

INSTALLATION GUIDE

VICONIC FALL DEFENSE™

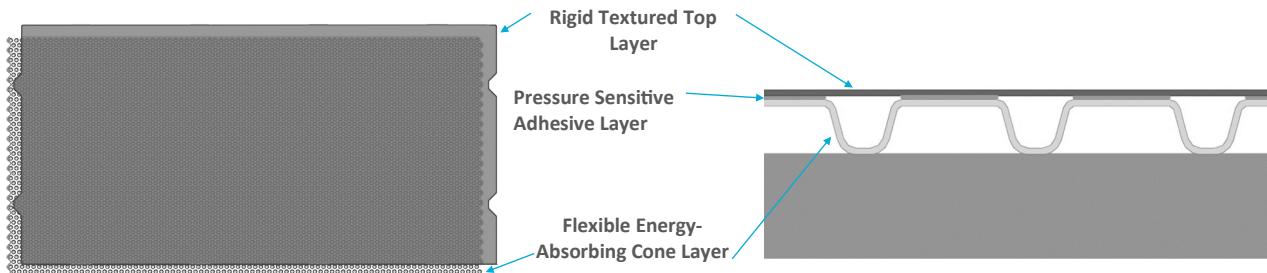


ABOUT THE PRODUCT

Viconic Fall Defense™ is a flooring underlayment system designed to reduce the risk of fall related injuries by adding military grade impact protection to compatible flooring systems.

The Viconic system is composed of two main components: the rigid, textured top layer and the flexible, energy-absorbing cone layer. These layers are attached to each other with a pre-applied pressure sensitive adhesive (PSA).

- It is important to note that these two layers are intentionally offset, allowing adjacent panels to be adhered to each other while reducing telegraphing onto the flooring system.



Viconic Fall Defense™ is a floating system. It should not be adhered to the subfloor during installation.

Viconic is designed to point-deform and recover during an impact onto the flooring surface. In order for the system to function properly, a compatible floor covering and adhesive system must be selected.

Flooring systems compatible with Viconic:

- Heterogenous vinyl sheet
- Rolled carpet
- Modular carpet
- Flexible LVT/LVP (without click lock)

Flooring systems NOT compatible with Viconic:

- Hardwood
- Ceramic or stone tile
- Click lock LVT/LVP
- Other rigid floor coverings

Note: Floor covering selection will affect overall system performance related to rolling loads. If rolling loads such as patient lifts are expected frequently in the space, a flexible floor covering with a higher level of rigidity and lack of padding may be preferred.

PRE-INSTALLATION

Note: Prior to installation, the Viconic panels will need to acclimate to the temperature of the room for at least 48 hours. Follow all flooring manufacturer recommendations for product acclimation. Depending on installation conditions this may take up to 24 hours. Only install Viconic in a space that is fully climate controlled.

Note: Viconic may be installed over any rigid subfloor including: wood, concrete, or a previously installed rigid flooring system.

1. Determine the number of panels and ancillary items necessary for the installation by measuring the room or referring to architectural drawings:

- An overage of 5-10% or more will be necessary depending on the complexity and dimensions of the room.
- You will also need to consider transitions between the Viconic system and adjacent flooring surfaces to minimize trip hazards.
- Viconic Reinforcement may be needed for any areas of the installation that require the flooring system to be rigidized.

2. Creating a simple 2D CAD layout is the most accurate method of determining the square footage required for the project.

3. Items you will need for installation:

- Viconic Fall Defense™ panels
- A broom and dustpan and/or vacuum
- Sharp razor blades (including a hook blade)
- Tape measure and straight edge
- Compatible flooring system and adhesive
- Ramped Reducers (as necessary)
- Viconic Reinforcement (as necessary)
- Acrylic latex caulk (as necessary)
- Heavy duty construction adhesive (as necessary)



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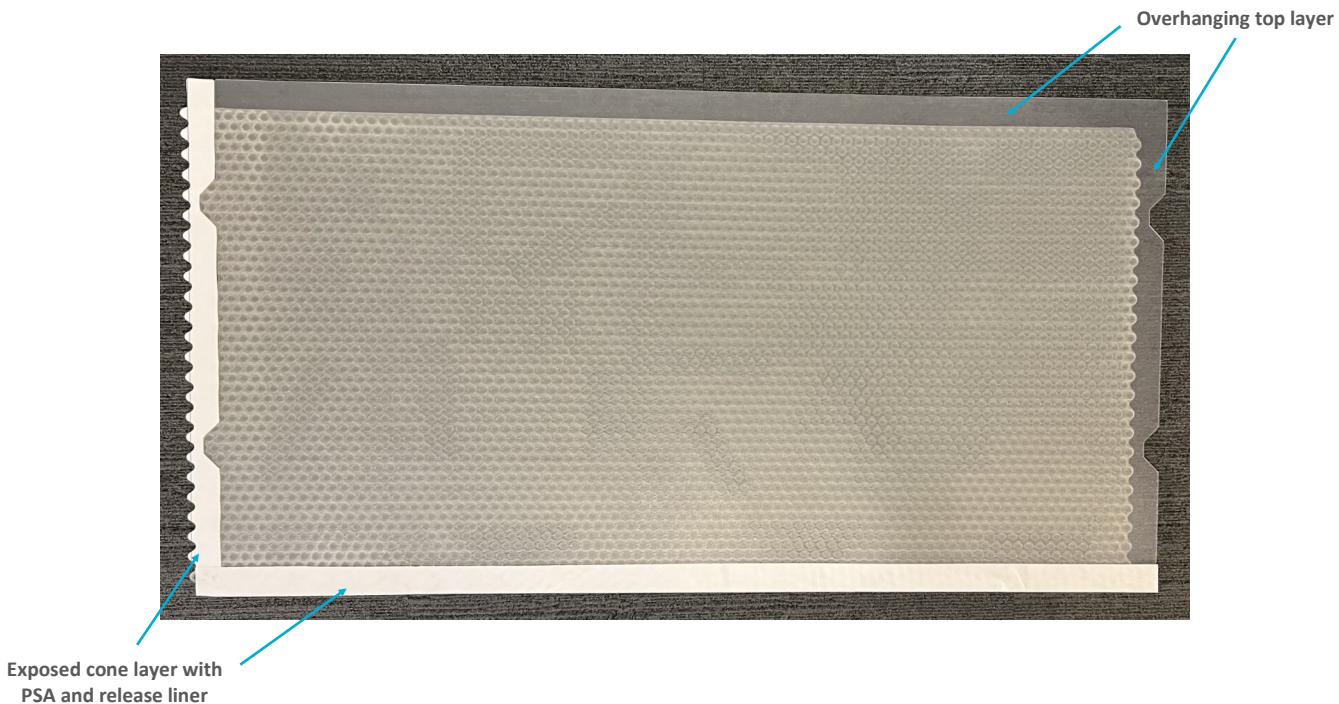
PRE-INSTALLATION CONT.

4. Ensure that the subfloor is flat to 3/16" (3.9 mm) in 10' (3050 mm) and 1/32" (0.8 mm) in 1' (305 mm). Bring high spots level by sanding, grinding, etc. and fill low spots. Smooth the surface to prevent any irregularities or roughness from telegraphing through the flooring system.
5. Evaluate all doors in the room to identify any potential clearance issues:
 - The overall height of the Viconic system is 7/16" (11.1 mm).
 - Any doors swinging into a room with Viconic will need to accommodate this height plus the height of the new flooring system.
 - Use a sample piece of Viconic with the selected flooring system and place under the full width of the door.
 - Ensure the door is able to open and close freely.
6. If the door will not open and close without resistance, two options are available:
 - If possible, removing and cutting down the door is the easiest method.
 - If the door is unable to be cut, the door jamb will have to be raised to accommodate Viconic.
7. Clear the subfloor of all debris prior to installation.
8. Determine where flooring material transitions and ramped reducers will be located.

INSTALLATION

Note: Each panel consists of two edges with an overhanging top layer and two edges where the flexible cone layer and pre-applied PSA are exposed and protected with a release liner. **Do not remove the release liner until you are ready for installation. Once panels are adhered, they may not be disassembled without risk of delamination.**

Viconic panels will need to be cut to fit the perimeter of the room and around any permanent structure.



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INSTALLATION CONT.

How to: Cutting Panels

A standard box cutter or carpet knife is recommended to make any necessary cuts to the Viconic system. Use a marker and straight edge to mark all cut lines.

1. For the easiest method of cutting, flip the Viconic panel and cut through the cone layer with enough pressure to score the top layer. Once the top layer is scored, the part can easily be snapped in two.
2. The panels may also be cut from the top surface. The ridged top layer is resilient, so use several passes with a sharp blade.

With either method (but especially when cutting from the top surface) be sure to use a blade friendly cutting board under the panel. Do not trim directly on top of a Viconic panel. This will cause damage to an installed panel below.

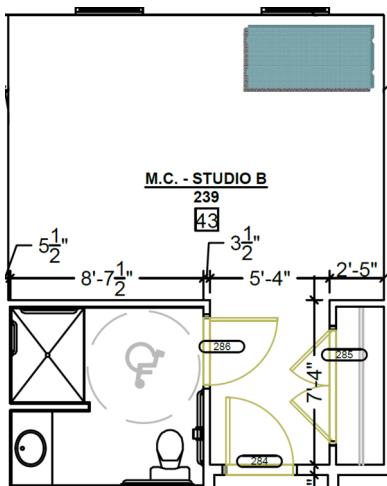
The rigid top layer must be fully supported by the cone layer for the system to function properly.

CAUTION: Cut corners and edges may be sharp. Handle with caution to help prevent injury.

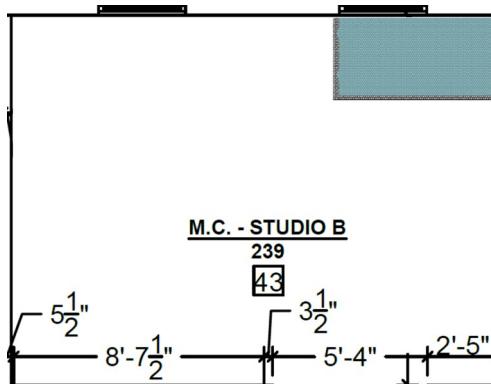


Reminder: Refer to the pre-installation panel layout to ensure the most efficient layout for Viconic.

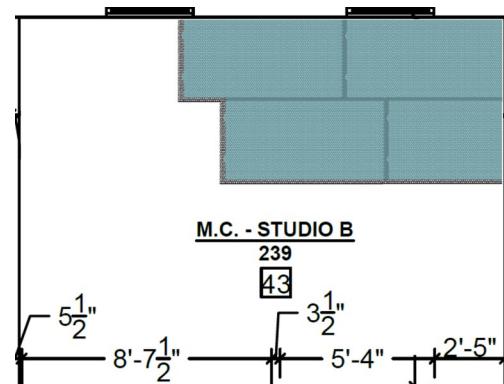
1. Start installation in the far right corner of the room with the overhanging top layer edges facing the walls
 - Trim off both overhanging top layer edges to begin. It may be beneficial to cut more than just the overhanging top layer based on room dimensions.
 - Place the first part with trimmed edges 1/4" (6.35mm) from both walls in the far right corner of the room.



Starting Installation in far-right corner of room with overhanging top layer edges facing the walls



Removing the overhanging top layer on both walls



Continuing the first row of the installation while maintaining the same panel orientation and staggering seams



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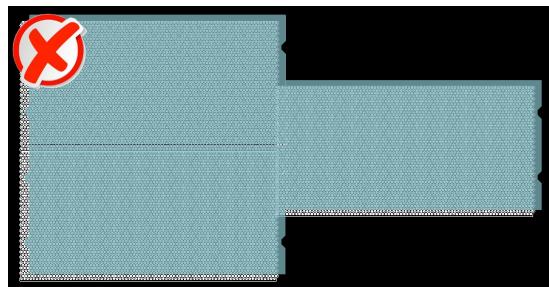
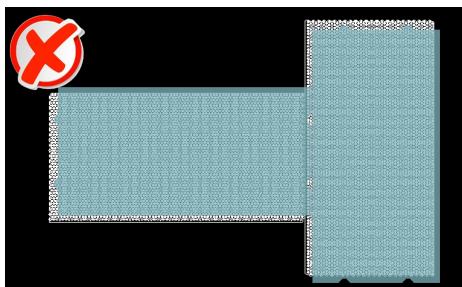
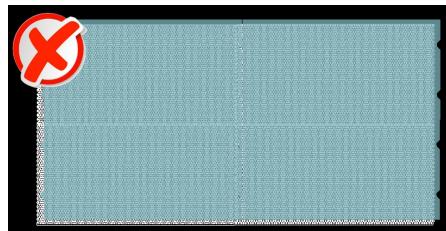
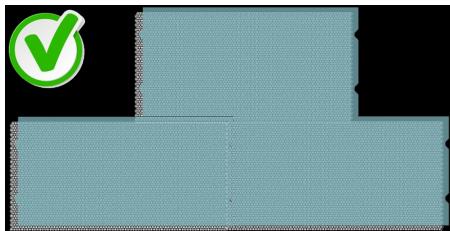


INSTALLATION CONT.

- Panels should be staggered along the long seam
- Do not change orientation of the panels during installation, i.e. do not attach a short seam to a long seam or vice versa

2. Working in either direction, make necessary cuts to adjacent panels and dry fit together

- While laying panels, ensure all are oriented in the same direction, i.e. all release liners are oriented in the same direction



- Viconic panels need to be tightly aligned with zero overlap to avoid telegraphing of seams to the floor covering top surface.
- All male and female location tabs must be aligned properly and gaps in the top layer between adjacent panels must be minimized.
 - Any gaps smaller than 1/16" (1.59 mm) can be typically filled using the selected troweled adhesive.
 - Any gaps larger than 1/16" (1.59 mm) should be filled, smoothed, and taped.
 - Any gaps larger than 1/8" (3.18 mm) are not acceptable and should be repositioned or patched with a scrap piece of the top layer cut to size.

3. After two panels have been dry fit and alignment is acceptable, remove the release liner and active the PSA by applying hand pressure to the seam.

4. Repeat this process until the floor is fully covered with Viconic, understanding additional considerations may be necessary for entryways, bathrooms, and areas where height transitions will occur.

5. The entire Viconic installation should be rolled with a 100lb roller to wet-out both the Viconic PSA and the floor covering adhesive.

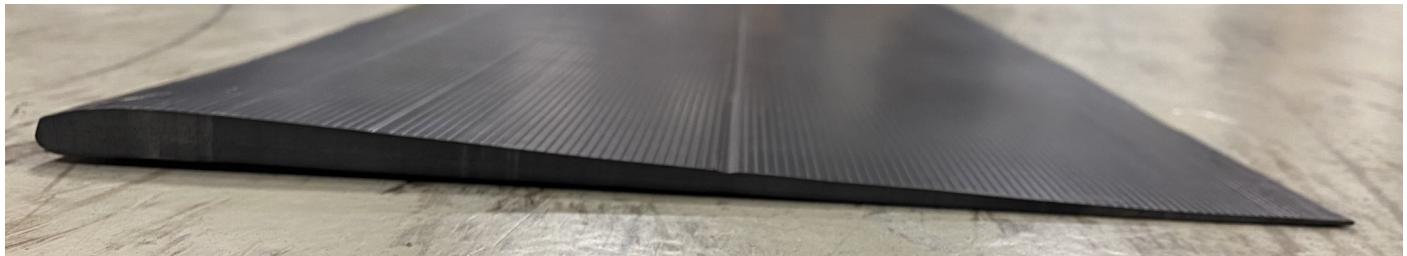


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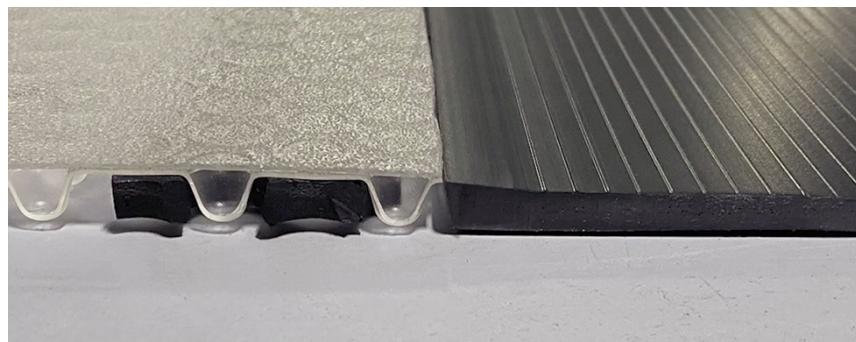
Ramped Reducers



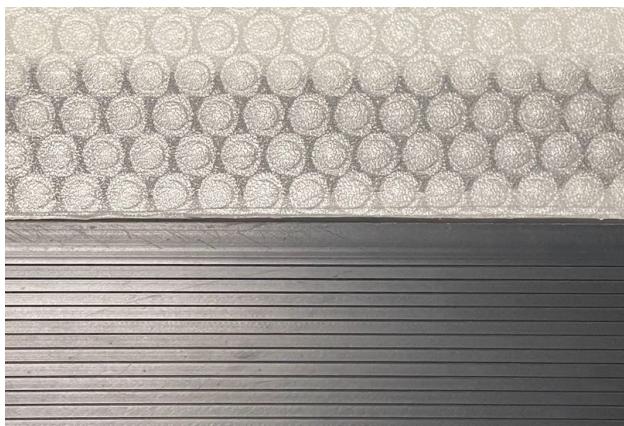
Note: Always install a Viconic ramped reducer to transition between a flooring system with Viconic and an adjacent flooring product of unequal height to avoid trip hazards and maintain ADA accessibility.

Note: Viconic recommends using a commercially available ramped reducer such as the Burke 3/8" - 0" Subfloor Reducer Ramp

1. Determine where the ramped reducer will be installed. Since the reducer is wider than most room thresholds, it may extend into the hallway and/or resident room. The ideal placement reduces trip hazards both in the resident room and hallway.
2. After identifying the location of the ramped reducer, loose lay the reducer to ensure it lays flat on the subfloor. Use a sharp blade to cut the piece to size and shape.
3. Dry fit Viconic panels to the edge of the ramped reducer. Do not fully install the panel(s) that will contact the ramped reducer. Leaving them loose-laid will make final installation easier.
4. Cut the Viconic panel(s) flush with the ramped reducer, minimizing the gap between the Viconic panels and the reducer.
5. Install a 2" (51 mm) wide strip of reinforcement under Viconic along the entire length of the ramped reducer. This will eliminate any soft spots in the system and provide a more durable finished installation.
6. Adhere the reducer to the subfloor using a compatible flooring adhesive or construction adhesive.
7. Install the finished floor covering over the ramped reducer and Viconic with a compatible pressure sensitive adhesive.



Side View - Burke Ramped Reducer installed with Fall Defense™ and Viconic Reinforcement



Top view - Reducer Ramp Installed with Fall Defense™ and Reinforcement



Top view - Installed Reducer Ramp with Taped Seam



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Alternate Ramped Reducer



Note: Depending on the environment in which Viconic is being installed, a less gradual ramped reducer may be preferred. Viconic manufactures and can supply a 6" (152mm) ramped reducer when necessary.

1. Determine where the ramp will be installed. This is typically done in the threshold of the room and contained within the doorway (Step 1).
 - Note: Areas where flooring products change may require seaming or alternative transition strips.
 - It is recommended to extend the new floor covering past the ramped transition so the floor covering can be adhered directly to the subfloor.
2. After identifying the location of the transition, loose lay the transition to ensure it lays flat on the subfloor. Use a sharp blade to cut the piece to size and shape.
3. Dry fit Viconic panels to the edge of the ramped reducer. Do not fully install the panel(s) that will contact the ramped reducer. Leaving them loose-laid will make final installation easier.
 - The alternate ramped reducers have a 1" (25.4 mm) recessed channel along the length of the part. This accommodates the rigid top layer of the adjacent Viconic panel and allows for a smooth transition into the room once the finished floor covering is installed.
4. After the reducer has been cut to size and all adjacent Viconic panels are loose laid, mark a cut line on the Viconic panel that aligns with the far edge of the recessed channel on the reducer.
 - Following this line, cut through both the rigid top layer and cone layer (Step 2).
 - Mark a cut line 1" (25.4 mm) from the freshly cut edge.
 - Following this line, cut through the cone layer ONLY. Be careful to leave the rigid top layer intact.
 - Cutting through the cone layer with a hook blade will help avoid damaging or weakening the top layer.
 - You will most likely have to cut through cones and against rows of cones to complete this process. This is acceptable.
 - Once cut, peel the 1" (25.4 mm) strip of the cone layer from the top layer (Step 3).
 - Dry fit all pieces and ensure the overhanging top layer fits into the recessed channel and lays flat.
5. The ramped reducer will need to be fastened rigidly to the subfloor.
6. Ensure any adhesive selected is compatible with the urethane ramped reducer and the subfloor to which it is attached. Gorilla Heavy Duty Construction adhesive works well in most installations. The surface may need to be scuffed or sanded to increase adhesion.
7. Once all pieces have been dry fit successfully and the ramped reducer is adhered to the subfloor, begin the final system assembly.
8. Finish the Viconic installation by removing all release liners, applying hand pressure to all the Viconic seams, and filling any voids between panels as previously described (Step 4).
 - Note: The finished floor covering should be installed using the manufacturers recommended methods with adhesive systems which are compatible with Viconic as previously described. Viconic offers no warranty on the finished floor covering (Step 5).

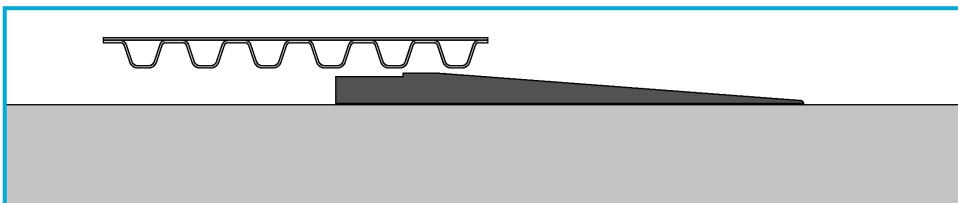


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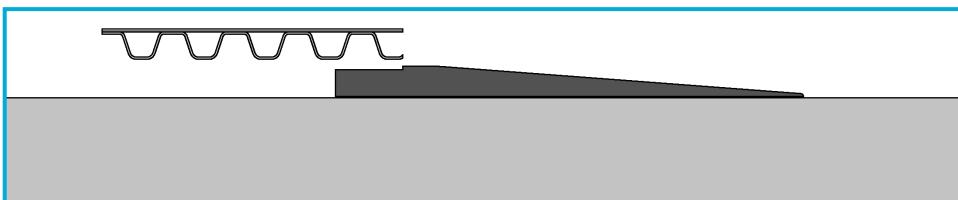
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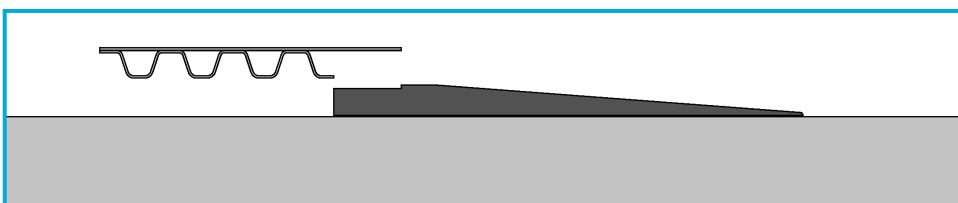
Alternate Ramped Reducer Installation: Step by Step



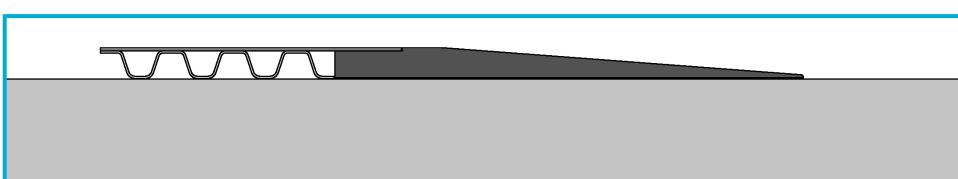
Step 1: Place ramped reducer in doorway or logical transition location and dry fit adjacent Viconic panels



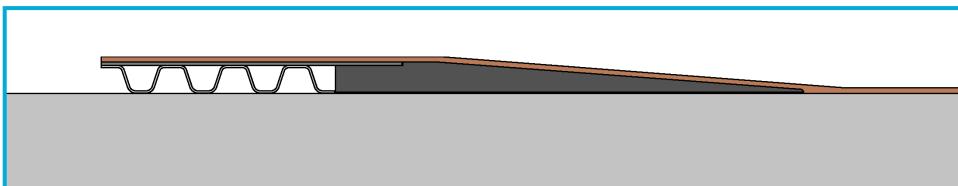
Step 2: Trim through both layers of Viconic panel at the edge of the recessed channel



Step 3: Remove 1" of the cone layer while keeping the top layer intact



Step 4: Adhere the ramped reducer to the subfloor and complete installation of Viconic panels



Step 5: Install floor covering over ramped reducer



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Reinforcement Installation

Note: Viconic reduces the risk of fall-related injuries by deforming during an impact and will deform under an applied load. Special consideration should be given to areas that will experience sustained heavy static loads in excess of 75 psi (520 kpa).

Viconic supplies reinforcement to reduce or prevent deformation due to sustained heavy static loads.

- Areas with reinforcement may not reduce risk of injury, therefore they should be used only where necessary.
- Examples of heavy static loads could include a hospital style bariatric bed or excessively heavy furniture.
- If you are unsure if a piece of furniture will need reinforcement, measure the weight of the furniture (in lbs), calculate the total surface area of the feet contacting the flooring surface (in in^2) and divide the weight by the surface area.
- Other recommended areas for reinforcement include locations that need to be rigidized for mounting purposes such as a toilet mount or floor mounted grab rails.

Viconic provided reinforcement is supplied in sheets as large as 33" x 63" (83 cm x 160 cm) and may be cut to size at the job site.

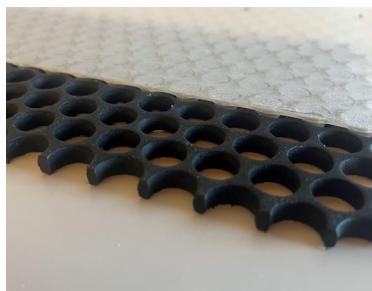
1. To install reinforcement, determine the required piece size and location.

- Identify the area where reinforcement is needed.
- Dry fit the Viconic panels and mark the area where the reinforcement will be located.
- Overlay the reinforcement paying special attention to cone orientation.
- Cut the reinforcement to size using box cutter or suitable cutting tool.
- Install the reinforcement in the marked area, making sure the cone layer is nested within the reinforcement.

2. Ensure the Viconic panel lies flat in the reinforcement. The reinforcement may need to be cut in areas where two Viconic panels come together.



Viconic-Supplied Reinforcement



Viconic Panels must lie flat in the Reinforcement



Caster cup over Viconic System

Load Spreaders

Note: Caster cups and furniture sliders should be considered if the locations of heavy static loads are expected to change, are not established at the time of the Viconic installation, or the installation of reinforcement are impractical.

The caster cups will increase the area of loading and reduce pressure on the Viconic system.

- Standard caster cups are available at your local hardware store.
- Choose a sufficiently rigid product, either: metal, hardwood or rigid plastic.

When choosing caster cups, determine the total weight of the static load. Verify that the total weight (in lbs) divided by the total area of the caster cups (in in^2) is less than 75.

- Example: A 450 lb piece of furniture with four legs will need a total surface area of 6 in^2 to meet the static loading limit. This means that each of the four caster cups will need to have a surface area of 1.5 in^2 . A square caster cup with sides measuring 1.25" or a round caster cup with a 1.4" diameter would be sufficient.



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Bathroom Installations

Before You Work

- To install Viconic in a bathroom setting, determine the Viconic panel layout and maintain the same panel orientation from adjacent rooms if possible (see Installation section).
- If the bathroom is connected to a room that is also being installed with Viconic, continue installing with the same panel orientation into the room.
- Determine if extended toilet mounting bolts will be necessary. The combined height of the Viconic system and new floor covering may require extended hardware.
- Viconic should not be installed in a walk-in shower; however, the system may be installed up to a pre-fabricated shower pan or tub.
- After the flooring product has been installed, the flooring system will need to be fully sealed against the shower pan using 100% silicone caulk to prevent seepage.

1. When installing Viconic around toilet drains, Viconic-supplied reinforcement is required:
 1. Loose lay the Viconic panels.
 2. Determine the exact center of the toilet flange.
 3. Mark the center point on the top surface and trim through both layers of the Viconic panel within 1/4" (6.35 mm) of the toilet flange perimeter.
 4. Reinforcement installation is recommended to create a rigid toilet mount.
2. Trim Viconic panels flush with shower pans and bathtubs. Do not leave a 1/4" expansion gap, but ensure the Viconic system lays flat on the subfloor.
3. Install a 2" (51 mm) wide strip of reinforcement under Viconic along the entire length of the shower pan or bathtub.
4. In any wet environment, sealed floor covering and perimeter sealing are necessary to prevent seepage beneath Viconic and onto the subfloor.
5. Finish the installation by using a combination of molding, coving, or silicone around the perimeter of the room to create a watertight seal.
 - Note: In the event seepage beneath Viconic occurs, remove any perimeter molding or sealing throughout the entire space and use fans to circulate air beneath the Fall Defense™ system to evaporate any fluids. In some cases you may have to gently lift the installed system, clean and dry the subfloor, and re-install the flooring system.



Cutting reinforcement to fit around toilet mount



Recommended use of reinforcement around toilet mount



Caulk all edges to create a watertight seal



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Patching and Repairing

Note: Small patches may be made if the Viconic system is damaged such that the top layer is punctured or the system is permanently deformed.

1. Remove the damaged section using a sharp blade:
 - When removing the damaged section, avoid cutting through cones.
 - The removed section should be a variation of a hexagonal shape, not square or rectangular.
2. Cut a patch section from a scrap piece of Viconic using the damaged section as a template.
 - Both the rigid top layer and cone layer must be fully present in the patch.
 - The patch section must lay flush with the previously installed Viconic panels.
 - Gaps between the patch and installed Viconic panels must be less than 1/16" (1.6 mm).
 - Tape around the full perimeter of the patch using a thin flooring underlayment tape such.

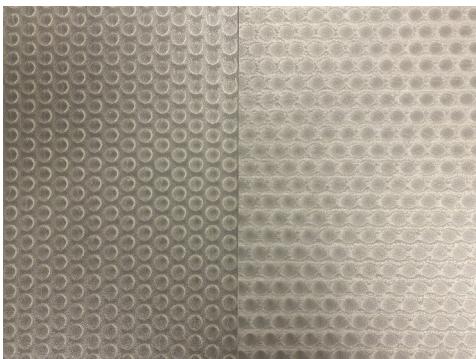


Example of a hexagonal shaped patch

Joining Two Viconic Installations

Note: Any installations within a room should be completed without changing orientation of the Fall Defense™ panels. Under circumstances where a continuous installation is not be possible or feasible, (e.g. two flooring crews working concurrently in different areas of a facility or expanding the area covered by Viconic after the initial installation has been completed) special considerations must be made.

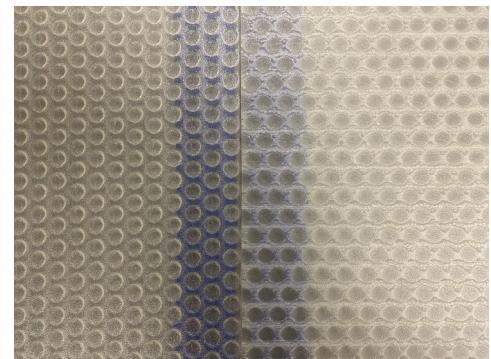
1. Cut the adjacent panels of two discontinuous Viconic installations flush to each other, minimizing gaps between the two panels.
2. Install a 2" (51 mm) strip of reinforcement along the cut edge of each panel. This step is critical in reducing potential soft spots in the finished installation.
3. Tape the seam using a thin underlayment tape.



Step 1: Cut two non-continuous Viconic installations flush to each other



Step 2: Cut strips of reinforcement for each panel, ensuring the orientation of the reinforcement matches the orientation of the Viconic cone layer



Step 3: Install the reinforcement under each Viconic panel and use a thin underlayment tape to seal the seam (not pictured)



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FLOOR COVERING INSTALLATION CONT.

Note: Compatible floor coverings and adhesive systems should be installed per the manufacturer's guidelines. The Flooring system needs to be adhered to Viconic. Loose lay flooring products are not compatible.

Viconic recommends using flexible, acrylic, water-based flooring adhesives. Both spray and trowel adhesive systems are acceptable:

- The adhesive system needs to be flexible to allow the Viconic system to point-deform and recover.
- Viconic is not compatible with rigid thermosetting adhesives including epoxy adhesives.

Always test adhesive compatibility with a sample piece of Viconic Fall Defense™ to verify bonding will be acceptable

Examples of compatible adhesives include:

• Capital PS100	• Shaw MS Resilient	• Shaw 5000
• Mannington Infinity 2	• Shaw S150-95	• Shaw 5100
• Mannington RP-18	• Shaw 4100	• Stix 2230
• Mannington V-82	• Shaw 4151	
• Mannington V-88	• Shaw 4252	

1. After Viconic Fall Defense™ is fully installed, prepare the surface for flooring installation. Remove any dust and debris from the Viconic layer to ensure the flooring system adheres to Viconic properly.
2. The chosen flooring adhesive should be installed directly over Viconic as well as any ramped reducers.
3. Follow all flooring manufacturer recommendations for flooring installation.
4. Lay out modular flooring systems to minimize seams directly over the ramped reducer. It is recommended that one tile spans the width of the reducer such that it is adhered to both the Viconic system and the subfloor outside of the room.
 - Care should be taken to minimize the use of small modular flooring pieces in high traffic areas.
5. Chemical welding is the preferred method to seal any seams in flooring materials.

CAUTION: When heat sealing is required, care should be taken during the sealing process to prevent damage to the Viconic system. Viconic Fall Defense™ is a thermoplastic system that may deform and melt at high temperature.



FLOOR COVERING REMOVAL AND REINSTALLATION

Removal of flooring products and re-installation of a new flooring product without damaging the Viconic system is possible.

1. Apply pressure to the Viconic system while simultaneously peeling back the old flooring system.
2. Modular flooring systems can be removed one tile at a time.
3. Sheet goods may need to be cut and removed in strips.
 - Use a hook blade when cutting the flooring system to prevent damage to the Viconic system.
4. Assess the Viconic layer for any damage and make repairs as necessary.
5. Reapply a compatible flooring adhesive as necessary and reinstall the new flooring system following manufacturer guidelines.



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