. **Do not cover floors with plastic, red rosin, felt or wax paper or previously used cardboard. Instead use a breathable material such as clean, dry, plain uncoated cardboard or Kraft paper. Inks from printed cardboard could damage the floor.** The floor should be thoroughly cleaned before covering to remove grit and debris that would damage the finish. The floor must be completely covered to eliminate uneven ambering from exposure to UV light.

Mohawk requires Engineered Hardwood with HDF Core products acclimate for 48 hours, prior to installation. Acclimation allows flooring to achieve equilibrium moisture content (EMC) with the installation environment. All wood flooring continually expands and contracts until it reaches the moisture equilibrium with the environment in which it's installed. As with all hardwood flooring, expansion and contraction will be minimized if climate control is consistently maintained year round. **This is especially important with tropical species, because denser woods experience more significant shrinkage in low moisture / low humidity environments.**

Room temperature should be 60 – 80° F, with relative humidity between 35 – 55%. These environmental conditions are specified as pre-installation requirements and must be maintained for the life of the product.

Building interiors are affected by two distinct humidity seasons – Heating and Non-Heating. Care should be taken to maintain humidity levels between 35-55%. **Mohawk warranties do not cover natural expansion and contraction which results in separation between planks, or damage caused by excessively low or high humidity. Seasonal gapping is not considered a manufacturing defect.**

Heating season – Low Humidity, Dry. All heating methods create dry, low humidity conditions. Humidifiers are recommended to prevent excessive shrinkage or gapping in engineered wood floors due to seasonal periods of low humidity.

Non Heating Season and Coastal or Waterfront Areas – High Humidity, Wet – During the non heating season proper humidity levels should be maintained by using an air conditioner, dehumidifier or by turning on your heating system periodically during the summer months

Do not install in full bathrooms or powder rooms. Do not install over radiant heat systems.

Examine flooring for color, finish and quality prior to installation. If material is unacceptable, contact the seller immediately. Engineered Hardwood flooring is a natural product and contains characteristics such as variations in color, tone and graining. Flooring is manufactured in accordance with industry standards, which allows manufacturing and natural defect tolerances up to 5% of the total installation. Installer should work from several cartons at the same time to ensure good color and shade blend. Installer should not install undesirable pieces.

Flooring warranties DO NOT cover materials with visible defects once they are installed. Installer and Owner are responsible for final inspection of flooring manufacture, grade and finish. Purchase an additional 5% of flooring to allow for cuts and an additional 10% if installing diagonally.

WARRANTY NOTE: Installer should provide owner with one carton end label from product installed for warranty purposes. Owner should retain carton end label and copy of original sales invoice with product style name and style number for their records. Excess flooring should be retained and stored flat in climate controlled area for future repairs in the event planks are ever damaged.

The use of stain, filler or putty for minor correction is considered a normal practice and a routine part of installation.

TOOLS: BASIC TOOLS AND ACCESSORIES:

Broom	Terry Cloth Towels
Coordinating transition strips or molding	Mineral Spirits
Coordinating stain, filler or putty	Hand or Electric Jam Saw
Chalk Line	Power Circular Saw or Miter Saw
Thick Felt or rubber pads	Wood/Concrete Moisture Meter or both
Safety Glasses	Carbide Blades
½ inch wood spacers	Straight Edge
Table Saw	Tape Measure
Carpenter's Square	Pry Bar or Trim Puller
Utility Knife	Pencil
Pull Bar	Drill
Hammer	Mohawk FloorCare Essentials Cleaner
Mohawk M908 Pro-Tack Urethane Adhesive with Mohawk M901 Pro-Tech Moisture Membrane or Mohawk M959 UltraTack 2-N-1 Urethane Adhesive	

The use of accessories other than Mohawk's may cause damage to the Mohawk Engineered Hardwood Flooring with HDF Core. Therefore, we recommend products specifically designed and tested for use with Mohawk Engineered Hardwood Flooring with HDF Core.

DIRECT GLUE DOWN INSTALLATION

Use **Mohawk M901 ProTech Moisture Membrane** with a 5/32" x 3/16" V notch trowel in conjunction with **Mohawk M908 ProTech Urethane Adhesive**, with a ¼" x 3/16" x ½" V notch trowel.

or
Use **Mohawk M959 UltraTack 2-N-1 Urethane Adhesive / Sealer** with a ¼" x 3/16" x ½" V notch trowel along with the trowel clip-on inside each pail.

Never use a water based adhesive to install Engineered Hardwood with HDF Core.

When installing on concrete subfloors, trowel should be replaced every 3000 ft.

STORAGE AND HANDLING

Flooring must be delivered and stored at the climate controlled jobsite 48 hours prior to installation to allow the product to acclimate from prior transport or storage conditions. Flooring should be stored with at least a four inch air space under cartons. Open cartons and remove any plastic wrap that may have been used to ship the material. This is especially important if you live in a very humid or dry climate.

PRE-INSTALLATION & JOB SITE CONDITIONS

SUBFLOOR REQUIREMENTS:

The following subfloor recommendations are intended to complement the installation of engineered hardwood flooring with HDF core as an interior finish. Engineered Hardwood flooring is not a structural component. These recommendations are not intended to supersede federal, state or local building codes, but as with many other interior finish products, may require modifying existing structural components for a successful installation.

SUBFLOOR PREPARATION RECOMMENDATIONS: ON, ABOVE, or BELOW GRADE:

Mohawk Engineered Hardwood Flooring with HDF Core may be installed over most structurally sound subfloors that are flat, clean and dry, on/above/or below grade. Do not install in full bathrooms or powder rooms.

All subfloors should be:

- **CLEAN** – Subfloor must be clean and free of dirt, curing compounds, drywall mud, wax, paint, oil, sealers, adhesives and other debris. These may be removed mechanically.
- **FLAT** – Within 3/16" in 10' radius (5 mm in 3 m) and/or 1/8" in 6' radius (3 mm in 2 m). Sand high areas or joints. Fill low areas with a high compressive strength (min. 3,000 psi) Portland base compound.
- **DRY** – Select the appropriate moisture indicator test specifically designed for use with wood or concrete subfloors. Test and record moisture content results.
- **STRUCTURALLY SOUND** – Nail or screw any areas that are loose or squeak. Wood panels should exhibit an adequate fastening pattern, glued/screwed or nailed as system requires, using an acceptable nailing pattern. Typical: 6" (15 cm) along bearing edges and 12" (31 cm) along intermediate supports. Flatten edge swell as necessary. Replace any water-damaged, swollen or delaminated subflooring or underlayments.

Building codes establish requirements for structural support components of flooring systems which may not provide adequate rigidity and support for proper installation and performance of a hardwood floor. Whenever possible install flooring perpendicular to the floor joists for maximum stability.

NOTE: Avoid subfloors with excessive vertical movement or deflection because subfloor movement will telegraph through to the finished installation. Indications of excessive deflection are uneven finish wear, fastener release, squeaking, compromised or damaged locking systems, sectional contours such as bowing or dipping in floors and uneven flooring material. Nail or screw subfloor panels to secure boards with excessive vertical movement or deflection. If the subfloor has excessive vertical movement (deflection) before installation of the flooring, it is likely it will do so after installation of the flooring is complete. Our warranties DO NOT cover any problems caused by inadequate substructures or improper installation of said substructures.

Subfloor Moisture Check

Note: To increase reliability, moisture testing should be performed after the HVAC system has been in operation for a minimum of 14 days. Excess moisture on any flooring substrate if not identified and corrected prior to installation will cause floor covering failure. Warranties DO NOT cover products installed over improperly prepared subfloors, substrates or environmental related deficiencies.

Acceptable conditions for on, above, or below grade applications are:

Concrete Subfloor Moisture Content

On and below grade applications are susceptible to moisture and should be tested for moisture prior to installation in several locations within the installation area. Installer should record moisture test results in the space provided on the last page of this document and leave with the owner as part of their records. Acceptable conditions for all grade applications on concrete are:

- Less than 3 lbs./1000 sq. ft./24 hrs. Calcium Chloride Test (ASTM F1869) or
- Less than 75% RH Levels in Concrete Using In-situ Probes (ASTM F 2170-02) or
- No greater than 5% on a Tramex Concrete Moisture Encounter meter or equivalent concrete moisture meter.

DO NOT INSTALL FLOORING IF MOISTURE TESTS RESULTS EXCEED RECOMMENDED LIMITS.

NOTE:

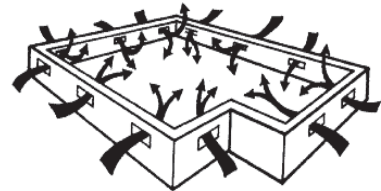
New concrete slabs require a minimum of 60 days drying time before covering them with a hardwood floor. Concrete must be fully cured. Although initial moisture tests may indicate a dry slab, the moisture content of slabs may increase due to seasonal fluctuation or weather patterns. New construction should have a minimum 10 mil poly between the ground and concrete.

Wood Subfloor Moisture Content

Test both wood subfloor and engineered hardwood flooring with HDF core for moisture content using a reliable moisture meter. The moisture content of the subfloor material must not exceed 12%. The difference between the moisture content of the wood subfloor and the engineered hardwood flooring with HDF core must not exceed 4%.

If subfloor moisture readings exceed recommended levels for concrete or wood, steps **MUST** be taken to reduce subfloor moisture. Steps could include waiting for subfloor to dry to acceptable levels or using an appropriate moisture barrier such as **Mohawk M901 ProTech Urethane Moisture Membrane** or **Mohawk M959 UltraTack 2-N-1 Adhesive / Sealer**.

NOTE: Basements and crawl spaces must be dry. Use of a 6 mil black polyethylene is required to cover 100% of the crawl space earth. Crawl space clearance from ground to underside of joist should be no less than 18" and perimeter vent spacing should be equal to 1.5% of the total square footage of the crawl space area to provide cross ventilation.



To correct any subfloor conditions concerning moisture, either wait until the subfloor dries to meet specifications or use an appropriate moisture barrier. For more information concerning moisture conditions, contact Mohawk's Technical Service Department at 888-387-9881 Option 3.

Concrete Subfloor

Lightweight concrete

To test for lightweight or acoustical concrete, scrape a coin or key across the surface of the subfloor. If the surface powders easily or has a dry density of 100 pounds or less per cubic foot do not install **Mohawk Engineered Hardwood with HDF Core**.

Wood Subfloors

NOTE: As with many other interior finish products, modification of existing structural components may be required for a successful installation.

Solid Wood Subfloors - Direct Glue Installation

- Minimum 3/4" (19 mm) thick with a maximum width of 6" (15 cm) installed at a 45° angle to the floor joists.
- Group 1 dense softwood (Pine, Larch, Douglas Fir, etc.) No. 2 common, kiln dried with all board ends bearing on joists.
- For glue-down applications add 3/8" (9.5 mm) approved floor panel underlayment.

Existing Wood Flooring – Direct Glue Installation

• **DIRECT GLUE** -Existing engineered flooring must be well bonded/fastened. Do not apply Mohawk M901 ProTech Moisture Membrane or Mohawk M959 UltraTack 2-N-1 Adhesive / Sealer to strip wood flooring, self-stick tile, sheet vinyl, old adhesives, metal, linoleum, laminate, or particleboard. Existing hardwood flooring must be covered with 3/8" (9.5 mm) approved underlayment and fastened as required. **Do not install over solid flooring attached directly to the concrete.**

Wood subfloors should be well nailed or secured with screws. Nails should be ring shank and screws need to be counter sunk. The wood subfloor needs to be structurally sound (meaning subfloors without loose boards, vinyl or tile). If sub-floor panels are a single layer, less than 3/4" thick, add another single cross layer for strength and stability (minimum 3/8" thick). Underlayment floor panels must be installed sealed side down. When used as a subfloor, allow 1/8" (3 mm) expansion space between each panel. If spacing is inadequate, cut in with a circular saw. Do not cut in expansion space on tongue and groove panels. When installing parallel to the floor joists it may be necessary to increase rigidity of the structural subfloor system by installing an additional minimum of 3/8" (9.5 mm) approved underlayment floor panel.

Approved underlayment floor panels should meet or exceed the following:

- **Plywood:** Must be minimum CDX grade (exposure 1) and meet US Voluntary Product Standard PS1 performance standard or Canadian performance standard CAN/CSA 0325-0-92. The preferred thickness is 3/4" (19 mm) as a subfloor [minimum 5/8"(16 mm)] or 3/8" (9.5 mm) as floor panel underlayment.
- **Oriented Strand Board (OSB):** Conforming to US Voluntary Product Standard PS2 or Canadian performance standard CAN/CSA 0325-0-92 construction sheathing. Check underside of panel for codes. When used as a subfloor, the panels must be tongue and groove and installed sealed side down. Minimum thickness to be 23/32" (18 mm) thick when used as a subfloor or 3/8" (9.5 mm) as floor panel underlayment.

* **Waferboard, Chipboard, Fiberboard and Particleboard are unacceptable subfloors for Mohawk's Engineered Hardwood Flooring with HDF Core.**

Mohawk M908 ProTack Urethane Adhesive and Mohawk M901 ProTech Moisture Membrane or Mohawk M959 UltraTack 2-N-1 Urethane Adhesive/Sealer, is the recommended flooring adhesive system and may be used for on or above grade applications and on all common substrates except particleboard, chipboard, waferboard, sheet vinyl, resilient tile and strip flooring.

Sub-floors other than wood or concrete:

For Direct Glue Down instructions on subfloors other than wood or concrete, contact Mohawk Technical Services at 888-387-9881, Option 3

Multi Width Installation:

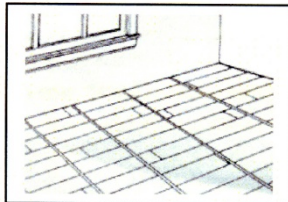
Installing planks of multiple widths requires special consideration. Multi Width products arrive in the same carton so measure material needs as you normally would.

Always start installation with the widest plank width and install in descending widths (example 5" -3", 5"-3").

Do not try to "mix" widths within a row.

Before You Start

- Plan your layout; determine the direction of the installation in the room. Planks installed parallel to windows accent the flooring best.
- Blending of Cartons- To achieve a uniform installation appearance, preselect and set aside planks that blend best with all trims and moldings. Install these planks next to best blended moldings.
- Remove all wall mounted moldings such as base and quarter round.
- Floor should be installed blending planks from several cartons at the same time to ensure good color and shade mixture throughout the installation.
- Be attentive to staggering the ends of the planks at least 6"-8" when possible, in adjacent rows. Create a random effect by creating a starter plank, cut the plank at 2/3 length and using full planks to continue across the room. Start the next row using the 1/3 to start the next row. Cuts made at the opposite wall should be used for starter planks to avoid a pattern.
- Do not install in areas of high moisture such as bathrooms and powder rooms.



NOTE: DO NOT USE A RUBBER Mallet TO INSTALL FLOORING. STRIKING THE SURFACE WITH A RUBBER Mallet MAY "BURN" THE FINISH CAUSING IRREPARABLE DAMAGE.

PREPARATION:

Undercut Door Casings - Undercut all door casings 1/16" higher than the thickness of the flooring materials being installed. To do this, use a scrap piece of flooring as a guide. Lay it on the substrate and cut the casing with a handsaw or use a power jamb saw set at the correct height. Remove all moldings and wall-base, and undercut all door casings.

Expansion Space:

An expansion space of at least 1/2" inch must be maintained around the perimeter of the room, all pipes, counters, cabinets, fireplace hearths, doorframes and any other fixed vertical objects in the room.

GLUE DOWN INSTALLATION GUIDELINES

It is required that Mohawk M901 ProTech Urethane Moisture Membrane be applied before installing with Mohawk M908 ProTack Urethane Adhesive. If using Mohawk M959 UltraTack 2-N-1 Sealer / Adhesive, use the adaptor trowel inside each pail for the sealer to be activated.

NEVER use a water based adhesive for installation of Mohawk's Engineered Hardwood Flooring with HDF Core.

APPLYING M901 PROTECH MOISTURE MEMBRANE:

ProTech M901 Urethane Moisture Membrane: A trowel-applied membrane that improves the long-term performance of glue-down flooring installations over concrete and wood substrates.

TYPICAL TROWEL AND APPROXIMATE COVERAGE*

5/32" x 3/16" V notch trowel: 40 to 45 sq. ft./U.S. gal.

* Coverage may vary depending on substrate conditions.

USES

- For protection from concrete moisture (up to 25 lbs. MVER)
- For reducing sound transfer in multi-story buildings
- For improving flexibility and increasing bond strength of installations

Note: Do not apply over self-stick tile, sheet vinyl, old adhesives, metal, linoleum, laminate, particleboard or strip wood subfloors without first covering with an approved wood or wood composite underlayment. Air temperature must be between 50°F and 100°F for applying ProTech M901 Urethane Moisture Membrane.

APPLICATION

1. Regulate temperature and humidity 72 hours before, during and after installation.
2. Complete undercuts **before** applying ProTech M901. Include the additional 1/16" height of ProTech M901 when calculating undercuts.
3. Pour ProTech M901 onto substrate (no mixing necessary).
4. Using the notched side of a 5/32" x 3/16" V-notch trowel, spread ProTech M901 evenly. Product will flatten out naturally.
5. Allow to dry completely (12 to 16 hours).
6. Correct any missed spots and voids with trowel's flat side.
7. Allow repair areas to dry completely.
8. While membrane is fresh, clean tools using a urethane adhesive cleaner or mineral spirits. ProTech M901 is extremely difficult to remove when cured.
9. Install engineered wood flooring using ProTack M908 Urethane Adhesive.

APPLYING M908 PROTACK URETHANE ADHESIVE:

ProTack M908 Urethane Adhesive: A trowel-applied moisture-curing urethane adhesive for the installation of glue-down flooring installations over concrete and wood substrates.

TYPICAL TROWEL AND APPROXIMATE COVERAGE*

1/4" x 3/16" x 1/2" V notch trowel: 40 to 45 sq. ft./U.S. gal.

* Coverage may vary depending on substrate conditions.

Note: Do not apply over self-stick tile, sheet vinyl, old adhesives, metal, linoleum, laminate, particleboard or strip wood subfloors without first covering with an approved wood or wood composite underlayment. Air temperature must be between 50°F and 100°F for applying ProTack M908 Urethane Adhesive.

APPLICATION

1. Regulate temperature and humidity 72 hours before, during and after installation.
2. Spread adhesive using recommended trowel, ensuring 95 – 100% adhesive contact.
 - Wet-lay method: Press flooring firmly into adhesive immediately after troweling.
 - Walk-on method: Press flooring firmly into adhesive after it has developed its initial grab (typically, after 15 to 20 minutes).
3. Remove any adhesive smudges or drops immediately as adhesive is very difficult to remove once allowed to dry. Clean tools while adhesive is fresh using a urethane adhesive remover or mineral spirits.
4. Avoid light/regular foot traffic for at least 12 hours. Avoid heavy foot traffic for at least 24 hours.

Use clean white terry cloth towels with mineral spirits to clean as you go. It is easy and convenient to use. Adhesive that has cured on the surface of the flooring can be difficult to remove.

APPLYING M959 ULTRATAK 2-N-1 URETHANE ADHESIVE / SEALER:

M959 UltraTack 2-N-1 Urethane Adhesive / Sealer:

M959 UltraTack 2-N-1 can be used by itself as a direct bonding material or in a single-coat application method that provides superior bond and moisture vapor emission control on concrete slabs (up to 15 lbs. in MVER or 85% relative humidity).

TYPICAL TROWEL AND APPROXIMATE COVERAGE*

As an adhesive: 5/32" x 3/16" V notch trowel: 45 to 55 sq. ft./U.S. gal.

As a moisture membrane: trowel clip-on inside bucket: 30 – 40 sq. ft./U.S. gal

* Coverage may vary depending on substrate conditions.

NOTES

- Product must be used in its entirety when opened. Lid cannot be re-sealed.
- Temperature and humidity will affect the curing time. The higher the temperature and humidity, the faster the cure.

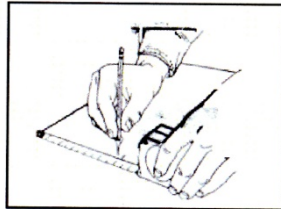
Use clean white terry cloth towels with mineral spirits to clean as you go. It is easy and convenient to use. Adhesive that has cured on the surface of the flooring can be difficult to remove.

Getting Started Direct Glue:

Step 1—

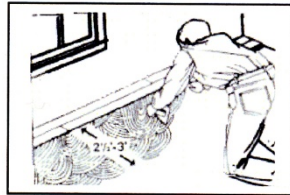
Starting Off - Layout

Measure and mark using a chalk line 4 1/4" from the wall at two spots near each end of the room. Use the chalk line as your flooring guide. Use spacers to maintain 1/2" expansion space along walls. **NOTE: When a room is greater than 20 ft. in width the direction of the installation should start near the center of the room and work out towards the walls.**



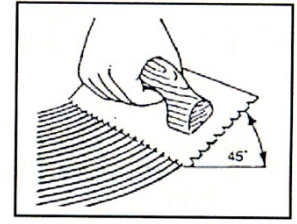
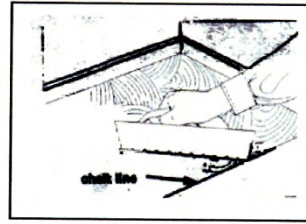
Remaining Rows:

Once the starter rows are secure spread 2 1/2 to 3 feet of adhesive the length of the room. (Never lay more adhesive than can be covered in approximately 2 hrs.) Place tongue into groove of plank and press firmly into adhesive making sure to maintain a 1/2" expansion space next to walls. Never slide planks or strips through adhesive. Clean any adhesive off the surface **before** it cures using clean terry cloth towels and mineral spirits.



Step 2

Spread Mohawk Pro-Tack M908 Urethane Adhesive or Mohawk M959 UltraTack 2-N-1 from the chalk line using the recommended trowel size. It is important to use the correct trowel at a 45° to get the proper spread of adhesive applied to the sub-floor, which will produce a proper and permanent bond. Improper bonding can cause loose or hollow spots.



Note: Change the trowel every 2000 to 3000 square feet due to wear down of the notches. This assures you always get the proper spread of adhesive.

Note: Never work on top of the flooring when installing. If you must work on top of the newly laid flooring use a kneeling board.

When using Mohawk's Pro-Tack M908 or Mohawk's UltraTack 2-N-1 M959 adhesive it is not necessary to roll the floor.

Final Touches

Install the proper trim molding at the doorways to achieve the transition and along the walls to cover the edges of any gaps along the wall due to irregularity.

Complete the job by using the wood filler that coordinates with the installed flooring for minor corrections or areas where brad nails were used in the trim or the flooring. Clean the finished floor with Mohawk's FloorCare Essentials Hardwood & Laminate floor cleaner.

Install or re-install any transition pieces, reducer strips, thresholds, bases and/or quarter round moldings. Trims and moldings should be nailed into the wall, not the floor.

To prevent surface damage, avoid rolling heavy furniture and appliances on the floor. Use plywood, hardboard or appliance lifts if necessary. Use protective castors/castor cups or felt pads on the legs of furniture to prevent damage to the flooring.

Clean Up

Use clean white terry cloth towels with mineral spirits to clean as you go. It is easy and convenient to use. Adhesive that has cured on the surface of the flooring can be difficult to remove.

MAINTENANCE

Mohawk Engineered Hardwood Flooring with HDF Core is very easily maintained. No wax, no mess. Simply use Mohawk FloorCare Essentials Hardwood & Laminate floor cleaner and a terry cloth mop.

STEP ONE: Sweep your floor to remove any particles that could scratch your floor.

Warning: Vacuums with a beater bar or power rotary brush head can damage a hardwood floor and should never be used.

STEP TWO: Apply FloorCare Essentials to the terry cloth flooring mop, **not** to the floor!

STEP THREE: Use a back and forth motion with the mop. When the terry cloth cover becomes soiled, simply replace it with a clean one. Cleaning the floor with a soiled cover could cause streaking. The covers are re-usable so simply throw the cover in the wash and dry it as you would any towel. **DO NOT USE FABRIC SOFTENER** when washing terry cloth covers.

Tips & Warnings:

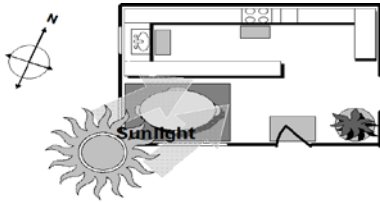
- Sweep regularly, with a soft bristle broom.
- Remove spills promptly and use Mohawk's FloorCare Essentials Hardwood & Laminate or Columbia Hardwood Floor cleaners and a clean white cloth.
- Use felt protectors under heavy pieces of furniture and chairs.
- Use protective mats at all exterior entrances. Do not use mats or area rug cushions constructed of rubber or PVC. Instead use urethane backed products.
- Spiked heels or shoes in need of repair can severely damage your floor.

- Replace hard plastic, metal casters or wheels on furniture with soft rubber casters or by using a protective mat under the casters.
- Never wet or damp mop your wood floors. Water can cause damage to wood flooring.
- Never use oil soaps, wax, liquid or other household products to clean your floor.
- The sun's UV rays can change the color of your floor.
- Keep animal nails trimmed.
- Protect your floor when using a dolly for moving furniture or appliances. Never slide or roll heavy furniture or appliances across the floor.
- Never use steam cleaners on your wood floors. This will force moisture into the wood and cause damage to your flooring.
- Use protective window coverings to protect hardwood floors from excessive heat during periods of direct sunlight.

Exterior and interior walk off mats should be used at all exterior entrance to avoid exposure to moisture from tracking during periods of inclement weather. Walk off mats should be routinely maintained to avoid becoming a soil source. Do not use mats or under mat cushions constructed of rubber or PVC. Instead use urethane backed products.

Wood Flooring reacts to sunlight

Wood Flooring contains certain types of acids in their cellular structure. With exposure to sunlight these acids begin to amber. The color change is referred to as patina. The flooring will reach its own natural warmth and patina level and stop ambering. The amount of patina is directly related to the species, amount of acids and the level of sunlight. The entire floor will reach the same patina level over time. This is often noticed after a rug is removed and the floor is noticeably different in color underneath. If you remove the rug and expose the entire floor to the same amount of light, it will even out over time and become uniform in color.



Hardwood flooring will scratch and dent

With today's active lifestyles it is important to note that hardwood flooring can, and will, scratch and dent. See Tips & Warnings for protecting your floor. In order to prevent excessive abuse the use of strategically placed mats and area rugs as well as floor protectors on chair and table legs are a must.

Installer should record moisture content readings in the following space and leave with the owner as part of their records.

Wood Subfloor	
Moisture Content:	_____ % Moisture Content of Subfloor
	_____ % Moisture Content of Hardwood
	_____ % Difference between subfloor & flooring
Concrete Subfloor	
Test Method Used:	_____ Calcium Chloride (ASTM F1869)
	_____ RH (ASTM F2170-02)1869
	_____ Electronic Meter (Tramex or equivalent)
Moisture Readings:	