



# Approved Stack System ShockPad Technical Manual

***NOTE: Use in conjunction with the current Ecore  
“Approved Stacked Systems” document***

Installation • Warranty

Manufactured in the U.S.A.

Revised 05Dec2023 Supersedes all previous versions. Check website for updates.
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**PLEASE NOTE:** The rubber or turf surface product being considered for use in an Ecore Stacked System **must be** listed on the current “Approved Stacking Systems” document found at [www.ecoreintl.com](http://www.ecoreintl.com); **if not, it is not approved** for installation over Modzilla ShockPad Interlocking Tiles or Monster ShockPad rolls.

## Installation

### I. JOB SITE CONDITIONS

1. Installation should not begin until after all other trades are finished in the area. If the job requires other trades to work in the area after the installation of the floor, the floor should be protected.
2. Areas to receive flooring should be weather tight and maintained at a minimum uniform temperature of 65°F (18°C) for 48 hours before, during, and after the installation.
3. NOTE This product is intended for indoor, HVAC-controlled spaces only.

### II. SUBFLOORS

1. Ecore Approved Stack System ShockPad may be installed over concrete and Portland-based patching and leveling materials, paved asphalt (outside), and wood (interior only).

**NOTE:** The selected Portland-based patching and self-leveling materials must be moisture resistant and rated to withstand the RH moisture levels on the project.

**NOTE:** Gypsum-based patching and leveling compounds are not acceptable.

2. **Concrete Subfloors** – Concrete shall have a minimum compressive strength of 3000 psi. New concrete slabs should cure for a minimum of 28 days. It must be fully cured and permanently dried.
3. **Paved Asphalt Base** – Use a coarse asphalt aggregate mixture; the preferred aggregate size for the adhered system is 3/8” to 1/2”. Asphalt may become less stable and soft in hot weather.

- a. New asphalt should cure for 28 days before installation.
- b. Avoid asphalt mixtures with a high percentage of fines.
- c. Excessive asphalt oil may interfere with adhesive bond. Always perform a bond test.

4. **Wood Subfloors** – (Interior only) Wood subfloors should be double construction with a minimum thickness of one inch. The floor must be rigid and free from movement with 18” of well-ventilated air space below.

5. **Underlayments** – The preferred underlayment panel is American Plywood Association (APA) underlayment grade plywood, minimum thickness of 1/4” with a fully sanded face.

**NOTE:** Particleboard, chipboard/OSB, Masonite, and lauan are not considered to be suitable underlayments.

6. **Radiant Heat:**

- a. **For use over radiant heat:**
  - i. The rubber or turf surface product may NOT be factory fusion-bonded/ laminated.

- ii. **Only Monster ShockPad Rolls may be used**
- b. **Modzilla ShockPad interlocking tile may NOT be used over radiant heat, regardless of the surface product being used.**

### III. SUBFLOOR REQUIREMENTS AND PREPARATION

1. Subfloors shall be dry, clean, smooth, level, and structurally sound. They should be free of dust, solvent, paint, wax, oil, grease, asphalt, sealers, curing and hardening compounds, alkaline salts, old adhesive residue, and other extraneous materials, according to ASTM F710.
2. Subfloors should be smooth to prevent irregularities, roughness, or other defects from telegraphing through the new flooring. The surface should be flat to the equivalent of 3/16" (4.8 mm) in 10' (3.0 m).
3. Mechanically remove all traces of old adhesives, paint, or other debris by scraping, sanding, or scarifying the substrate. Do not use solvents. All high spots shall be ground level and low spots filled with a Portland-based patching compound.
4. All saw cuts (control joints), cracks, indentations, and other non-moving joints in the concrete must be filled with a Portland-based patching compound.
5. Expansion joints in the concrete are designed to allow for expansion and contraction of the concrete. If a floor covering is installed over an expansion joint, it will likely fail in that area. Use expansion joint covers designed for resilient flooring.
6. Always allow patching materials to dry thoroughly and install according to the manufacturer's instructions. Excessive moisture in patching material may cause bonding problems with the adhesive.

#### HAZARDS:

**SILICA WARNING** – Concrete, floor patching compounds, toppings, and leveling compounds can contain free crystalline silica. Cutting, sawing, grinding, or drilling can produce respirable crystalline silica (particles 1-10 micrometers). Classified by OSHA as an IA carcinogen, respirable silica is known to cause silicosis and other respiratory diseases. Avoid actions that may cause dust to become airborne. Use local or general ventilation or provide protective equipment to reduce exposure to below the applicable exposure limits.

**ASBESTOS WARNING** – Resilient flooring, backing, lining felt, paint, or asphaltic "cutback" adhesives can contain asbestos fibers. Avoid actions that cause dust to become airborne. Do not sand, dry sweep, dry scrape, drill, saw, shot blast, or mechanically chip or pulverize. Regulations may require that the material be tested to determine the asbestos content. Consult the document "Recommended Work Practices for Removal of Existing Resilient Floor Coverings" available from the Resilient Floor Covering Institute.

**LEAD WARNING** – Certain paints can contain lead. Exposure to excessive amounts of lead dust presents a health hazard. Refer to applicable federal, state, and local laws and the publication "Lead Based Paint: Guidelines for Hazard Identification and Abatement in Public and Indian Housing" available from the United States Department of Housing and Urban Development.

7. For interior, adhered installations, moisture must be measured using the RH Relative Humidity test method per the ASTM F2170 test standard. Moisture content should not exceed the allowable limit of the selected Ecore adhesive.
  - a. E-Grip III – RH limit of 85% – normally selected
  - b. E-Grip 95 – RH limit of 95% – higher RH applications
  - c. E-Grip 99 – RH limit of 99% – highest RH applications

If RH levels exceed the selected Ecore adhesive's RH limit, stop and correct situation.

**NOTE: Fusion bonded/ factory laminated rubber and turf products may not be installed outside.**

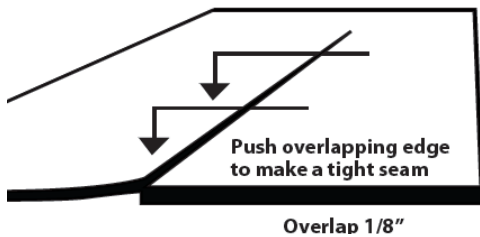
8. In the event that a moisture mitigation system is required, it must conform to the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for use Under Resilient Floor Coverings.
9. For installations requiring adhesion to concrete, perform pH tests on all concrete floors per ASTM F3441 Testing Concrete pH for Resilient Flooring. If greater than the allowable limit of the selected Ecore adhesive, neutralize prior to installation.
10. Adhesive bond tests should be conducted in several locations throughout the area. Glue down 3' x 3' test pieces of the flooring with the recommended adhesive and trowel. Allow to set for 72 hours before attempting to remove. A sufficient amount of force should be required to remove the flooring and, when removed, there should be adhesive residue on the subfloor and on the back of the test pieces.

#### IV. MATERIAL STORAGE AND HANDLING

1. Material should be delivered to the job site in its original, unopened packaging with all labels intact.
2. Note: Shipping pallets, cradles, banding, etc. are not intended for storage. After 7 days, remove roll material from shipping pallets, cradles, etc. Rubber roll material should always be stored laying down; Storing rubber rolls on end will curl the edges resulting in permanent memory of the material. All edges with memory curl must be straight edge cut before installation.
3. Material should only be stored inside on a clean, dry, smooth surface. Rolls should be stored with the end of the roll on top, facing up. The end of the roll should not be positioned against an adjacent roll or surface, or welts may be created on that roll and the roll below.
4. Roll material is stretched slightly during the manufacturing process. At the job site, the installer should unroll all rolls and allow to relax overnight. A bare minimum of two hours is required. Shaking the material once it is unrolled can help it to relax.
5. **Inspect all materials for visual defects before beginning the installation. No labor claim will be honored on material installed with visual defects. Verify the material delivered is the correct style, color, and amount. Any discrepancies must be reported immediately before beginning installation.**
6. All material and adhesive must be acclimated at room temperature for a minimum of 48 hours before starting installation.

#### V. INSTALLATION – Monster ShockPad Rolls Must be fully adhered (Interlocking tiles – see below)

1. Make the assumption that the walls are not straight or square. Using a chalk line, make a starting point for an edge of the flooring to follow. The chalk line should be set where the first seam will be located.
2. **Remove roll from shrink wrap and unroll it onto the floor.** Cut all rolls to required length, including enough to run up the wall a few inches. Stagger and overlap end seams approximately 3-6".
3. Allow the rough cuts to relax in position for a minimum of two hours.
4. Trim end seams **after acclimation** using a square for tight fit without gaps.
5. Align the first edge to the chalk line. It is very important that the first seam is perfectly straight.
6. Position the second roll with no more than a 1/8" overlap over the first roll at the seam. After adhesive is applied to substrate, the material will be worked back to eliminate the overlap. This procedure will leave tight seams and eliminate any gaps. Care should be taken to not over compress the seam. Over compressed seams will cause peaking.



7. It may be necessary to trim edge of second lineal drop if the rolls don't extend the length or width of room or field area. Rolls laid end to end with variance in roll width greater than 1/4" could result in peaked seams.
8. Repeat for each consecutive sheet necessary to complete area or for rolls that will be installed that day.

## VI. FULLY ADHERING – Monster ShockPad Rolls

1. Adhere to substrate. We recommend E-Grip III, a one-component moisture-cured polyurethane adhesive. E-Grip III should not be mixed; use it right out of the pail. Apply with a 1/16" square notch trowel; a 1/16 sq. notch trowel yields approx. 95 sq ft / gallon of E-Grip III.
2. NOTE: For asphalt, a 1/8" square notch trowel may be necessary).
3. Always perform a bond test.
4. Fold over the first drop along the wall (half the width of the roll).
5. Take care not to spread more E-Grip III than can be covered with flooring within 30 minutes. Adhesive open time is 30–40 min. at 70°F and 50% relative humidity.

**NOTE: Temperature and humidity affect the open time of the adhesive. Temperatures above 70°F and/or relative humidity above 50% will cause the adhesive to set up more quickly. Temperatures below 70°F and/or relative humidity below 50% will cause the adhesive to set up more slowly. The installer should monitor the on-site conditions and adjust the open time accordingly.**

6. Lay the ShockPad into the wet adhesive. Do not allow the material to "flop" into place; this may cause air entrapment and bubbles beneath the flooring.
7. Immediately roll with a 100 lb. roller to ensure proper adhesive transfer. Overlap each pass of the roller by 50% of the previous pass to ensure the floor is properly rolled. Roll the width first and then length. Roll again in 60 minutes.
8. Fold over the second half of the first roll and half of the second roll. Spread the adhesive at right angles to the seam and roll with a 100-pound flooring roller.
9. Continue the process for each consecutive drop, always folding material back into wet adhesive. Never leave adhesive ridges or puddles. They will telegraph through the material.
10. **Do not allow adhesive to cure on your hands or the flooring. Cured adhesive is very difficult to remove and we strongly suggest wearing gloves. Immediately wipe off excess adhesive with a rag slightly dampened with mineral spirits or denatured alcohol. Follow the mineral spirits/ denatured alcohol with a rag dampened with water to remove the mineral spirits/denatured alcohol.**

**NOTE: Use mineral spirits / denatured alcohol sparingly. Saturating the rubber with them may darken the flooring and cause the adhesive to be pushed too deeply into the pores of the rubber.**

11. If some seams are gapping, it is possible to hold them together temporarily with blue painter's tape. Tape MUST be removed within 2-3 hours when adhesive has developed a firm set. Allowing tape to remain longer than 2-3 hours or using aggressive tapes may result in adhesive residue. Ecore will not be responsible for residue left behind from tape of any kind.
12. Hand roll all seams after the entire floor has been rolled.
13. It may be necessary to weigh down / brick seams until adhesive develops a firm set.

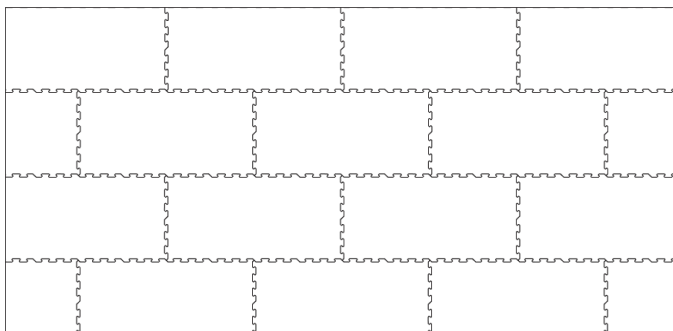
14. Keep traffic off the floor for a minimum of 24 hours. Floor should be free from rolling loads for a minimum of 72 hours. Foot traffic and rolling loads can cause permanent indentations in or debonding of the uncured adhesive.
15. Install surface product onto Monster ShockPad using surface product's Tech Manual.
  - a) **NOTE: Expect approx. a 60% adhesive yield when spreading adhesive onto Monster ShockPad Rolls. For example, a 1/16 sq. notch trowel yields approx. 55 sq ft / gallon of E-Grip III**

## VII. INSTALLATION – Modzilla ShockPad Interlocking Tiles


### **NOTE: Do not glue tiles to subfloor**

1. Confirm you have the correct interlocking tile thickness, either 15mm (19/32") or 32mm (1-1/4").
2. Tile installation generally starts in the middle of the room, so measure the width and length of the space, divide the room into 4 equal quadrants and snap chalk lines.
3. Start the installation where the two lines meet.
 

*Hint: Adjust the starting point to have a balanced installation and not end up with small cuts of interlocking tiles at the walls.*
4. It is recommended to install the tiles in a half-tile "offset" in the 48" (long) direction (as shown below) rather than in a tile corner-to-corner configuration.



5. Place first tile with edges placed where chalk lines intersect.
6. If tiles have a curl, install tiles so the center of each tile is higher than its ends, like an upside-down "U."
 

 The tiles will lay flat when the surface product rolls are installed on top of the tiles.
7. Use rubber mallet to interlock tiles; follow with 75-100 floor roller.. **Do not glue tiles to subfloor.**
8. Continue installation and complete each quadrant. Trim perimeter as necessary, leaving a 1/4" gap at walls, columns, etc.
9. Install surface product onto Modzilla ShockPad Interlocking Tiles using surface product's Tech Manual.
  - a. **Expect approx. a 60% adhesive yield when spread onto Modzilla ShockPad Interlocking Tiles. For example, a 1/16 sq. notch trowel yields approx. 55 sq ft / gallon of E-Grip III.**

## Warranty

Approved Stacked Systems assume the warranty of the surface product.

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Please see the Ecore Warranty Guide for length specifics.

These warranties are in lieu of any other warranty expressed or implied. Ecore shall not be liable for any incidental or consequential damages which may result from a defect. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. These warranties give you specific rights, and you may also have rights which may vary from state to state. To know what your legal rights are in your state, consult your local or state Consumer Affairs Office or your State Attorney General. For complete and latest warranty information, please see [www.ecoreintl.com](http://www.ecoreintl.com).

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**Manufactured in the U.S.A. by:**



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