

**Coastal Woodlands
3/8" & 1/2" Floating Floors
For Floating or Glue-Down Installations**

INSTALLER/OWNER RESPONSIBILITY

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

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

TOOLS & ACCESSORIES NEEDED

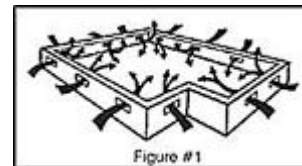
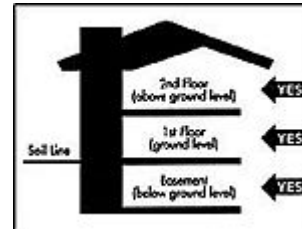
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|---|---|
| • Broom | • Bruce Acrylic Filler |
| • Tape Measure | • Hammer |
| • Chalk line & chalk | • Recommended Adhesives (EverSeal Joint Adhesive & Connection PR+ or Equalizer Hardwood Flooring Adhesive) & Adhesive Cleaner |
| • Hand saw or jamb saw | |
| • Electric power saw | • Bruce Dura-Luster Cleaner |
| • Moisture meter (wood, concrete or both) | • Recommended trowel |
| • Square | • Safety glasses |
| • Installation bar | • 8-penny nails |

- Tapping Block (floating)
- Wedges
- 3M 2090 Blue Mask Tape
- Tapping Block (glue-down)

PRE-INSTALLATION PROCEDURES

Job Site Inspection

- The building should be closed in with all outside doors and windows in place. All concrete, masonry, framing members, drywall, paint and other "wet" work should be thoroughly dry.
- The wall coverings should be in place and the painting completed except for the final coat on the base molding. When possible, delay installation of base molding until flooring installation is complete.
- Exterior grading should be complete with surface drainage directing water away from the building. All gutters and downspouts should be in place.
- Floating floors may be installed on, above or below grade level. Do not install in full bathrooms.
- Basements and crawl spaces must be dry and well ventilated.
- Crawl space must be a minimum of 24" (600 mm) from the ground to underside of joists. A ground cover of 6-8 mil black polyethylene film is essential as a vapor barrier with joints lapped six inches and taped. The crawl space should have perimeter venting equal to a minimum of 1.5% of the crawl space square footage. These vents should be properly located to foster cross ventilation (see figure #1).
- Subfloor must be checked for moisture content using the appropriate testing method.
- Permanent air conditioning and heating systems should be in place and operational. The installation site should have a consistent room temperature of 60-75° F and humidity of 35-55% for 14 days prior, during and until occupied, to allow for proper acclimation



STORAGE AND HANDLING

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

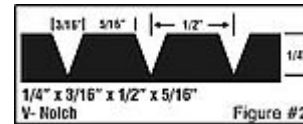
INSTALLATION APPLICATIONS

FLOATING INSTALLATION

- Use Comfort Guard floating floor underlayment (shown in header on page 1).
- Use EverSeal joint adhesive (shown in header on page 1).

GLUE-DOWN INSTALLATION

- Use recommended trowel (figure #2) to get required spread rate and ridging height.
- Use EverSeal joint adhesive and Connection PR+ or Equalizer hardwood flooring adhesive (shown in header on page 1).



SUBFLOOR REQUIREMENTS

SUBFLOORS MUST BE:

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

RECOMMENDED SUBFLOOR SURFACES

- **PREFERRED:** 3/4" (19 mm) CDX grade plywood
- 3/4" (23/32") OSB PS2 rated underlayment
- **MINIMUM:** 5/8" CDX grade plywood
- 3/4" chip, waferboard, particleboard
- Radiant heated subfloors

CONCRETE SLABS

Floating floors can be glued directly to concrete or floated over them. In glue-down applications, do not use a concrete sealer nor install over one. Surface preparation using mechanical methods such as sanding or scouring with open coat paper or a titanium disk is preferred. The concrete must be of high compressive strength. All concrete subfloors should

preferred. The concrete must be of high compressive strength. All concrete subfloors should be tested for moisture content. Visual checks are not reliable. Acceptable test methods for subfloor moisture content include:

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

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



Figure #3

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

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

ACOUSTIC CONCRETE

Acoustic concrete normally contains large quantities of gypsum that may inhibit the adhesive's capability to properly bond. For glue-down applications, acoustic concrete must be primed with the concrete manufacturers recommended primer/surface hardener.

WOOD SUBFLOORS & WOOD STRUCTURAL PANEL SUBFLOORS

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

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

Particleboard must be a minimum 40-LB density, stamped underlayment grade and ¾" thick.

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

Optimum performance of hardwood floor covering products occurs when there is no horizontal or vertical movement of the subfloor. The MINIMUM subfloor recommendations described above for 16" O/C joist spacing. The thicker, PREFERRED subfloor recommendations described above will allow 19.2" O/C joist spacing if the joist manufacturer's recommended span is not exceeded. Spacing in excess of 19.2" O/C does not offer optimum results. Install flooring

perpendicular to the floor joists when possible. Installations should not be made parallel to the floor joists or on joist spacing that exceeds 19.2" O/C unless the subfloor has been properly stiffened. Stiffening may require the addition of a second layer of subflooring material to bring the overall thickness to at least 1-1/8".

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

RESILIENT TILE, RESILIENT SHEET VINYL & CORK FLOORING

If the tiles or sheet goods are well bonded, the flooring can be glued directly to the surface. Clean the surface thoroughly with a good quality household detergent. De-gloss flooring as necessary to create a good adhesive bond using an abrasive pad. If vinyl appears to have a coating of wax or other maintenance materials, it must be removed with the appropriate floor stripper. Allow ample drying time. (Note: Do not sand any resilient products for they may contain asbestos fibers, which may be harmful.) Do not direct glue to floors that exceed two layers; install as a floating system only under these circumstances. Cork floors must have all sealers and surface treatments removed before installation begins if a direct glue-down application is preferred.

CERAMIC, TERRAZZO, SLATE & MARBLE

All grout joints and broken corners that exceed 1" must be filled with a cementitious leveling compound mixed with Latex additive of a glue-down application is preferred. The surface should be cleaned and abraded to create a good bonding surface for the adhesive. Loose tiles must be re-adhered to the subfloor or filled as above for both glue-down and floated applications.

CORK (ACOUSTIC)

Floating floors can be glued or floated directly over full-spread, permanently bonded acoustic cork. The cork should have a density of no less than 11.4 lb./cubic foot and no more than 13 lb./cubic foot. The cork, in general, should be pure cork combined with a polyurethane binder. Cork thickness is to be no more than 1/4" (6 mm). Install cork in accordance with manufacturer's recommendations. DO NOT use cushion underlayment when floating over these surfaces.

SUBFLOORS WITH RADIANT HEAT

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

DOORWAY AND WALL PREPARATION

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



GENERAL INSTALLATION TIPS

- Floor should be installed from several cartons at the same time to ensure good color and shade mixture.
- Be attentive to staggering the ends of boards in adjacent rows at least 16" when possible (figure #5). This will help ensure a more favorable overall appearance of the floor.
- DO install from closed/sealed cartons. DO NOT remove materials from their sealed container prior to installation.
- DO tighten panels by tapping against the recommended tapping block with a hammer. DO NOT tighten panels by striking directly with the tapping block or a hammer.
- DO glue all joints with EverSeal when using a floating system. The glue MUST be applied to the top of the tongue, DO NOT apply adhesive in the groove
- DO use a starter board that is adequately fastened to a straight starting line.
- DO use Comfort Guard underlayment on all floating floors over subfloors that require it.
- DO Not use short tapping blocks that can damage the edge. Do Not use lightweight wooden tapping blocks. Do Not use grooved tapping blocks.
- DO NOT use laminate straps to tighten the flooring panels.

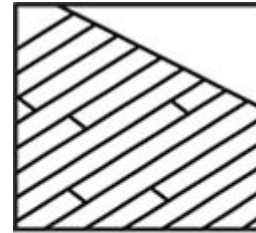


Figure #5
PREFERRED
Alignment

STEP 1: ESTABLISH A STARTING POINT

- Installation parallel to the longest wall is recommended for best visual effects, however, the floor should be installed perpendicular to the flooring joists unless subfloor has been reinforced to reduce subfloor sagging. Find appropriate subfloor from "Subfloor Type" section in this instruction manual.
- When possible, always begin layout or installation from an outside wall, as these are normally the straightest.
- Pre-plan the floor by counting the number of planks (in width) that it will take to complete the floor. Avoid finishing out with a rip narrower than 2". Plan to start the first row with a partial board, ripping it to the necessary width to avoid a narrow rip on the final wall.
- In at least two places 12"-16" from the corner, measure out equal distance from the starting wall (figure #6) and snap a chalk line. The chalk should be of a bright color so that it is visible through the underlayment or adhesive. If a partial, ripped board is required (as above) it can be installed after the balance of the flooring has been

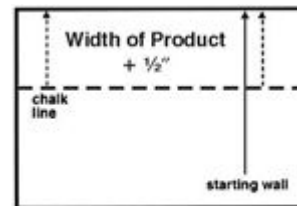


Figure #6

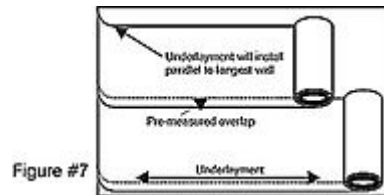
completed. Adjust the starting line to allow for the width of the board plus 1/2" for expansion. Ascertain that the wall is straight. If it is not, scribe the first row (figure #9) to allow for irregularities.

- Install a starter board on the inside edge of the chalk line aligned to create a straight edge to work against (figure 8A). Attach the starter board to the subfloor using nails appropriate to the subflooring materials. When installing using the floating system install the cushion underlayment BEFORE installing the starter strip.

FLOATING FLOOR INSTALLATION

STEP 2: INSTALLING THE UNDERLAYMENT

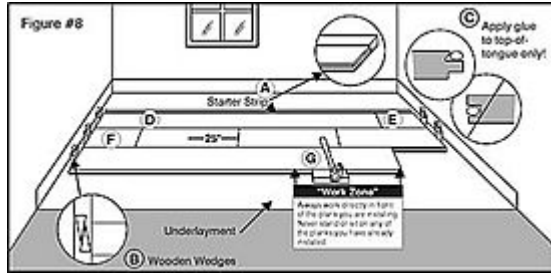
- Roll the underlayment in the same direction that the wood flooring is to be installed.
- Extend the underlayment a few inches up the wall. Excess will be trimmed off prior to installing trim or moldings.
- Firmly bond the sheets together to cover the entire floor. The floating floor underlayment already has double sided tape for ease of taping the pre-cut overlapping seams (figure #7).
- Always allow 1/2" expansion around all vertical objects.



STEP 3: INSTALLING THE FLOOR

- Select your first board; apply a continuous 1/8" glue bead to the top of the tongue on "the end of the board." Do not apply glue to the side-tongue at this time (Item C, figure #8).
- Lay the first board (Item D, figure #8) with the grooves facing the edge of the starter board and the left wall of the room. (Always leave expansion space).
- Complete the first row. Cut the last board allowing for 1/2" clearance between the wall

the joints from the ends. Remove excess adhesive with a damp towel.



- The final row of boards, in most installations, will need to be ripped lengthwise to fit. The cut has to compensate for uneven walls and the expansion clearance or gap necessary between the wall and the flooring. First lay up the last row, face-up over the top of the last row permanently installed. Now using a stub of a board and a pencil, scribe the proper guide lines and cut (figure #9).
- Use an installation bar to pull in the last row (figure #10) and install wedges.
- Remove the starter board and install the final row using the installation bar as above.
- Allow the completed floor to rest undisturbed (no foot traffic) for a minimum of 8 hours before removing the wedges.
- Before leaving the job site, check the floor under proper lighting for any trace of glue on the surface. Use Bruce Adhesive Cleaner to remove stubborn glue. Install molding the following day. Refer to the floor care and maintenance section for maintaining your wood flooring.



Figure #9
(Scribing)

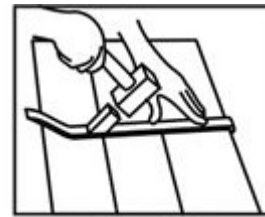


Figure #10
(Tightening floor with installation bar)

GLUE-DOWN INSTALLATION

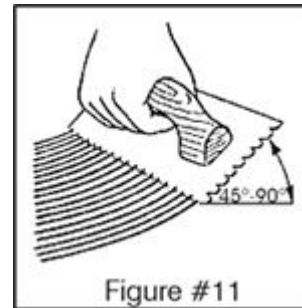
- Maximum Adhesive Working Times
- Equalizer Urethane Adhesive - 60 minutes (Always read container label before proceeding)
- Connection PR+ Polymeric Resin Adhesive - 90 minutes (Always read container label before proceeding)
- Open times and curing times of ALL adhesives vary dependant upon subfloor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

on page 1) with the recommended trowel (figure #2) in an area that can be covered in 60-90 minutes. Polymeric resin adhesives should be rolled every two hours and at the end of the day. If a urethane adhesive is to be rolled, do not do so until the adhesive has cured for two hours.

NOTE: Avoid installing from the surface of the flooring. If necessary distribute weight using a kneeler board. Always refer to specific adhesive instructions on the adhesive label. Comfort Guard underlayment will not be used in this application.

STEP 2: SPREAD THE ADHESIVE

- Hold trowel at a minimum 45° angle (figure #11) firmly against the subfloor to obtain a 50-60 sq. ft. per gallon spread rate. The trowel will leave ridges of adhesive and very little adhesive between the ridges. This will allow you to still see the chalk lines between the ridges and provide the recommended spread rate. If the adhesive skins over and fails to transfer, remove and spread new adhesive to achieve proper bonding to the subfloor. WORKING TIME WILL VARY DEPENDING ON JOB SITE CONDITIONS.



- During the installation occasionally remove a piece of flooring from the subfloor and inspect the back for proper adhesive transfer. Adequate adhesive transfer is necessary to ensure sufficient holding strength.
- For additional application instructions, follow the recommendations on the adhesive container.
- When not in use, keep the adhesive container tightly closed to prevent thickening. Thickening will cause difficulty in spreading the adhesive.
- Proper ventilation within the room must be provided. An electric fan is helpful.
- If the floor is to be covered, use a breathable material such as cardboard. Do not cover with plastic.

NOTE: Clean adhesive from the surface of the floor frequently using the recommended adhesive cleaner. Do not use blue tape before adhesive is removed. Use a clean towel, changed frequently to prevent haze and adhesive residue.

STEP 3: INSTALLATION OF FLOORING

- Use the straightest boards available for the first two rows. The first row of planks should be installed with the edge of the groove lined up against the starter board. The tongue should be facing the starting wall. The first row must be aligned and seated in the adhesive as all additional rows will be pushed back to this original row.
- Apply a bead of EverSeal to all of the end tongues prior to installing into the adhesive. Gluing of the edges is not necessary in glue-down applications.
- Use wedges against the starting wall to prevent movement. Tighten or loosen as necessary to allow for variations in the wall, always keeping planks aligned with the chalk line.
- Avoid working from the surface of the newly installed floor to prevent scotting. Use a kneeler board if necessary to distribute weight.

- When installing planks, engage the end-joint first as close to the side (long) tongue and groove as possible and then slide together tightly to engage side (long) joint tongue and groove. To avoid adhesive bleed-through and memory pull-back, avoid sliding pieces through the adhesive as much as possible when placing them in position.
- Check for a tight fit between all edges and ends of each plank. End-joints of adjacent rows should be staggered 16" when possible to ensure a more favorable overall appearance.
- Use a glue-down tapping block and a hammer to tighten all joints.
- To eliminate minor shifting or gapping of product during installation, use 3M 2090 Blue Mask Tape to hold the planks together. After installation is complete, remove all the 3M 2090 Blue Mask Tape from surface of newly installed flooring. Do not let tape remain on flooring longer than 24 hours. Avoid use of masking tape which leaves an adhesive residue.
- Be sure not to spread adhesive too far ahead of your work area.
- Complete the installation using this same technique for the remainder of the floor.
- Remove the starter board and install the final row as above.
- Avoid heavy foot traffic on the flooring for at least 24 hours. Lift the furniture or fixtures back into place after 24 hours.

INSTALLERS - ADVISE YOUR CUSTOMER OF THE FOLLOWING

SEASONS: HEATING AND NON-HEATING

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

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

FLOOR REPAIR

Minor damage can be repaired with the Bruce Touch-Up Kit or Acrylic Filler. Major damage will require board replacement, which can be done by a professional floor installer.

ALL INSTALLATIONS

STEP 4: COMPLETING THE JOB

- Clean floor with the Bruce Dura-Luster Cleaner. (See adhesive container for specific information)
- Re-install any transition pieces that may be needed, such as Reducer Strips, T-moldings, or Thresholds. The products are available pre-finished to blend with your

flooring. (See moldings below)

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

MOLDINGS

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