It is important to work out of several cartons to mix the patterns when installing this select flooring product to enhance the beauty of nature without having duplicate planks beside each other. Knockout offers the natural colors and texture variations that are abundantly available in nature to give a beautiful finished installation within the home. Knockout should never be installed outdoors, or in areas that will not constantly stay between 65° F and 85° F.

BEFORE YOU BEGIN INSTALLATION, it is extremely important that subfloor preparations are performed as follows:

**SUBFLOOR**

1. Subfloor must be level, flat, and structurally sound. The subfloor levelness must not exceed 3/16” level within a 10’ span in all directions. It is suggested to use either a level or a straightedge. Grind high spots down and level low spots with a water resistant non-shrinking Portland leveling compound. Be certain the floor joists do not impede the floor flatness as required. Unevenness can cause problems with the integrity of the locking system and cause the system to disengage.

2. Concrete substrates must be fully cured before installation for a minimum of 30 days or more. Concrete subfloors must be dry, smooth, and free from dust, solvent, wax, asphalt sealing compounds, and other materials that may compromise the backing of the flooring.

3. Underlayment with cushioning properties may not be used under Knockout under any circumstances. While not required, it is acceptable to use LVT approved acoustic mitigation underlayment according to the manufacturer’s recommendations and instructions.

4. It is the installer’s responsibility to be certain the subfloor guidelines are followed before installation begins.

Knockout may be installed above, on, or below grade over ACCEPTABLE SUBFLOOR TYPES:

1. Concrete slab
2. APA underlayment grade plywood and OSB
3. Properly prepared gypsum and lightweight cement
4. Underlayment grade particleboard
5. OSB minimum ¾”
6. Existing hardwood floor
7. Single layer, well bonded resilient tile and sheet vinyl (not cushion back)
8. Radiant heated subfloors that do not exceed 85° F
9. Terrazzo (properly prepared with all waxes and surface finishes removed)

**SUBFLOOR PREPARATION**

Substrate must be prepared per ASTM F710-05 standards including, but not limited to the following:

1. Concrete floors must be dry, clean, smooth and structurally sound. They shall be free of any
foreign materials that might prevent adhesive bond, including dust, dirt, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, incompatible sealers, fire-retardant chemicals, fungicides, release agents, alkaline salts, excessive carbonation, laitance, mold, mildew, and curing, sealing, hardening or parting compounds.

2. Fill all surface cracks, grooves, depressions, control joints and non-moving joints with moisture resistant patching and self-leveling compounds, allow to fully cure and correct high spots before applying adhesive.

3. The substrate, adhesive and flooring must be acclimated in an enclosed building with the HVAC operational between 65-85°F (15-35°C), and between 30-65% relative humidity, for at least 72 hours before, during and after the installation.

4. When installing over radiant heated subfloors, turn the heat off for 24 hours before, during and after installation. Failure to turn the heat off may result in shortened working time of the adhesive. When turning radiant heat back on, raise it incrementally, not to exceed a change of more than 5 degrees per hour to a maximum of 85°.

**GENERAL GUIDELINES**

**ACCLIMATION:** The product must be acclimated for a minimum of 24 hours prior to installation. HVAC system for the installation must be operational and turned on to provide a temperature of 65-85°F. Separate boxes into stacks, no more than 3 boxes high, and spread throughout the installation area.

**DIRECT SUNLIGHT:** The installed flooring should be protected from excessive exposure to direct sunlight.

**CRAWL SPACE:** The bottom of wooden subfloor joists must be a minimum of 18” above ground surface. Minimum 6 mil black poly sheeting must be in place covering 100% of the ground and overlapped a minimum of 6” at seams acting as a moisture barrier. The poly sheeting must run up the walls no less than 6”. Air vents must be open on all sides with no less than 1.5% air vent opening compared to the total crawlspace area.

**RADIANT HEAT:** Only embedded radiant heat is recommended. Temperature should be reduced three days before installation to no more than 65°F. After installation, slowly increase the temperature a maximum of 5°F per 24 hour period. Temperatures should never exceed 85°F. **Warning:** Heating mats are not recommended for LVT floors.

**INSTALLATION TOOLS**

1. Tape measure
2. Pencil
3. Chalk line
4. Utility knife
5. 75-100-pound roller
6. Taylor™ Dynamic® Adhesive
7. Trowel
   a. 1/16” x 1/16” x 1/16” Square Notch for porous floors
   b. 1/16” x 1/32” x 1/32” U Notch for non-porous floors

IMPORTANT REQUIREMENTS BEFORE INSTALLING:
• Be certain the subfloor is sound, flat, dry, and level. Floor levelness should not exceed 3/16” in a 10’ radius span. Using a 6’ or longer level or straightedge, slide along the subfloor looking for low and high areas, which must be either ground down or filled with an approved Portland based leveling compound. Eastern Flooring Products® is not responsible for flooring failures resulting from unsatisfactory subfloors.
• Wood subfloors must be secure making sure it is either nailed or screwed every 6” along the joists to avoid squeaking.
• Eastern Flooring Products® recommends, crawl spaces have a black 6 to 20 mil thick moisture barrier properly installed.
• Do Not install Knockout where it will be in direct sunlight for extended periods of time.
• Eastern Flooring Products® cannot be responsible for installing planks with visible defects.
• Existing floors such as resilient tile and non-cushioned sheet vinyl must be well bonded to the subfloor. Do not sand existing vinyl floors, as they may contain asbestos.

INSTALLATION INSTRUCTIONS

1. Measure and designate the middle of each wall and define the center of the room by intersecting two chalk lines.
2. Spread adhesive using the required tools (mentioned above)
3. Install flooring per the instructions below dependent on the desired application method.
   a. Pressure Sensitive Adhesive (porous and non-porous substrates)
      i. Wait 30-60 minutes after adhesive is spread to allow it to dry (adhesive will darken to visually cue installer).
      ii. Working time is approximately 12 hours under acceptable temperature and humidity conditions.
   b. Semi-wet set (porous substrates only)
      i. Wait 20-30 minutes after adhesive is spread to allow it to skin over
ii. Working time is approximately 20-30 minutes under acceptable temperature and humidity conditions.

4. Thoroughly inspect each plank prior to installing. Eastern Flooring Products® is not responsible for planks installed with visual defects.

5. The first row: Begin installation in the center of the room for best results. Position the first plank with its sides adjacent to the two intersecting lines in the orientation of your choice.

6. Lay each adjacent tile, ensuring a tight fit to the previous tile, and strict adherence to the chalked line to maintain a straight installation.

7. The second and subsequent rows: Make sure that each plank has a minimum of 8” between end joints and no plank is less than 6” when installed.

8. Roll and cross roll floor with a 75-100-pound roller at the end of installation to ensure proper transfer of adhesive.

9. Install trim over any exposed subfloor or unsightly cuts adjacent to vertical structures. Do not attach the trim to the installed LVT.

**MOLDING INSTALLATION**

1. Eastern Flooring Products® recommends using Eastern Vinyl Stair Caps on stairs. Matching stair caps and risers can be purchase from your source for Knockout.

2. All molding should be dry fit prior to flooring installation to ensure proper fit, finish, and match.

**AFTER INSTALLATION**

1. Do not wet mop the floor for 72 hours after installation is complete.

2. Furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.

3. Avoid excessive exposure to direct sunlight.

4. Indoor temperatures should always stay between 65° and 85° F.

5. Oil or petroleum-based products can result in surface staining. Do not track asphalt-driveway sealer or other oil based products on to the flooring. Use protected walk-off mats that are non-staining. Rubber may discolor the floor.

6. Furniture should be equipped with felt pads to avoid scratching the floor. Heavy furniture and appliances should be equipped with non-staining large surface floor protectors. Furniture with wheeled castors should only have wide castors no less than 4” in diameter. Office areas must have a protective mat under chairs. DO NOT use ball-type castors.
7. Moldings from another flooring segment must not be nailed through the planks.
8. Use walk-off mats at entrances to prevent dirt and grit from being tracked on to the floor.
9. Sweep or vacuum the floor regularly to remove loose dirt. DO NOT use vacuums that use a beater bar or turn beater bar off.
10. If you suspect a problem with your floor, do not walk nor roll on that area prior to reporting it to the point of purchase. Any problem with the floor that you discover must be reported to the point of purchase within 48 hours of discovery. All issues that remain unresolved must be reported to the manufacturer within 14 days of discovery.
11. Damp mop as needed using clean water and a diluted neutral-PH floor cleaner. DO NOT use detergents, abrasive cleaners or “mop and shine” products. Use caution as with all smooth surface floors may become slippery when wet. Allow time for floor to dry after cleaning.

**WARNING:** Existing resilient floor coverings and black asphalt adhesive may contain asbestos. Improper removal procedures could release asbestos fibers into the air. Asbestos fibers, when inhaled, could cause serious bodily harm. Do not sand or dry scrape these materials. If removal of existing floor coverings is necessary, be certain that all precautions are taken and proper procedures are followed. For information regarding proper removal procedures in the U.S.A., please consult the Resilient Floor Covering Institute (966 Hungerford Drive, Suite 12-B, Rockville, MD 20850) for a pamphlet, “Recommended Work Practices for the Removal of Resilient Floor Coverings.”