



VERLAYO[®] Installation Instructions

1. **VERLAYO[®]** and adhesives must be site conditioned at room temperature or ambient exterior temperature for 72 hours prior to and during installation.
2. In areas that are exposed to intense or direct sunlight, the product must be protected during the conditioning, installation, and adhesive curing periods, by covering with tarp or geotextile.
3. The highest quality materials and workmanship is used in the manufacture of **VERLAYO[®]** and quality control is exercised in the manufacturing process. However, is the installer's responsibility to confirm the accuracy of the order and to ensure the materials are checked for damage, defects, and color match. **TERRECON, Inc.** or a **TERRECON** representative must be notified of any problems before installation proceeds.
4. **TERRECON, Inc.** does not accept responsibility for product loss or damage caused by handling or working conditions outside our control.

5. Surface Preparations

5.a. All subfloors or bonding surfaces must be clean, dry and free of grease, oil, silicone containing damp proofing treatment, or other contamination that may interfere with adhesion. Masonry, or asphalt surfaces, that have been used for traffic should be power washed and allowed to dry before installation to assure a clean bonding surface. Surfaces should be reasonably flat and free of irregularities greater than forty mills. The surface must be free of all dust, loose particles, solvents, paint, grease, oil, wax, alkali, sealing/curing compounds, old adhesive, and any other foreign material, which could affect installation. Damaged surfaces should be filled and smoothed with appropriate repair material. BARR FP may be used for minor repair of irregularities when tooled to a smooth surface. A twenty four hour cure time must be allowed before installing **VERLAYO[®]**. Do not apply to pavement that is subject to hydrostatic pressure behind the bonded surface.

5.b. All existing flooring or surfacing and adhesives must be removed prior to installing **VERLAYO[®]**. Remove existing adhesive mechanically; do not use chemical adhesive removers or solvents.

5.c. Do not install at surface temperatures below 40 degrees F. Do not install when rain is anticipated within eight hours of installation.

6. Concrete subfloors or bases

6.a. Industry Standards

New Concrete subfloors or bases must be constructed according to the American Concrete Institute's ACI 302.1 R-96 "Guide for Concrete; Floor and Slab Construction" and prepared to receive resilient flooring according to ASTM F 710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring".

TERRECON, Inc.

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6.b Moisture

Concrete subfloors or bases must be tested for moisture, pH (alkalinity), and proper adhesive bond: Moisture tests shall be conducted in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" or ASTM F 2170 "Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs using *in situ* Probes". Three tests should be conducted for areas up to 1,000 sq. ft. and one additional test should be conducted for each additional 1,000 sq. ft. of flooring.

Results must not exceed 5 lbs. per 1,000 sq. ft. in 24 hours when tested to ASTM F 1869, or exceed 80% when tested to ASTM F 2170. If test results exceed the limitations, the installation must not proceed until the problem has been corrected

6.c Alkalinity

A pH test for alkalinity must be conducted. Results should range between 7 and 9. If the test results are not within the acceptable range of 7 to 9, the installation must not proceed until the problem has been corrected.

6.d Concrete floors equipped with a radiant heating system: Turn the heat down to 65°F for at least 48 hours before installation. Heat may be returned to operating temperature 48 hours after installation. Temperature should not exceed 85°F.

7. Wood subfloors or bases

7.a Wood bases must have a minimum 18" (47 cm) of cross-ventilated space between the bottom of the joist and ground. Exposed earth crawl spaces should be sealed with a polyethylene moisture barrier. Subfloors should meet local and national building codes.

7.b Single Wood and Tongue and Groove subfloors should be covered with 1/4" (6.4 mm) or 1/2" (13 mm) APA approved underlayment plywood. Use 1/4" (6.4 mm) thick underlayment panels for boards with a face width of 3" (76 mm) or less. For boards wider than 3" (76 mm) face width use 1/2" (13 mm) underlayment panels.

Countersink nail heads and fill depressions, joints, cracks, gouges, and chipped edges with a good quality Portland cement based patching compound.

7.c Disallowed wood substitutes

Do not install over OSB (Oriented Strand Board), particle board, chipboard, lauan, or any composite type underlayment.

8. Terrazzo, Stone, Marble, and Ceramic surfaces

Hard stone and ceramic surfaces must be thoroughly sanded to remove all glaze and waxes. Remove or replace all loose tiles and clean the grout lines. Use a leveling compound to fill in all indentations.

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9. Specified Adhesives

Chem-Link M-1 Structural Adhesive

Chem-Link BARR Flash & Patch



Chem-Link M-1 Structural Adhesive / Sealant

M-1, a strong, green adhesive / sealant, bonds aggressively to EPDM, PVC, BUR, coal tar, SBS mod bit, granulated APP, many types of coated metal, metal flashing details and FRP. Capable of bonding steel decks to bar joists and metal sandwich panels to roof and wall purline. Available in white, gray, limestone, and black.



Chem-Link BARR Flash & Patch

BARR Flash & Patch is green moisture curing elastomeric waterproofing material for use in repairing roof leaks, shingles, roof valleys, seams, chimneys, flashings and emergency repairs.

10. Bonding Test

An adhesive bond test should be performed using the actual flooring materials and adhesive to be installed. The test areas should be a minimum of 36" x 36" and remain in place for at least 72 hours and then evaluated for bond strength to the concrete.

11. Application

11.a Apply M-1 or BARR FP waterproof adhesive using a serrated trowel, cut to deliver a consistent rate of spread of 40 to 50 square feet per gallon. This rate of spread will assure a glue-line thickness of 40 to 30 mils. Application of adhesive less than 30 mils could leave voids in the glue-line resulting in bond failure.

11.b Install **VERLAYO**[®] pavers within 15 minutes of applying M-1 or BARR FP to the base. To avoid "skin over" of adhesive, do not apply more than twenty square feet of adhesive at a time. (Periodically check base and **VERLAYO**[®] to ensure bonding surfaces are clean and free of debris before installing.

11.c. Begin installation at the far end of the job and work toward the construction material storage materials to avoid carrying material over freshly laid **VERLAYO**[®].

11.d Carefully lay **VERLAYO**[®] tiles into adhesive in alignment with adjacent tiles or perimeter forms, or guidelines. Set tiles in adhesive by gently applying hand pressure until the tile is installed in the same plane as adjacent tiles. Promptly scrape off "squeeze out" of adhesive at the edge of installed tiles. Periodically, lift the corner of an installed tile to ensure proper transfer of adhesive.

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Note: If installation is not accomplished in one working day, make sure uncured adhesive is removed from exposed edges of tile before leaving the jobsite. Check bonding surfaces for contamination before proceeding with next day installation.

11.e. Cure time

Do not walk on installed tiles for one hour in warm weather, or two hours in cold (40 degrees F.) air temperatures. Sunlight will accelerate adhesive cure. Installation should be able to bear public foot traffic in four hours at 70°F or for eight hours at 40 ° F.

11.f Traffic

Avoid vehicular traffic for twenty-four hours.

Contact **TERRECON, Inc.** at 714 964 1400 with any questions.

VERLAYO® are high-density paving tiles made with recycled California tire crumbed rubber combined with polyurethane binder and colorant, then molded with heat under compression.



This produces a strong and durable mat that can be used to retro-fit existing concrete or hardscape, providing a safe, ADA compliant and comfortable surface. **VERLAYO**® are ideal for safety surfacing, restoration, Industrial Chic design, and both indoor and outdoor applications. **VERLAYO**® are available in various sizes and colors. Expected life is minimum seven years.

Description and Features													
Materials	100% California recycled tire crumb rubber, polyurethane resin bound under heated compression												
Colors	Black, gray, terra cotta, brown, green. Custom colors on request												
Sides	1/8" radius beveled edges; reversible												
Sizes & Weights	<table border="0"> <tr> <td>2' x 2' x .5"</td> <td>9.5 lbs.</td> <td>2.38 lbs/sf</td> </tr> <tr> <td>2' x 2' x .75"</td> <td>15 lbs</td> <td>3.75 lbs/sf</td> </tr> <tr> <td>2' x 2' x 1"</td> <td>21 lbs</td> <td>5.25 lbs/sf</td> </tr> <tr> <td>2' x 2' x 1.5"</td> <td>31 lbs</td> <td>7.75 lbs/sf</td> </tr> </table>	2' x 2' x .5"	9.5 lbs.	2.38 lbs/sf	2' x 2' x .75"	15 lbs	3.75 lbs/sf	2' x 2' x 1"	21 lbs	5.25 lbs/sf	2' x 2' x 1.5"	31 lbs	7.75 lbs/sf
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Installation	Placed directly on hardscape; butted edges. Adhesive needed.												
Weight Load	3000 lbs/sq in												
Maintenance	Same as any flooring												
Warranty	3 years materials												
Density	ASTM D3676 68.3 lbs./cubic foot												
Hardness	Shore 72 ±5												
Slip Resistance	ASTM C 1028: 0.90 dry; 0.65 wet												
Abrasion	ASTM C 501: 270 (indicates high resistance to wear)												
Flammability	ASTM E162: Index 131.18 at average temperature of 157.7 C (Surface flammability ANSI Z124.1 and Z124.1 allows Index of 450 or less) If exposed to open, constant fire, pavers are likely to smolder. Lit cigarettes, cigars or matches can burn on paver until they self-extinguish.												
Porosity	100% porous at seams												
Freeze-Thaw	ASTM C 1026: Product exposed to 15 cycles of freeze-thaw at 0 Degrees for 90 days. No change. No facial defects. No signs of crazing, chipping, spalling or cracking. Product frozen at 0 degrees was subjected to impact with no change.												
Acoustics	Dampens noise and sounds.												
Chemicals	ASTM B117: No change in surface; no stain or residue for salt, chlorine or magnesium chloride												
VOCs	No measurable units												

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