Commercial Rigid Mineral Core Inline Level Edge Installation

I. GENERAL INFORMATION:

These installation guidelines apply to mineral core flooring products only. All instructions and recommendations should be followed for a satisfactory installation.

- Acclimation of material prior to installation is not required, however, the floor covering should be installed in a climate controlled environment with an ambient temperature range between 55° - 85°F (13°-29°C) or average temperature of 70°F (21.1°C).
- Avoid exposure to direct sunlight for prolonged periods, doing so may result in discoloration. During peak sunlight hours, the use of the drapes or blinds is recommended.
- Regardless of new construction or remodeling projects, keep flooring stored in rooms that are not being worked in and only install product after all other trades have completed work that could damage the flooring.
- To minimize shade variation, mix and install planks from several cartons.
- Inspect all planks for damage before installing. If you have any concerns about the product fit or finish, call Shaw Information Services at 1-800-441-7429. Claims will not be accepted for flooring that has been cut to size and/or installed.
- Use cementitious patching and leveling compounds that meet or exceed maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.
- For cracks or saw cuts deeper than 1", follow the preparation and application instructions for QuikFill. QuikFill is a 2-part urethane treatment that prevents future damage from moisture penetrating to the surface of the slab that may damage or breakdown adhesives or unapproved patching compounds.
- Required perimeter expansion is ¼" around all vertical surfaces.
- Cut outside whenever possible to minimize airborne contaminants that may become embedded in the grain.
- A masonry blade is required to keep from fraying the edges.
- When cutting inside, dust collection bags should be clean and in place.
- Always wear adequate eye protection and safety masks.

Tools: Tape Measure, Utility Knife, Saw (masonry blades are required), Diablo HardieBlade, Polycrystalline Diamond Jigsaw Blade, Guillotine Cutter, Tapping Block or Rubber Mallet, Pull Bar, ¼" Spacers, T-Square, Safety Glasses, Broom or Vacuum and, if necessary, tools for subfloor repair

II. SUBFLOOR INFORMATION

All subfloors must be clean, flat, dry and structurally sound. The correct preparation of the subfloor is a major part of a successful installation. Subfloor must be flat – 3/16" in 10' or 1/8" in 6'.

If a chemical abatement has been performed, use Surface Prep EXT; to remove any residual chemicals present. Once Surface Prep EXT has been properly cleaned and removed, apply one coat of MRP for additional protection. Adhesive removal through the use of solvents or citrus adhesive removers is not recommended. Solvent residue left in or on the subfloor may affect the new adhesive and floor covering.

WARNING! DO NOT SAND, DRY SWEEP, DRY SCRAPE, DRILL, SAW, BEAD BLAST OR MECHANICALLY CHIP OR PULVERISE EXISTING RESILIENT FLOORING, BACKING,LINING FELT,ASPHALTIC CUT BACK ADHESIVES OR OTHER ADHESIVES.

These products may contain either asbestos fibers and/or crystallie silica. Avoid creating dust. Inhalation of such 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. For current information go to www.rfci.com

A. WOOD SUBFLOORS

Do not install material over wood subfloors that lay directly on concrete or over dimensional lumber or plywood used over concrete. Refer to ASTM F1482 for panel underlayment recommendations.

1. Do not apply sheet plastic over wood subfloors.
2. 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 is to 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. Where necessary, local regulations prevail.
3. DO NOT install over sleeper construction subfloors or wood subfloors applied directly over concrete.
4. All other subfloors - Plywood, OSB, chipboard, wafer board, etc. must be structurally sound and must be installed following their manufacturer’s recommendations. Local building codes may only establish minimum requirements of the flooring system and may not provide adequate rigidity and support for proper installation and performance. If needed, add an additional layer of APA rated underlayment, fasten and secure according to the underlayment manufacturer’s recommendations.
5. Mineral core flooring is not recommended for direct glue down applications over fire-retardant treated plywood or preservative treated plywood. An additional layer of APA rated 1/4" thick underlayment should be installed.

B. CONCRETE SUBFLOORS

1. Floors shall be smooth, permanently dry, clean, and free of all foreign material such as dust, wax, solvents, paint, grease, oils, and old adhesive residue. The surface must be hard and dense, and free from powder or flaking.

2. Concrete slabs must be dry with no visible moisture.
3. Required Moisture Testing - maximum moisture level per ASTM 1869 CaCl is 8 lbs. and ASTM 2170 In-situ Relative Humidity 90% per 1000 sq.ft. in 24 hours. If moisture test results exceed these limits, we recommend use of a moisture remediation system.
4. Do not install over concrete with a history of high moisture or hydrostatic conditions.
5. pH level of concrete should be between 7-10
6. The final responsibility for determining if the concrete is dry enough for installation of the flooring lies with the floor covering installer.

Radiant Heat: Radiant-heated subfloor systems can be concrete, wood or a combination of both. The heating systems components must have a minimum of 1/2" separation from the flooring product. The system must be on and operational for at least 2 weeks prior to installation to reduce residual moisture. Three days prior to installation lower the temperature to 65 degrees, after installation gradually increase the temperature in increments of 5° F to avoid overheating. Maximum operating temperature should never exceed 85°F. Use of an in-floor temperature sensor is recommended to avoid overheating. Contact the manufacturer of your radiant heating system for further recommendations.

- Electric Radiant Floors: consist of electric cables (or) mats of electrically conductive materials mounted on the subfloor below the floor covering. Mesh systems are typically embedded in thin-set. When embedding the system components, use cementitious patching and leveling compounds that meet or exceed Shaw's maximum moisture level and pH requirements. Use of gypsum-based patching and/or leveling compounds which contain Portland or high alumina cement and meet or exceed the compressive strength of 3,000 psi are acceptable.

- Hydronic Radiant Floors: pump heated water from a boiler through tubing laid in a pattern under the flooring. Typically installed in channels under a wooden subfloor (or) imbedded in concrete slabs.

WARNING! Drilling, sawing, sanding or machining wood products can expose you to wood dust a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to https://www.p65warnings.ca.gov/products/wood-dust

C. EXISTING FLOOR COVERINGS

- Mineral core flooring can be installed over most existing hard–surface floor coverings, provided that the existing floor surface is clean, flat dry and structurally sound.
- Existing sheet vinyl floors should not be heavily cushioned and not exceed more than one layer in thickness. Soft underlayment and soft substrates will compromise the product's locking ability as well as diminish its indentation resistance.
- **Ceramic tile and terrazzo:** All wax and sealers must be removed with an appropriate cleaner/stripper. Ceramic tile and terrazzo should be abraded to allow for proper adhesion. Check for loose tiles by tapping and re-adhere. Fill grout lines with a cementitious latex fortified leveling compound.
- Installation is NOT allowed over any type of carpet.
- Do NOT install over wood floors adhered to concrete.
- Never use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor may affect the new floor covering.

RAISED ACCESS PANELS

- Must be stable, level, flat, free and clean of existing adhesives
- 24" x 24" panels are recommended.
- Lippage (variation of height) between panels must not exceed 0.0295" (0.75 mm)
- Gaps between panels must not exceed 0.039" (1mm)
- There should be no deflection of the individual panels – Concave less than 0.0295" (0.75 mm) Flatness 1/8" in 10'
- Stagger the flooring tiles/planks to overlap the access panels
- Telegraphing of access panel seams may be visible and is not considered a product defect nor warranted by the flooring manufacturer.
- If needed, overlay the panels with a 1/4" (6 mm) plywood and properly fasten to the access panels prior to the installation of the floorcovering. Prior to underlayment installation, repair any loose or unstable panels. Use the appropriate installation methods for the product

III. LAYOUT AND INSTALLATION:

Getting Started

1. Select a starter wall. An outside wall is best: it's most likely to be straight and square with the room. Measure out from this wall, at each end, the width of two planks including the tongue plus the space needed (1/4") for expansion.

2. Snap a chalk line from these points, parallel to that wall.

3. Prior to installing the flooring, secure a straight edge inside the chalk line to act as a guide and to prevent the row of planks from shifting during installation. The straightedge could be a straight piece of lumber or piece of flooring. Alternatively, the first row can be face-nailed with finishing nails into the wood subfloor or sprig nailed into a concrete subfloor.

Spreading the Adhesive

The recommended adhesive is 3 In 1 Ultra or comparable adhesive using a 1/8'' x 1/8'' x 1/8'' U-notch trowel.

Using the proper trowel, hold the trowel at a 45° angle to ensure proper spread rate of adhesive. Apply pressure to allow the trowel to leave ridges of adhesive on the substrate with little adhesive left between the ridges. This will help to achieve the proper spread rate of the adhesive. Temperature and air flow across the adhesive can have an effect on the open time of the adhesive. 3X (or urethanes) will have a longer open time in areas of low humidity and will have a shorter open time in areas of high humidity. (See Adhesive label for further information).

Installing the Floor

4. Spread adhesive from the chalk line/straightedge out to approximately the width of two planks. Install the first row of starter planks along the chalk line/straightedge and secure into position with the tongue facing

the starter wall. NOTE: Proper alignment is critical. Misaligned starter rows can cause side and end gaps to appear in proceeding rows of flooring. When you have the starter rows complete, you can begin the next row.

5. When you are certain the first two starter rows are straight and secure, spread adhesive 2 to 3 feet wide across the length of the room. As a general rule, never spread more adhesive than can be covered in 30 to 45 minutes. If the adhesive has skinned over, remove dried adhesive and trowel new adhesive.

6. Continue to install planks and push them into place. Place the tongue of the board into the grooves of installed boards and press into the adhesive. As you continue working across the floor try to maintain a six-inch minimum space between end joints. Randomly install different lengths to avoid a patterned appearance

NOTE: Never strike a rubber mallet or hammer directly on the flooring to engage the tongue-and-groove. This practice can damage the flooring and/or the finish.

7. Remove the adhesive from the surface of the installed flooring as you work – this will help to save time. A damp rag with water or mineral spirits will remove adhesive. Frequently change towels to avoid leaving a haze on the flooring surface. DO NOT use water to remove urethane adhesives from the finish.

8. As you approach the end wall it may be necessary to cut the width of the last row – be sure to allow for the expansion space along the end wall. Once the final cuts are made, set planks into place.

9. After the floor is complete, remove the straight edge and glue down the first two boards.

10. Restrict foot traffic for a minimum of 6-8 hours and wait 24 hours before permitting moving of furniture onto the floor.

11. Clean any wet adhesive from the flooring with a lightly dampened clean cloth. If the adhesive has dried, use mineral spirits on a clean cloth. For Urethane adhesive use the recommended urethane adhesive remover.

12. Roll and cross-roll floor with a 100-150 lbs. (45-70 kg) roller at the end of the installation to ensure proper transfer of adhesive.

STARTING TIP:

1. Measure the width of two plank or tiles off the starting wall adding ¼" for expansion and place a mark on both ends to chalk the first line. After the first line is marked, measure over 1" and chalk a second line.

2. Measure from the first line chalked off the wall two tiles or 3 planks wide and chalk a third line (adhesive will be spread in between the second and third chalk lines.

3. Using the same flooring material, cut 12" scrap starter blocks and place double side tape on the bottom side (these will be used on the first row to secure alignment).

4. Spread adhesive between the second and third chalked lines.

5. Place the first and second row of plank or tiles into the adhesive aligning the length side tongue along the

first chalk line (the length side groove should be facing away from the wall). Then using the starter blocks engage the groove into the tongue of the first row across the end joints and at both ends of the first row. Continue installing the rest of the flooring to cover adhesive.

6. Roll section with a 100lbs roller and continue to install flooring working off it. If tape is needed, it is recommended to use blue painter's tape. Cautiously remove tape with 24 hours of installation.

7. Clean and adhesive residue with a clean rag and Denatured Alcohol.

Final Inspection: After the floor has been cleaned, inspect the floor for nicks, scratches, gaps or planks that may have moved during installation, as well as any other imperfections that need attention. Touch up nicks and scratches with touch-up products. In typical climates, the new floor can accept foot traffic within 24 hours. In areas where additional curing time is required, more time may be needed.

Do not use tape to secure floor protection during construction or renovation. Use ram board or similar to protect the floor.