GEOCERAMICA®

TIPS FOR A SUCCESSFUL INSTALL

1 PROJECT PLANNING

Installing large format pavers or porcelain tiles requires careful planning and a more precise approach than typical paver installation. When laying pavers, it's common to start at a corner and lay them in a pattern, making cuts only as necessary when the pattern can't be completed. However, with large porcelain tiles like GeoCeramica, it's essential to think more like a traditional tile installer to minimize waste and create a balanced aesthetic. A well-planned layout ensures fewer cuts and a more symmetrical finish, which is especially important given the potential for minor imperfections in the material, such as the inherent "warp factor" seen in ceramic tiles, where the center may bow slightly.

Choose the Laying Pattern
To achieve the best results, avoid using traditional half-bond patterns for long, narrow tiles, as the bowed center can create an uneven look when adjacent tiles' low and high points meet. Instead, consider using a stacked-bond or offset running bond pattern (e.g., 1/3 - 2/3) to allow for a more balanced appearance

Find the Center
Next, find the center point of the patio. Starting in the center ensures that GeoCeramica tiles are evenly distributed across the space. The end goal is to distribute the cut pieces on each edge of the space. In order to minimize cuts and waste, adjust the position of your first tile off-center if needed to ensure the pieces on each edge are the same size. Note any offset in your plan.

Snap Chalk Lines
Snap a chalk line along the center of the patio in both directions. This will create a cross that divides the patio into four quadrants. These lines will serve as our guide for laying GeoCeramica.

Layout the Tiles
Lay the first row of GeoCeramica along the center line-or aligned to any offset you noted in your initial plan. Adjust as necessary to ensure that the GeoCeramica tiles are evenly spaced, aligned with the chalk lines and that the cuts required on the opposing edges are of equal size.

Lay the Rest of the Pattern
For a 1/3 offset running bond, measure and mark the 1/3rd point on the edge of the first GeoCeramica, then align the second row GeoCeramica tiles with this mark. Continue laying out the second row, ensuring each tile is offset by 1/3rd the width of the row above. Continue this staggered pattern across the entire patio

Plan and Make Cuts as Needed
Check the edges of the patio to see where cuts will be necessary. It's best to place cut GeoCeramica pieces along the perimeter where they will be less noticeable. Measure and mark these cuts carefully to ensure a precise fit."

2 BASE

Selecting the right base is crucial for a successful and long-lasting GeoCeramica installation. While similar to traditional paver installations, there are unique considerations for GeoCeramica you should consider when selecting your base approach. See below for considerations when selecting a base.

Type of Base	Materials & Approach	Pros	Considerations
Open Graded	• Typically consists of crushed angular chips topped with smaller chips, such as ASTM #57 fractured clear chip for the base and #8 or #9 fractured clear chip for the bedding course.	• Provides excellent drainage • Versatile base type suitable for many applications.	• Leveling tiles on an open-graded base can be more challenging than on a sand-set base, as the chips offer less flexibility and "give" compared to sand. • GeoCeramica has a smaller chamfer than concrete pavers making it less forgiving than traditional pavers. Imperfections in leveling are more apparent.
Sand Set		• Offers greater ease of leveling and faster installation. • Sand provides a degree of "give," that makes adjusting and leveling tiles easier	• Despite its ease of use, a sand-set base has lower drainage capacity compared to an open-graded base, making it less effective in regions with heavy rainfall or poor drainage. • Drainage problems can cause long-term issues with the integrity of the patio. You should carefully consider and weigh these impacts before choosing a sand set.
Synthetic (Gator Base)	• Not recommended		

3 OPENING PALLETS

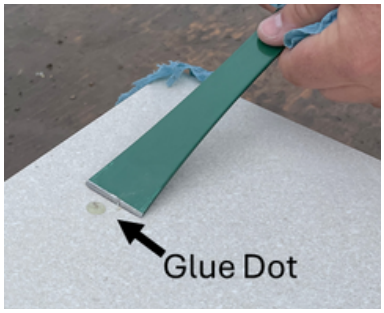
GeoCeramica comes packaged with 26, 24x24 pieces per pallet (13 layers/2 pieces per layer) and just over 100 sq ft per pallet.

There are a few things you should pay attention to as you unwrap the pallets to speed up your GeoCeramica installation.

1. Check for any damage to the tile. In general, the tile and edges should be in pristine condition. There may be minor divots (less than 1mm) on the edge that will blend in.

2. Examine the sides of each GeoCermica piece. In rare cases a tile may have a hairline crack that has not reached the surface of the tile yet. These should be set aside and not installed.

3. When looking at the edges, also check the corners to make sure there is no gap between the tile and the Stabikorn bases. Gaps like this leave the tile vulnerable to cracking post install. This defect is extremely rare, but important to catch before the tile is installed.



4. GeoCermaica is packaged with 4 beads of low adhesive glue on the surface of each tile. This provides a buffer between each tile during shipment. These beads can be easily scraped off using a utility knife.

5. It is always a good idea to spray paver shampoo and do a quick wipe of each tile. This will remove basic dust and dirt that may have accumulated during transit.

6. Much like waste on paver jobs, you should anticipate approximately 5% of tiles will be unusable. Many of these pieces can be used for cuts, further reducing waste.

While this process may take a few minutes of time it will eliminate future headaches and issues during install when they are harder to fix

BEFORE STARTING, ALWAYS CHECK THE BATCH NUMBERS TO ENSURE CONSISTENCY IN COLOR SHADING.

4

HANDLING & LAYING

To ensure a fast, efficient, and damage-free installation, it's important to use the right tools . While GeoCeramica moves and lays similarly to traditional concrete pavers, its porcelain surface, large size (24x24), and weight (72 lbs) require some special handling considerations.

Lifting: We strongly recommend using a vacuum lifter to move GeoCeramica around the site. A vacuum lifter minimizes risk of damage and helps speed installation. Vacuum lifters allow you to place each tile directly into position without tilting or applying pressure to the edges, which can cause chipping or cracking.

Adjustment: A vacuum lifter also makes moving and replacing individual tiles much easier. The ability to remove or set tiles in a vertical manner reduces the risk of chipping an edge. This system also makes it much easier to adjust individual tiles, something that is difficult to do by hand without risking damage.

Laying by Hand: In our experience, laying by hand may increase damage to tiles by more than 10%. While, not impossible to do, this is an important consideration when deciding to install by hand.

It is important to minimize sliding pieces across pieces underneath when removing tiles from the pallet. It is also important when lifting a piece off the pallet not to “tilt” the paver to the point the porcelain edge contacts another tile. This could result in damage and chipping.

Tilting the product when setting exposes the tile edge to the potential for damage. This is especially important when installing in-between other tiles or against a fixed surface such as a wall.

Laying tile by hand also may disturb the base you have spent time leveling. This may require extra time and effort when leveling and compacting GeoCeramica.

Finally, unlike traditional pavers or thin-set porcelain installations, do not attempt to level each tile as it’s installed. Instead, complete the installation of all tiles and then run a roller compactor over the surface to level the final surface, ensuring a smooth and even result.

5

CUTTING TILE

Cutting GeoCeramica tiles without damaging tiles is straightforward with the right tools and technique.

Tools:

- We recommend a tub saw fitted with a non-segmental (smooth rim) diamond blade (Alpha Q-Cut or Zenesis). Ensure the blade's RPM rating meets or exceeds the saw RPM's
- A cut-off saw can be used; however a tub saw is more stable and will create a smoother and more precise cut.
- For smooth cuts that minimize chipping and waste, it is essential to cut "wet". Make sure you have access to water on site.
- Use a dressing stone/finishing pad to hone the newly cut edge. This is a simple tool with a diamond grit sanding pad used to smooth the cut edge. This should cost about $12-15 at Home Depot.

Making Cuts:

- Mark your cuts with a fine point Sharpie or grease pencil. Water will wash away chalk and other marks.
- When using a cut-off saw, it is often better to make a plunge cut into the material vs. scoring the surface.
- Some contractors have reported great success by cutting the pavers upside down (the tile top facing down).
- When cutting voids or intricate shapes in the tiles, start by drilling holes in the corners of the shape with a diamond drill bit rated for tile. Then, connect the holes with cuts using a 4-1/2" grinder fitted with a porcelain blade. This method allows you to define the boundaries of the cut and make precise, clean cuts without compromising the tile's integrity.

6 COMPACTING

A roller compactor is the recommended choice for compacting GeoCeramica. Plate compactors can cause chips or cracks due to the concentrated pressure they apply. The roller compactor evenly distributes pressure, reducing the risk of shifting or damaging the tiles while also providing a smoother finish, which is crucial for the overall appearance of your project.

Before starting the compaction process, ensure that all tiles are properly aligned and set in place. For tight joints, use a Paver Adjuster tool along a string line to align the joint lines, ensuring the blade engages with the concrete base well below the tile's bottom to avoid damaging the porcelain edges. Check for any loose or uneven tiles and adjust them as needed. A roller compactor can usually smooth out slight variances in tile height, but more significant variances (> 1/4") may require adjusting the individual tiles before compacting.

Begin at one edge of the paver area and follow a systematic pattern, such as the "overlapping pass" method. For the first pass, move the roller across the area, then overlap the previous path by about one-third of the roller width on the return pass. Continue this pattern until the entire area has been compacted, making sure to maintain a steady pace and avoid abrupt stops, which could leave marks on the pavers. Move perpendicular and diagonally across the joints.

After completing the compaction, inspect the surface for any uneven areas. If needed, go over those spots again, as proper compaction is critical to achieving a durable, professional-looking installation. It may take 2-3 passes over certain areas to achieve the desired level of compaction.

Avoid using a metal or dead blow hammer to adjust individual tiles. Instead, use a rubber mallet to gently tap the tiles into place. If some tiles remain uneven after compaction, pull them up individually and adjust the bedding material beneath them, then recompact the area to achieve the correct height.

For tight joints, use a Paver Adjustment tool along a string line to align the joint lines, ensuring the blade engages with the concrete base well below the tile's bottom to avoid damaging the porcelain edges.

Following these procedures will ensure that the tiles are properly compacted and aligned, providing a long-lasting and aesthetically pleasing result.

7 SANDING

Before installing joint sand, particularly polymeric sand, it's important to thoroughly pressure wash the area. This step ensures that the surface is clean and free of debris, which could interfere with the installation.

It's preferable to use resin sand, as it can be installed in any weather conditions and allows the homeowner to pressure wash the are in the future. If drainage is a concern, resin sand is also ideal, as it allows water to pass through.

Polymeric sand can be used if needed. However, if you're using polymeric sand, ensure you account for the setting time and freeze-thaw tolerance depending on the time of year

Begin your work at the top of the slope, focusing on small, manageable sections and completing each one before moving on to the next. When filling the joints, ensure that the sand is placed about 1/8 inch below the shoulder of the paver for the best results. . Be mindful of environmental factors such as rain, freezing temperatures, or other conditions that could affect the installation. . .

8 EDGING

Selecting the right edging is crucial to ensure the longevity and stability of your project. Proper edging holds the GeoCeramica in place, preventing the tiles from shifting while maintaining the integrity of the installation. Below are popular edging options. Each type has its own set of advantages and disadvantages that are important to consider for various landscaping projects.

- **Cementitious Edging**
  - **Pros:**
    - Strength and Stability: Cementitious edging, which includes concrete curbs or poured concrete borders, provides the highest level of strength and stability, preventing any movement of the GeoCeramica.
    - Customizable: Can be molded and shaped on-site to fit specific project requirements, offering a high degree of customization.
    - Aesthetic: Can be hidden below the surface of the GeoCeramica tiles providing strength without unsightly contrasting edging

RECOMMENDED

  - **Cons:**
    - Labor-Intensive: Requires mixing on site, preparation of edging and some knowledge on how to install properly. It also can take a day to cure.
    - Permanence: Once installed, it is not easily altered or removed, making it less flexible for future changes to the landscape.
    - Overall cementitious edging such as X from Alliance Gator provides the best overall solution for edging with GeoCeramica.

- **Plastic Edging**
  - **Pros:**
    - Cost-Effective: Plastic edging is generally less expensive than other types, making it a budget-friendly option for many projects.
    - Ease of Installation: Lightweight and flexible, plastic edging is easy to cut and shape, allowing for quick and straightforward installation. It can be secured using plastic or metal spikes.
    - Flexibility: Ideal for creating curved designs and complex shapes due to its flexibility.
  - **Cons:**
    - Durability: Plastic edging is less durable than metal or cementitious options. It may warp or become brittle over time, especially when exposed to extreme weather conditions.
    - Cannot use with open-graded base
    - Aesthetic Limitations: It might not provide the same high-end, professional look as metal or cementitious edging, potentially affecting the overall appearance of the project.
  - **Best Uses:**
    - In most circumstances, plastic edging is not the edging solution we would recommend for GeoCeramica installations. The aesthetic contrast vs. GeoCeramica and the likelihood of future degradation and movement make plastic edging a sub-optimal solution

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