Terrazzo Vertical Installation Guide

Sensitile Terrazzo™, Terrazzo Lumina™, and PIXA™ are materials manufactured by Sensitile using proprietary and patented technologies. These materials are composed of a combination of Portland cement, mineral aggregates, pigments, PMMA or acrylic light guides and may also contain steel (in the form of reinforcement). The shape, arrangement, and function of the polymer light guides vary based on the product line and selected pattern.

Receiving Information

Sensitile Terrazzo™, Terrazzo Lumina™, and PIXA™ products ship from our factory in wooden crates protected with cardboard and foam. The slabs are usually stored on their edges within the crates. The crates are designed to be opened on one side, this side of the crate will be marked “Open This Side”. The crates should be opened very carefully since the slabs may have shifted during transport and could be leaning on the side that will be opened.

On receipt of the shipment, please check crates carefully. Any minor shipping damage should be noted on the BOL at the time of signing for their delivery. In the rare event that there is extensive visible damage to the crates - do not accept the delivery.

After receipt of the shipment, we recommend that the crates then be opened carefully and the slabs taken out and inspected. Verify that all items were received in good condition - any discrepancies need to be communicated to us immediately.
Handling Information

Our micro-concrete slab materials should be handled and carried on edge. They can be transported within the job site or shop on stonecarts. To protect the factory finish, we recommend that all surfaces in contact with the materials be padded. The slabs can also be hand carried with vacuum lifters or panel carrying clamps of appropriate lifting capacity. As with any stone or stone-like material, these materials can be chipped on the edges or at the corners if sufficient care is not taken in handling.

Weight Guide

Typical Sensitile Terrazzo slabs are 1-1/2” thick and will weight 18 lbs/square feet or 90 Kilograms /square meter.

Preparation

Before starting, please read and understand the relevant sections of this guide in their entirety and ensure that you have, in hand, all the tools and materials required to complete the project.

Please review all drawings and ensure that areas to receive the materials are flat, level, and sized correctly. The sub-top and/or vertical supports should be rigid and of sufficient strength to support the weight of the material, any unsupported lengths or cantilevers might need to be reinforced with metal brackets or additional blocking. This ensures long term stability of the installation.

We recommend that all work be preformed by a trade contractor, tile and marble setters, stone and granite installers and finishers who are thoroughly competent to execute the work and have had successful experience with projects of similar
magnitude to this project.

For vertical installations where the material is used as cladding on a wall, barface, counter face, etc, it is imperative that the supporting wall or structure be able to carry the load of the material. If the materials are to be used as a freestanding wall or partition, then the support framing should be sound and rigid enough to take the resulting loads. In both cases, if the weight of the slab is resting on a horizontal surface then it must be cushioned and it must be ensured that the surface in contact is flat and level to the slab edge.

**Vertical Installation**

If the installation involves more than 1 slab, then we recommend dry fitting all slabs before actually setting the materials in place. If the slabs were manufactured based on a shop drawing, they will be labeled and marked with a slab number based on the drawing, which can serve as a guide during the set-up. For vertical installations it is best to do this on a level floor.

During the dry fit, it would be advisable to determine which seams and slabs will need to be “shimmed”. At this time seam locations and seam widths should also be marked and adjusted for the correct fit. Markings can be made on the surface to be installed if needed. Care should be taken during this phase since the slab edges can be damaged and chipped if they are butted together with too much force.

Once the installation is verified with the dry fit, it is possible to start setting slabs in place. This is usually done from a corner or end piece. Each slab should be leveled and placed in its marked position.
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For vertical installations there are several modes of installation which are usually discussed in advance of each project. Please find the different types of installation in following.

**Embedded Steel Plate**

This is a common mode of installation for vertical surfaces. In this method Sensitile provides 1/4” to 3/8” mild steel plates that are embedded into the slabs per the agreed upon drawings. These plates can then be tapped to the required thread size and then used with z-clips or another hanging system to attach the slabs to the substrate.

**Pins or Anchors**

Another common mode of vertical installation includes the use of pins and anchors (such as manufactured by Halfen, Keil, and others) to attach the slabs to the substrate or framing system. For this method, slabs are usually drilled on site following the drilling and fabrication instructions provided separately. Threaded inserts or anchors can be placed into a drilled hole. These are commonly bonded in place with epoxy, as recommended by the insert manufacturer. Pins are typically used on the edges of the slab and are only recommended for thicker slabs. Care must be taken to ensure that pins are centered on the edge and that the diameter of the hole is in proportion to the slab thickness. In some cases the inclusion of a metal sleeve into the pin hole may be beneficial. When installing a multi-slab installation it is important to choose a pin/anchor and framing system that allows for adjustment. This will allow the installer to be able to align the slabs corners and adjust the seams in order to maintain flatness and an even gap.
Adhesive Bonding
This mode of installation involves the use of stone adhesives and mortars to bond our materials to a prepared substrate. We suggest the use of quality products manufactured by Laticrete, TEC, Maipei, or similar established brand names. If applicable the back of the slabs to be bonded can be scarified. For projects using large slabs of material, adhesive only installations are generally not recommended due to dissimilarities in the substrate’s environmental response.

Free Standing Vertical Installation/Other Special Needs
For slabs that are to be free standing or for help with the detailing of other special needs, please consult with us. We are more than happy to collaborate with you on a custom detail to achieve your desired effect.

Post Installation
Once all of the slabs are installed, then depending on the type of installation, the seams may need to be treated. For a vertical installation, seams do not have to be filled. They may be left as cavaties or openings in between the individual slabs. However, if it is desirable to have filled seams then there are some different options depending on your desired aesthetic outcome. Color machced grout pre-mixed and sold in a caulk tube is one option. These are sanded or mineralized calk and offer a great blend of flexible Silicone or Acrylic polymer along with the texture of sand. Another option is to use color-matched polymer modified grout as would be used for tiling. If this method is used it is important to seal the grout once it is dry and cured. Sealing the grout will ensure ease of cleaning and allow the grout to resist discoloration. A final option is epoxy based joint compound as used by Granite installers. A popular brand is Akemi. Since vertical installations are prone to settling, this method may not be suitable for all applications since these resins
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are rigid and may not be able to absorb any inner slab movement.

If no seaming agent was used then the slab is now ready for use, otherwise it will be ready to use once the seaming agent has set and has been sealed (if needed). Before the first use, we do recommend that all exposed areas of the top be wiped with a soft damp microfiber cloth. It should then be cleaned with a pH neutral stone cleaner to remove any dust debris or adhesive residue.

Given that most new structures will experience some settling and movement during their initial year, it might be necessary to examine the seams to ensure that they are intact and replenish or repair the seaming material as necessary.

In addition to the above steps, Terrazzo Lumina™ slabs are illuminated ad will also need their lighting component to be installed based on the project’s shop drawings. For more information regarding this step, please refer to the Terrazzo Lumina™ Lighting Guide. Lighting will usually need to be adjusted on site for optimal illumination.

If you have any questions, please do not hesitate to contact us.

Thank You,
The Sensitile Team

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Typical Details

Typical Z-Clip Detail

- **Wall**
- **Z-Clip** (Provided by Sensitile)
  - Pre-Attached to Slab
- **Z-Clip** (Provided by Sensitile)
  - To be Attached to Wall
- **Terrazzo Lumina Slab**

Potential Lighting Detail

- **WALL**
- **LED with Housing** (Pre-Attached to 1"x1" U Channel Provided by Sensitile)
- **Terrazzo Lumina Slab**
- **Anchoring Hardware by Sensitile**
- **Z-Clip** (Provided by Sensitile)
- **Buffed Stainless Steel Finish Decorative Snap on Trim** (Provided by Sensitile and Other Colors May Be Available)
- **Siliconized Grout to Match Slabs** (Provided by Sensitile)
- **All Edges Eased**
- **Section View A**
  - Through Large Slabs
- **Section View C**
  - Lighting and Vertical Seams
- **Edge Uniformity Tape**

Production of your order will commence after we receive an approved copy (signed and dated) of these shop drawings.

**Notes:**
- Dimension Tolerances +/- 1/16".
- All slabs to match approval color samples.

**Customer Drawing:** 4.8.16

**Linetype Key:**
- **Terminal Size:** Elongated (1/4" x 3/32")
- **Sealer:** Penetrating

**Fax #:** 313-872-6315

*All drawings show slab or tile faces in plan or elevation, unless otherwise indicated*
Terrazzo Z-Clip Installation Example

Tools Needed:
- Cardboard Template
- 4’-6’ level
- Hammer Drill
- 9/16” concrete bit (for z-clips)
- 9/32” concrete bit (for light bar)
- Marker
- Socket Set
- Personal Protective Equipment

Materials Needed:
- Terrazzo Lumina Slab
- Lighting Bars
- Power Supply
- Z-Clips
- Concrete Anchors 5/16” -18 x 1-1/2” (for Z-clips)
- Concrete anchors #10-12 x 1-7/16”
- Poly-Plug (for Light Bars)
- 5/16”-18x1-1/2” Bolts
- #10 x 2-1/2” Screw
- Tile and Grout Caulk
- Aluminum Spacers
Terrazzo Example Installation

Step 1:
Locate all tools and materials.

Step 2:
Place cardboard template on desired location and level the template.

Step 3:
Mark all the holes for anchors using the template.

Step 4:
Remove the template and drill holes to the correct size. For z-clips, drill 9/16" diameter and light bars drill 9/32". These dimensions may change from installation to installation, so be sure to double check your needed diameter.
Step 5:
Hammer in the poly-plug light plate anchors

Step 6:
Fasten bolts to anchors

Step 7:
Hammer in z-clip anchors into the wall so they are flush

Step 8:
Tighten bolt to engage anchor

Step 9:
Remove the bolt, add the z-clip, and tighten down the bolt. You may need to put the bolt back on and hammer it until the holes line up.
Terrazzo Example Installation

Step 11:
Assemble a team to lift the slab (this one is approximately 240 lbs.)

Step 12:
Carefully lift and center the slab into place and set it on the mating z-clips.

Step 13:
Remove the light plate finish cover, thread in aluminum spacers and screw into the anchors using #10 x 2-1/2” screws.

Step 14:
Slide finish light plate onto the light plate backing and apply siliconized grout on finish plate to ensure no light leakage.

Step 15:
Wire up the power supply and LEDs using the wiring diagram provided in the shop drawings.