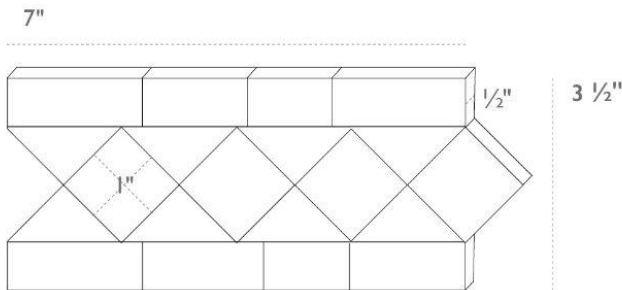
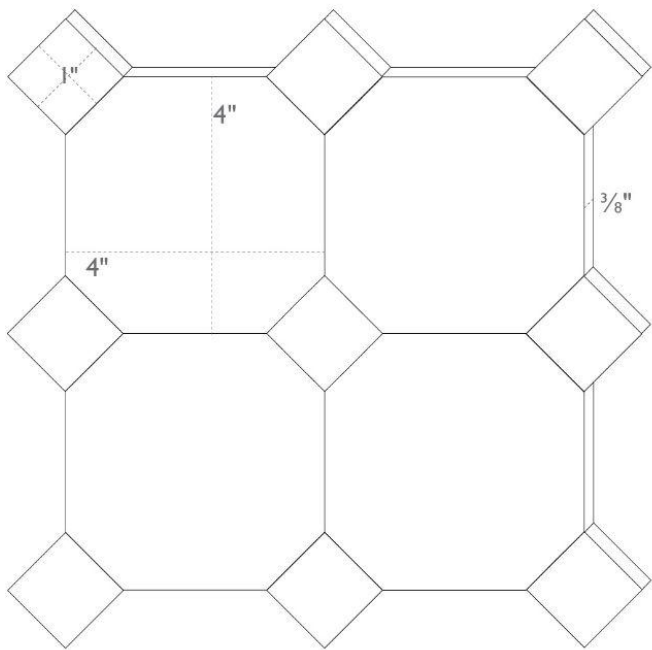


ZIO & SONS + clé

USAGE	Y / N
interior floor	Y*
interior wall	Y*
exterior floor	N
exterior wall	Y*
residential light traffic	Y
commercial light traffic	N
radiant heating compatible	Y
fireplace surround	Y
shower	Y*
steam shower	Y*
fountain waterlines	Y*
freeze thaw	N
pool waterlines	Y*
heat resistant	N
sink backsplash	Y*
stove backsplash	Y*
grout joint size	1/16"
UV resistant	Y



Standard thickness for zio & sons is 3/8" and 1/2" for border pieces.
Note that border pieces come pre-assembled and can appear to be thicker than 1/2" due to the white setting material underneath that is used to glue the individual tile pieces together.
Please note all dimensions are nominal. Additionally, dimensions can vary +/- 1/4 inch."
*There are specific installation requirements for this usage. Please discuss with your installer.

ZIO & SONS + clé

Drawing upon the rich mosaic patterns of Morocco, this collection, in collaboration with designer Anthony D'Argenzio of Zio & sons, offers two simple terracotta shapes that fit together—a 4" octagon and 1" bouchon. In four neutral shades: weathered white, sea salt, charred cedar and natural. Each octagon can be mixed with a contrasting bouchon to create countless pattern combinations and a truly custom look. The collection is perfect as an accent wall or even for a floor surface. The collection also includes pre-assembled mosaic borders perfect to frame floors, cap backsplashes and more.

What's in our tile: Zellige is a tile that has retained its ancient tile making process and, therefore, has all the hand-hewn qualities that have become synonymous with it. Essentially, a glazed terracotta tile, hand-crafted, olive-pit fired and hand chiseled to size, Zellige is a testament of ancient tile craft. If your order doesn't contain tiles with pits, cracks, iron spots, shade/size variations and chipped edges—it's not Zellige.

Due to the handmade craftsmanship of our tiles and the variety of materials used, there will be degrees of variation in color, shade, size and texture across production lots or batches. This means that your sample may not be a perfect match with your actual order, and that your add-on order may not be a perfect match to either. **This is the beauty of artisanal tile!**

INSPECTING YOUR SHIPMENT

- Due to the natural materials and production process of zellige tiles, there will be degrees of variation in color, shade and size in your order; therefore it is important to blend the tiles from all boxes once they arrive and place them in their installation area to ensure you have the layout you want before installing.
- Industry standard suggests adding at least 15% overage due to tile cuts, potential breakage, or future repairs.
 - Please note that due to the production process including the firing methods and raw materials used to create glazed clay tiles, your order of Zellige will have a percentage of tiles greater than 15% with cracks, iron spots, crazing, chipped edges, and pitting.
 - If these imperfections do not fit your project's needs we recommend ordering 20-30% overage to allow your contractor to cherry-pick tiles.
- Dust and shipping residue are to be expected and should be cleaned prior to installing.

INSTALLATION FYIs

- clé offers general information about our tiles and their unique qualities and usages. Proper installation will only be attained if you have selected a seasoned installer with years of experience with artisan tiles. Any installer without artisan tile experience will not know how to install clé tiles and will likely result in failed installations.
- As is standard in the tile industry, installation deems acceptance of materials. Do not install if there are visible issues. If you have any doubts or are unsure of what qualifies as a visible issue for the tile you are installing, please reach out to us prior to installation. Our tiles are subject to variations in color, texture, size and finish. Misuse by

contractor or end-user including but not limited to negligence, physical and/or chemical abuse is not covered by clé's warranty.

- Tile is merely the surface of your construction. Installation problems will arise from inexperienced artisan tile installers, substrate or construction engineering and/or installation issues. Please refer to your project architect, structural engineer and/or installer for best results.
- Install the tiles as late as possible in the project to minimize the risk of damaging the tile.
- Please note that since each zellige tile is hand chiseled, there may be sharp edges. Your installer will minimize the sharp edges during the installation process or after installation with a light sanding on high points.
- Do not use blue tape or other construction tape during product installation. We cannot guarantee that the tape will not erode or damage our products.
- To accommodate variations in tile sizes, wedge spacers should be used when needed to keep tile lines straight.
- Please refer to the current edition of the TCNA Handbook for best installation results and ANSI A137.1 American National Standard Specifications for Ceramic Tile to reference for specifications.

INSTALLATION AREAS

- Zellige tiles both glazed and unglazed are radiant heating compatible and can be used indoors with light residential traffic.
- Zellige tiles can be used on fireplace surrounds.
- Zellige tiles can be installed on backsplashes, in bathrooms, showers and steam showers with the application of a penetrating sealer.
- Zellige tiles can be used on shower and steam shower floors, where the natural variation on the surface of the tile can provide additional protection against slipping. Additionally, using a thicker grout line, an off-center placement and/or using smaller 2" x 2" tiles, can also provide protection because there are more grout lines.
- Zellige tiles cannot be placed where heat is directed on them (inside fireplaces, pizza ovens, oven venting).
- Zellige tiles can be used as a stove backsplash. Please consult with your installer to see if a range splash is required for your installation.
- Zellige tiles can be used on interior and exterior non-freeze thaw location walls. Refer to the "Sealing, Maintenance, and Care" section below for exterior sealing recommendations.
- Glazed zellige tiles can be installed on pool and fountain water lines with application of a penetrating sealer. Refer to the "Sealing, Maintenance, and Care" section below for sealing recommendations.
- Unglazed zellige tiles are not suitable for pool and fountain water lines.
- Zellige tiles are not freeze/thaw resistant.

GROUT

- clé recommends Mapei Flexcolor CQ grout for all zellige tile installations other than pool and fountain water lines which will require Mapei Ultracolor Plus FA grout.
- Zio & Sons border pieces come pre-assembled, revealing white setting material in between each piece. We recommend applying Mapei Grout Refresher onto the setting material to match the grout color you select for your installation.

- Mapei Grout Refresher comes in the same colors as Mapei Ultracolor Plus FA and Mapei Flexcolor CQ, allowing the color to be consistent and matched easily to your grout.
- Grout color selection is always up to our client and/or their design professional. However, clé is often asked for our opinion on best grout selections for our tiles. And due to the large array of grout colors that are now available, clé would like to offer this general guideline on a grout color selection for any of your clé tiles.
 - First, have your contractor complete your tile installation, except for the grout portion.
 - Next, ask your contractor to bring ALL grout color charts from his preferred grout manufacturer for your review.
 - Lastly, choose a time of day when you are most pleased with the lighting in your space (either natural lighting, installed lighting or a blend of both). During that lighting and time of day, select the grout color that best matches your tile selection.
- If you are working with highly color-variegated tiles or a combination of tiles, we recommend that you follow the above recommendations—but match your grout to the color in your installation that you would like to accentuate.
- We do not generally recommend using a contrasting grout color with Zellige, as it will highlight the thin hairline cracks/crazing found on the tiles, and fill in any pits, and/or chips. If you choose to use a contrasting grout (i.e. white grout with black tile) please order 20-30% overage in order to cherry-pick the tile of the imperfections that are standard to Zellige. Additionally, you must make sure to apply Stonetech Heavy Duty Sealer from Laticrete as a pre-grout treatment to minimize the possibility of the contrasting grout curing in the inherent hairline cracks, pits, and/or chips.
- If your contractor is having any issues or questions regarding this grout, please reach out to Mapei tech support directly at 1-800-992-6273 as they are the best and fastest line of contact.

SEALING, MAINTENANCE, AND CARE

- If you are installing unglazed Zellige on a busy kitchen backsplash where heavy staining is a concern, we recommend applying the clé top coat kit to the tile surface and grouted areas instead of using Laticrete sealing products. The clé top coat kit can provide even more protection against stains on backsplashes. Apply the top coat kit as the final step of installation. Please note that this product is only a top coat and should only be applied as the final step of installation. Please do not use this as a pre-grout treatment and be careful during the grouting process, using a grout bag and cleaning up as you go. Otherwise, please follow the instructions below from Laticrete.
- Please follow Laticrete's Sealing, Maintenance, and Care guide for more guidance on sealing, cleaning, maintaining, and caring for your tile installation.



STONETECH[®] Sealing, Maintenance, and Care

Clé Glazed and Unglazed Tiles

Zellige

MCI 118

NOTE: For all recommended products: read the entire product label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Avoid skin and eye contact. Always wear appropriate safety equipment during product use.

REGULAR MAINTENANCE AND CARE

Routine, daily maintenance of saltillo, terra cotta or clay brick surfaces will involve keeping dirt, dust and other soiling from building up. Exterior installations will often require more intensive maintenance and care processes. Spills, food and other potential staining materials need to be cleaned up in a reasonable period of time. Regular sweeping and light damp mopping is advisable. For larger installations these processes remain the same; only the scale will change.

Highly alkaline, acidic, ammonia based, abrasive cleaners, or bleach may damage some stone, tile and/or grout surfaces and may also degrade any applied sealer, adversely affecting stain repellency. The use of a gentle cleaner specifically formulated for stone, tile and grout maintenance is the best assurance of not harming the saltillo, terra cotta, clay brick, grout or degrading any applied sealers.

Maintenance Cleaning

Both routine damp mopping and monthly scrub cleanings of saltillo, terra cotta or clay brick surfaces can be accomplished using sponges and brushes, spray mops, and traditional mop and bucket. A wet/dry vacuum is helpful for cleaning big floors. For commercial applications, a swing machine fitted with a brush or pad or an auto-scrubber will help maintain larger installations. STONETECH has two maintenance cleaners suitable for saltillo, terra cotta or clay brick surfaces.

For routine cleaning of saltillo, terra cotta or clay brick using a cleaner and protector:

STONETECH® Revitalizer® Cleaner and Protector (Concentrate)

Read entire label before using. Use only as directed. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Keep children and pets out of the area during application and drying. 1. Dilute STONETECH Revitalizer Cleaner and Protector (Concentrate) with warm water according to the following mixing chart:

Use	STONETECH® Revitalizer® Cleaner & Protector (Concentrate)	Warm Water
Spray Refill	1 part	1 part
Light Duty	1 part	4 parts

2. Apply diluted solution with a damp mop, towel, sponge or low-pressure sprayer.
3. Rub surface lightly and remove any excess cleaner. No need to rinse.
4. Repeat if necessary, for heavily soiled areas.
5. Let area dry completely before using.

STONETECH® Revitalizer® Cleaner and Protector (Ready-To-Use)

Read entire label before using. Use only as directed. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Keep children and pets out of the area during application and drying. 1. To refill 24 oz. (709 mL) spray bottle, use a funnel.

2. Spray or pour directly onto soiled area.
3. Wipe clean with a dry towel, lint free cloth or sponge. No need to rinse.
4. Repeat for heavily soiled areas using a non-abrasive scrubbing pad.
5. Wipe clean with a dry towel.

Refer to [DS 212.0](#) for more information.

STONETECH Stone & Tile Cleaner (Concentrate)

Read entire label before using. Use only as directed. Be sure surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact with product. Wear protective eyewear and gloves when handling concentrate. Keep children and pets out of the area during application and drying.

1. Dilute STONETECH® Stone & Tile Cleaner (Concentrate) with warm water according to the following mixing chart:

Use	STONETECH® Stone & Tile Cleaner (Concentrate)	Warm Water
Light Duty	1 part	64 parts
Heavy Duty	1 part	32 parts

2. Apply mixed solution with a damp mop, sponge or appropriate professional cleaning equipment.
3. Clean entire area with mop, changing cleaning solution often to ensure that soil is not redeposited. Wipe or rinse cleaned area.
4. Let area dry completely before using.

STONETECH Stone & Tile Cleaner (Ready-To-Use)

Read entire label before using. Use only as directed. Be sure surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact with product. Wear protective eyewear and gloves when handling concentrate. Keep children and pets out of the area during application and drying.

1. Spray or pour directly onto soiled area.
2. Wipe clean with a dry towel, lint free cloth or sponge. No need to rinse.
3. Repeat for heavily soiled areas using a non-abrasive scrubbing pad.
4. Wipe clean with a dry towel.

Refer to [DS 211.0](#) for more information.

NEW INSTALLATION PRE-GROUT TREATMENT

Grouting cleanup is often easier when the stone is sealed prior to grouting. Saltillo, terra cotta and clay brick can be porous and are susceptible to grout staining and may benefit from sealing prior to grouting.

A simple water test can be performed to identify if the stone is porous. If the saltillo, terra cotta or clay brick darkens after applying water to its surface and waiting for 5 minutes, then the tile is absorbent and applying a sealer prior to grouting may aid in clean up after grouting. For most stones that darken when wet a single application of sealer is generally sufficient as a pre-grouting treatment.

For a pre-grout sealer for saltillo, terra cotta or clay brick:

STONETECH® Heavy Duty Sealer

Pre-Grout Sealer Application

Read entire label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Make sure surface is clean and free of waxes and coatings. STONETECH® Heavy Duty Sealer may be applied to damp surfaces one hour after standing water has been removed. Surface temperature should be between 50°F - 80°F (10°C - 26°C). Ensure that the area is well ventilated during application and until the surface is dry. Keep children and pets out of the area until treated surface is dry.

1. Ensure cap is closed and sealed and shake well before use.
2. Mask off surfaces not intended to be treated.
3. Liberally apply an even coat of STONETECH Heavy Duty Sealer using a paint pad, roller, brush or low pressure sprayer.

4. Allow the sealer to penetrate the surface for 10-15 minutes. During this time, keep the surface wet with sealer, adding more sealer as needed. DO NOT ALLOW SEALER TO COMPLETELY DRY ON THE SURFACE.
5. Thoroughly wipe dry the entire surface with clean absorbent towels.
6. A second coat may be needed for porous, absorbent surfaces. If a second coat is required, it should be applied within 30-40 minutes from the initial application as directed in steps 3-5.
7. Allow sealer to cure for 24 hours prior to grouting.
8. Clean tools used during application with water.

Refer to [DS 279.0](#) for more information.

RESTORATIVE DEEP CLEANING

Stone, tile and grout installations can become heavily soiled over time. Restorative cleaning processes will help return these surfaces to a more acceptable appearance.

The following restorative surface cleaning processes are done in preparation for resealing or for specialized surface cleaning circumstances. These cleaning processes should not damage the surface of the Saltillo, terra cotta or clay brick. However, these types of heavy-duty cleaning methods may degrade or strip many sealers from the application.

Depending on the type of soiling or staining, select one of the following options:

For cleaning grease, oil, dirt, dry soil, or to prepare for resealing:

STONETECH® KlenzAll™ Cleaner (Concentrate)

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine ease of use and desired results. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact with product. Wear protective eyewear, gloves, long sleeves, and long pants while handling concentrate. Ensure work area is well-ventilated during application and until surface is dry. Keep children and pets out of the area during application and drying.

The following is a restorative surface cleaning process which is done in preparation for resealing or for specialized surface cleaning circumstances. This process should not damage the stone surface; however, this type of heavy-duty cleaning will degrade or strip many sealers from the application.

1. Dilute concentrated STONETECH KlenzAll™ Cleaner with warm water according to the following mixing chart:

Use	STONETECH® KlenzAll™ Cleaner (Concentrate)	Warm Water	pH
Light Duty	1 part	8 parts	10.7
Medium Duty	1 part	4 parts	11
Heavy Duty	1 part	2 parts	11.3

2. Apply mixed solution with a mop, clean cloth or low-pressure sprayer. Avoid applying cleaner on unintended surfaces.
3. Lightly scrub with a scrub brush or floor machine as needed.
4. Remove STONETECH® KlenzAll™ Cleaner using a clean cloth, wet/dry vacuum or damp mop. 5. Rinse area well with clean water. Allow area to dry completely.
6. Some surfaces may require additional cleaning. If so, repeat steps 2 – 5 above.
7. Reseal cleaned area with an appropriate STONETECH sealer (e.g. STONETECH BulletProof® Sealer). Refer to [DS 215.0](#) for more information.

Removal of efflorescence, mineral deposits, and calcium-based staining:

STONETECH® Restore™ Acidic Cleaner

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine required dilution and results. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Heavy duty dilution may darken some surfaces. **This acid-based cleaner will etch or damage most marble, limestone and travertine surfaces. Will etch or corrode most metal surfaces.** Avoid skin and eye contact. Wear protective eyewear, gloves, long sleeves, and long pants while handling product. Ensure work area is well ventilated during application and until surface is dry. Keep children and pets out of the area during application and drying.

1. Dilute concentrated STONETECH Restore™ Acidic Cleaner with warm water according to the following mixing chart:

Use	STONETECH® Restore™ Acidic Cleaner (Concentrate)	Warm Water	pH
Light Duty	1 part	16 parts	1.4
Medium Duty	1 part	4 parts	1.2
Heavy Duty	1 part	1 part	<1

2. Mask off and protect any metals or other surfaces not intended to be treated. Apply mixed solution with a clean mop, or towel.
3. Agitate with a scrub brush or floor machine as needed.
4. Remove STONETECH Restore Acidic Cleaner using a clean cloth, wet/dry vacuum or damp mop. 5. Rinse area well with clean water and wipe dry.
6. Thoroughly rinse all metal surfaces with clean water. Clean and rinse equipment with water. 7. Reseal cleaned area with an appropriate STONETECH sealer (e.g. STONETECH BulletProof® Sealer). Refer to [DS 216.0](#) for more information.

Removal of cement grout hazes, stripping topical coatings, acrylic finishes or heavy waxes:

STONETECH Epoxy Grout Haze & Coating Stripper

Read entire label before using. Use only as directed. Test in a small inconspicuous area to determine ease of application and desired results. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Ensure work area is well-ventilated during application and until surface is dry.

Keep children and pets out of the area until surface use resumes. Avoid contact with surfaces not intended to be treated. Avoid applying in direct sunlight. Should not be used in extreme temperatures.

Recommended application temperature range is between 50°F - 90°F (10 °C - 32 °C).

1. SHAKE WELL BEFORE USING. Do not dilute before applying.
2. Wear rubber gloves and eye protection during handling and application to prevent skin and eye contact. 3. Liberally apply an even coat of STONETECH® Epoxy Grout Haze & Coating Stripper over the required area with a paint brush, mop or paint pad. DO NOT APPLY WITH A SPRAYER. Immediately remove STONETECH Epoxy Grout Haze & Coating Stripper from unintended surfaces with a wet cloth to prevent potential damage to those surfaces.
4. Application time will vary depending on type of coating being removed. Approximate application times are as follows:

Haze / Coating	Surface Type	Age of Haze/Coating		
		24 Hour	7 Days	> 7 Days
Epoxy Grout Haze	Tile	1 – 3 minutes	3 – 5 minutes	10 minutes
Epoxy Grout Haze	Natural Stone & Masonry	1 – 3 minutes	3 – 5 minutes	10 minutes

Coatings *	Tile	1 – 5 minutes	
Coatings *	Natural Stone & Masonry	1 – 5 minutes	10 minutes

5. Do not let STONETECH Epoxy Grout Haze & Coating Stripper dry on the surface. If STONETECH Heavy Duty Epoxy Grout Haze & Coating Stripper starts to dry, add additional product to keep surface wet.
6. Agitate surface with a nylon scrub brush or pad after testing a small area first to make sure that brush or pad will not scratch the surface. Surface can be wet with water to enable easier removal of coating.
7. Wipe up residual STONETECH Epoxy Grout Haze & Coating Stripper Coating Stripper with clean, dry cloth or wet mop. A wet/dry vacuum can be used for larger area.
8. Rinse surface well with clean water.
9. More than one application may be required, repeat steps 3 through 8 when necessary. 10. Surface traffic may begin 2 hours after removal of coating.

Refer to [DS 116.4](#) for more information.

For spot or small area deep cleaning:

STONETECH® DeepKlenz™ Cleaner

Read entire label before using. Use only as directed. Test in a small inconspicuous area to determine required results. Be sure all surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact with product. Wear protective eyewear, gloves, long sleeves, and long pants while handling concentrate. Ensure work area is well-ventilated during application and until surface is dry. Keep children and pets out of the area during application and drying. Recommended application temperature range is between 40°F - 100°F (4°C - 38°C).

1. Thoroughly wet surface by directly spraying onto soiled area.
2. Allow STONETECH DeepKlenz™ Cleaner to work on the surface for 5-10 minutes. Do NOT allow product to dry on the surface.
3. Lightly scrub with a stiff bristle brush to remove the surface contaminants.
4. Rinse and wipe surface with clean cloth and warm water. Repeat as needed for heavy soiled areas.
5. Reseal cleaned area with an appropriate STONETECH sealer (e.g. STONETECH BulletProof® Sealer). Refer to data sheet DS111.2 for more information.

For cleaning and removing soap scum:

STONETECH Soap Scum Remover

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine ease of use and desired results. Be sure surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact. Wear protective eyewear and gloves. Keep children and pets out of the area during application and drying.

1. Spray STONETECH® Soap Scum Remover directly on soiled areas. Avoid applying onto unintended surfaces.
2. Wipe surface with clean, dry cloth or scrub with stiff nylon brush as needed.
3. Rinse area well with clean water.
4. Wipe area dry with clean cloth.
5. Repeat as needed for heavily soiled areas.

Refer to [DS 229.0](#) for more information.

For cleaning and removing mold and mildew:

STONETECH® Mold & Mildew Stain Remover

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine ease of use and desired results. Be sure surfaces to be cleaned are swept or vacuumed to remove loose debris. Avoid skin and eye contact. Wear protective eyewear and gloves. Keep children and pets out of the area during application and

drying. Do not mix this product with other household cleaners or metals.

1. Spray STONETECH Mold & Mildew Stain Remover directly on soiled areas. Avoid applying onto unintended surfaces.
2. Clean surface with non-abrasive sponge or stiff nylon brush as needed.
3. Rinse area well with clean water.
4. Repeat as needed for heavily soiled areas.

Refer to [DS 219.0](#) for more information.

For oil stain removal:

STONETECH Oil Stain Remover.

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine that the desired results will be achieved. Make sure surface is clean, dry, and free of waxes and coatings. Ensure that area is well-ventilated and keep children and pets away from the area during application and until surface is clean and dry.

1. Using a plastic or wood spatula, stir thoroughly to mix the paste.
2. Apply a ¼" (6 mm) thick layer of paste to the stain. Ensure that the paste extends at least 1" - 2" (25 – 50mm) beyond the edge of the stain.
3. Do not cover.
4. Allow 48 – 72 hours for STONETECH Oil Stain Remover to dry.
5. Using a plastic spatula, remove the dried STONETECH Oil Stain Remover and discard. 6. Allow solvent to completely dry from the stone.
7. If stain is not completely gone after drying, repeat process.
8. Clean up residue and tools with mineral spirits.
9. Once the surface is dry, reseal the cleaned area with an appropriate STONETECH sealer (e.g. STONETECH BulletProof® Sealer).

Refer to [DS 214.0](#) for more information.

SEALING AND PROTECTING:

All saltillo, terra cotta or clay bricks are susceptible to staining from both oil and water-based materials and sealing will help protect the stone's appearance. The cement grouts used in saltillo, terra cotta or clay brick tile installations will also be more stain resistant with the application of a penetrating sealer.

For interior and exterior natural look protection from water- and oil-based staining:

STONETECH® BulletProof® Sealer

Read entire label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Allow new grout installations to cure for a minimum of 72 hours prior to application. Make sure surface is clean and free of waxes and coatings. Sealer may be applied to damp surfaces one hour after standing water has been removed. Surface temperature should be between 50°F - 80°F (10°C - 26°C). Ensure that the area is well-ventilated during application and until the surface is dry. Keep children and pets out of the area until treated surface is dry.

1. Ensure cap is closed and sealed and shake well before use.
2. Mask off surfaces not intended to be treated.
3. Liberally apply an even coat of STONETECH® BulletProof® Sealer using a paint pad, roller, brush or low-pressure sprayer.
4. Allow sealer to penetrate the surface for 10-15 minutes. During this time, keep the surface wet with sealer, adding more sealer as needed. DO NOT ALLOW SEALER TO COMPLETELY DRY ON THE SURFACE.
5. Thoroughly wipe dry the entire surface with clean absorbent towels.
6. A second coat may be needed for porous, absorbent surfaces. If a second coat is required, it should be applied within 30-40 minutes from the initial application as directed in steps 3-5.
7. Should a sealer residue appear, rewet the impacted section of the surface with sealer. Agitate the surface with a white nylon scrubbing pad to loosen residue and wipe dry with a clean, absorbent towel.
8. A full cure is achieved in 24-72 hours. Use of the treated surface may resume in 6-8 hours. If use of the surface must resume sooner, cover the treated surface with red rosin paper to protect it until full cure has been achieved.
9. Clean tools used during application with water.

Refer to [DS 282.0](#) for more information.

For a natural look water repellent on exterior surfaces:

STONETECH® Heavy Duty Exterior Sealer

Read entire label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Allow new grout installations to cure for a minimum of 72 hours prior to application. Make sure surface is clean, thoroughly dry and free of waxes and coatings. Surface temperature should be between 50°F - 80°F (10°C - 26°C). Keep children and pets out of the area until surface use resumes.

1. Mask off any surfaces not intended to be treated.
2. Liberally apply an even coat of STONETECH® Heavy Duty Exterior Sealer with a paint pad, paintbrush, paint roller or solvent-resistant, low-pressure sprayer. Do not use power sprayer. Do not thin before using. See method of application.
3. Allow sealer to penetrate the surface for 5–15 minutes; denser material may require more time for sealer to penetrate. During this time, distribute excess sealer over entire area to ensure even penetration. **DO NOT ALLOW EXCESS SEALER TO DRY ON THE SURFACE.**
4. Thoroughly wipe dry the entire surface with a clean dry cloth to completely remove all excess sealer from the surface.
5. A second coat may be needed for porous, absorbent surfaces and should be applied one hour after initial application as directed in steps 2–4.
6. If sealer was not completely wiped off and a residue appears, wipe entire surface with a towel dampened with sealer. Use a white nylon pad to loosen residue and follow with a clean, white absorbent towel to remove.
7. Full cure is achieved in 24–72 hours. Surface use may resume in 4–6 hours.
8. Clean up promptly after job is complete, since rags and equipment that are wet with product may be combustible. Clean equipment with mineral spirits and allow equipment and rags to dry in a well-ventilated area out of reach of children and pets. After rags are dry, dispose of in accordance with local waste disposal regulations.

Refer to [DS 212.5](#) for more information.

For a color enhancing impregnating sealer for interior surfaces:

STONETECH Enhancer Sealer (Water-based)

Read entire label before using. Use only as directed. Test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Allow new grout installations to cure for at least 72 hours prior to application. Be sure surface is clean, thoroughly dry and free of sealers, waxes and coatings. Not recommended for exterior surfaces. Surface temperature should be between 50°F – 80°F (10°C - 26°C). Avoid skin and eye contact. Wear protective eyewear and gloves. Ensure work area is well-ventilated during application and until surface is dry. Keep children and pets out of the area during application and drying.

1. Shake well before using.
2. Apply STONETECH® Enhancer Sealer evenly and liberally using a paint pad, low-pressure chemical resistant sprayer, roller or brush. Avoid applying sealer on unintended surfaces.
3. Allow sealer to penetrate surface for 15–30 minutes; denser material may require maximum time to penetrate surface. Spread excess sealer over entire area for even penetration.
4. Following penetration time, completely wipe surface dry with a clean dry towel. **DO NOT ALLOW EXCESS TO DRY COMPLETELY ON SURFACE.**
5. A second coat may be needed for porous, absorbent surfaces or if a darker appearance is required. Apply second coat 1 hour after start of initial application following directions in steps 1–4.
6. A full cure is achieved after 24–72 hours. Surface traffic may begin in 6–8 hours. If needed sooner, cover the floor with red rosin paper to protect it until the recommended time periods have passed.
7. Clean tools used during application with water.

Refer to [DS 217.5](#) for more information.

For a color enhancing impregnating sealer for interior and exterior surfaces:

STONETECH® Enhancer Pro™ Sealer (Solvent-based)

Read entire label before using. Use only as directed. Always test in a small inconspicuous area with a 24-hour cure time to determine ease of application and desired results. Allow new grout installations to cure for a minimum of 72 hours prior to application. Make sure surface is clean, free of waxes, coatings, and previous sealers, and is dry for 24-72 hours. Surface temperature should be between 50°F - 80°F (10°C - 26°C). Ensure that the area is well-ventilated during application and until treated surface is dry. Keep children and pets out of the area until treated surface is dry.

1. Mask off any surfaces not intended to be treated.
2. Liberally apply an even coat of STONETECH Enhancer Pro Sealer using a paint pad, roller, brush, or pump-up garden sprayer. Do not use a power sprayer, towel, or sponge for application. Do not thin before using.
3. Allow Sealer to penetrate surface for 15-20 minutes. Denser material may require more time to penetrate. DO NOT ALLOW EXCESS SEALER TO DRY ON SURFACE. Failure to remove excess sealer from surface may result in residue that may need to be mechanically removed.
4. Thoroughly wipe surface with multiple dry cloths to remove all excess sealer.
5. A second coat may be needed for more absorbent surfaces or if darker appearance is required. Sealer should be applied one hour after start of initial application, as directed in steps 2-4.
6. Full cure is achieved after 24-72 hours. Avoid surface traffic for 6-8 hours after application. If surface traffic must resume sooner, cover the floor with red rosin paper to protect it until full cure has been achieved. Red rosin paper is not needed to apply second coat.
7. Clean up promptly after job is complete. Rags and equipment that are wet with product may be flammable. Clean equipment with mineral spirits and allow to dry in a well-ventilated area. Allow rags to dry in a well-ventilated area out of reach of children and pets. When dry, dispose of in accordance with local waste disposal regulations.

Refer to [DS 218.5](#) for more information.

For a color enhancing topical protector:

STONETECH® High Gloss Finish & Sealer

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine appropriate application method, achievement of desired results, and to ensure good adhesion. Surface must be thoroughly clean, dry, and free of any sealers or coatings before application. Application to a dirty or dusty surface will affect adhesion and appearance. Avoid applying in direct sunlight, surface temperature should be 50°F – 80°F (10°C - 26°C). STONETECH® High Gloss Finish & Sealer should not be applied to a wet or moist surface. Avoid applying onto surfaces not intended for treatment. For new installations with grout, sealer can be applied as soon as 72 hours after grouting. Fresh concrete slabs require a minimum of 28 days to cure before applying the sealer. Keep children and pets out of the area until treated surface is dry.

1. SHAKE WELL BEFORE USING. Do not dilute before applying.
2. Liberally apply 1-3 even coats of STONETECH High Gloss Finish & Sealer with a natural bristle paint brush, paint roller, low pressure sprayer, or pump-up garden sprayer. Avoid puddling of product during application.
3. Allow 30-45 minutes between coats or until the surface is dry.
4. Surface traffic may begin 12 hours after final application; keep installation dry for a minimum of 12 hours; full cure is achieved in 24-48 hours.
5. Keep surfaces clean and dry as finished surfaces may become slippery when wet.
6. Clean tools used during application immediately with water.

Refer to [DS 219.5](#) for more information.

STONETECH Semi Gloss Finish & Sealer

Read entire label before using. Use only as directed. Always test in a small inconspicuous area to determine appropriate application method, achievement of desired results, and to ensure good adhesion. Surface must be thoroughly clean, dry, and free of any sealers or coatings before application. Application to a dirty or dusty surface will affect adhesion and appearance. Avoid applying in direct sunlight, surface temperature should be 50°F – 80°F (10°C - 26°C). STONETECH Semi Gloss Finish & Sealer should not be applied to a wet or moist surface. Avoid applying onto surfaces not intended for treatment. For new installations with grout, sealer can be applied as soon as 72 hours after grouting. Fresh concrete slabs require a minimum of 28 days to cure before applying the sealer. Keep children and pets out of the area until treated surface is dry.

1. SHAKE WELL BEFORE USING. Do not dilute before applying.

2. Liberally apply 1-3 even coats of STONETECH Semi Gloss Finish & Sealer with a natural bristle paint brush, paint roller, or paint pad. Do not apply product with a sprayer. Avoid puddling of product during application.
3. Allow 30-45 minutes between coats or until the surface is dry.
4. Surface traffic may begin 12 hours after final application; keep installation dry for a minimum of 12 hours; full cure is achieved in 24-48 hours.
5. Keep surfaces clean and dry as finished surfaces may become slippery when wet.
6. Clean tools used during application immediately with water.

Refer to [DS 220.5](#) for more information.



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Maintenance & Care Instructions are subject to change without notice. For latest revision, check our website at <https://laticrete.com> MCI 118 R 20 February 2020

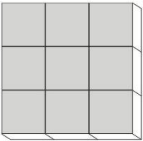
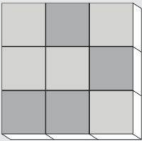
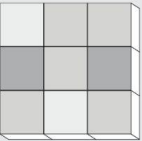
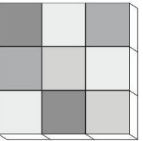
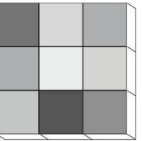
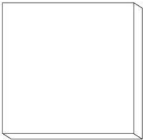
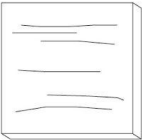
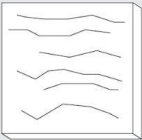
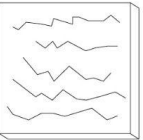
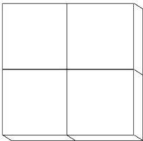
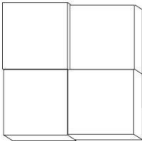
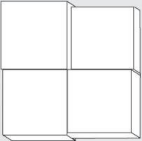
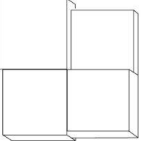
ADDITIONAL SPECIFICATIONS

COLOR,TEXTURE AND SIZE VARIATION

Zellige tiles are created from natural glazes, pigments and clay, are fired in handmade kilns using olive pits, and chiseled by hand into desired shapes and sizes. Because of the natural materials and the artisan production methods, there will be noticeable variations in thickness, size, shade and color. There may even be differences in the same color across different sizes of zellige. If you want a uniform looking glazed tile, zellige may not be right for your project.

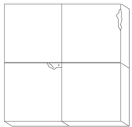
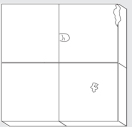
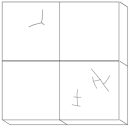
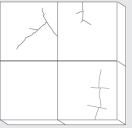
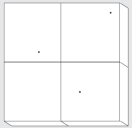
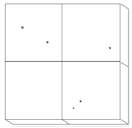
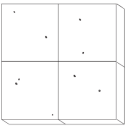
The following is a guide for the different degrees of variation that we have assigned our tiles:

Zio & Sons glazed zellige tiles are rated 'level 3 medium', and the unglazed tiles are rated 'level 2 slight', for color variation. All Zio & Sons zellige tiles are rated 'level 3 medium' for texture variation, and 'level 3 heavy' for size variation.

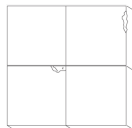
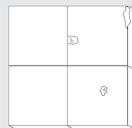
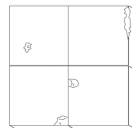
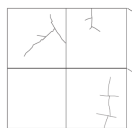
CATEGORY	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5
COLOR VARIATION	 low	 slight (for unglazed tile)	 medium	 heavy	 extreme
TEXTURE VARIATION	 smooth	 slight	 medium	 heavy	n/a
SIZE VARIATION	 slight	 medium	 heavy	 extreme	n/a

IMPERFECTIONS

Glazed tiles: All Zio & Sons glazed zellige tiles are rated 'level 2 medium' for pits/chips and cracks/crazing, with the exception of charred cedar which is rated 'level 3 heavy', are rated 'level 2 medium' for pits/chips and cracks/crazing. For iron spots, all glazed tiles are rated 'level 1 light'.

	LEVEL 1	LEVEL 2	LEVEL 3
PITS/CHIPS	 light	 medium	 heavy (charred cedar)
CRACKS /CRAZING	 light	 medium	 heavy (charred cedar)
IRON SPOTS	 light	 medium	 heavy

Unglazed tiles: Zio & Sons unglazed zellige tiles are rated 'level 2 medium' for pits/chips, and 'level 1 light for cracks'.

	LEVEL 1	LEVEL 2	LEVEL 3
PITS/CHIPS	 light	 medium	 heavy
CRACKS	 light	 medium	 heavy

FLOOR RATING

zio & sons are rated I (can be used for light residential foot traffic)

I light residential

for residential areas with light foot traffic. examples can include bathroom, bedroom, formal dining and living rooms. please note the following:

- not suitable for shoes with hard sole profiles (cleats, stilettos, etc.)
- the floor must be kept clean from abrasive debris (gravel, mud, salt, etc.)
- immediately clean all stains (food, personal and household care products, oils, paints, chemicals etc.)

II heavy residential

for residential areas with continuous foot traffic. examples can include entry, hallway, kitchen, foyer, laundry and mud rooms. please note the following:

- the floor must be kept clean from abrasive debris (sand, gravel, mud, salt, etc.)
- immediately clean all stains (food, personal and household care products, oils, paints, chemicals etc.)

III light commercial

for commercial areas with light foot traffic. examples can include commercial offices, doctor's offices and boutiques. please note the following:

- the floor must be kept clean from abrasive debris (sand, gravel, mud, salt, etc.)
- immediately clean all stains (food, personal and household care products, oils, paints, chemicals etc.)

IV heavy commercial

for commercial areas with continuous foot traffic. examples can include hotel lobby, retail, corridors in an office building, shopping mall and restaurant. please note the following:

- the floor must be kept clean from abrasive debris (sand, gravel, mud, salt, etc.)
- immediately clean all stains (food, personal and household care products, oils, paints, chemicals etc.)

V industrial

standard industrial floor use with no extreme, heavy breakage or spillage. examples can include restaurant kitchen, bar work area, winery production, exterior hotel entry, airport, car showroom, driveway. please note the following:

- the floor must be kept clean from abrasive debris (sand, gravel, mud, salt, etc.)
- immediately clean all stains (food, personal and household care products, oils, paints, chemicals etc.)

PRODUCT DESCRIPTION

Handmade, glazed terracotta tiles.

PRODUCT COMPONENTS

Clay, glaze, pigments.

PITTING, CRACKING & CHIPPED EDGES

Note that due to the firing methods and raw materials used to create glazed clay tiles, your order of Zellige will have a percentage of tiles greater than 15% with cracks, iron spots, crazing, edge-chipping and pits through the glaze to the clay body.

If these imperfections do not fit your project's needs we recommend ordering more than 15% overage. This allows your contractor to cherry-pick these imperfections from your order.

DIMENSIONS

Octagon	10.16 cm x 10.12 cm x .95 cm (4" x 4" x $\frac{3}{8}$ ") / .18 kg per tile (.40 lb)
Bouchon	3.18 cm x 3.18 cm x .95 cm (1 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " x $\frac{3}{8}$ ") / .05 kg per tile (.10 lb)
Border	20.3 cm x 8.9 cm x 1.27 cm (8" x 3 $\frac{1}{2}$ " x $\frac{1}{2}$ ") / .30 kg per piece (.67 lb)

* Please note all dimensions are nominal. Additionally, dimensions can vary +/- $\frac{1}{4}$ ".

AVERAGE COEFFICIENT OF FRICTION (DCOF ACUTEST)

"Wet Dynamic Coefficient of Friction" (DCOF)

Natural zellige 4"x4" avg. .80

Glazed zellige 4"x4" avg. .25

Please note that the application of a sealant may help increase slip resistance.

FREEZE/THAW RESISTANCE (ASTM C1026)

Zellige tiles are not freeze/thaw resistant.

WATER ABSORPTION (ASTM C373)

Natural: avg. 21.9%

Glazed: avg. 22.9%

ACID RESISTANCE

Zellige tiles are not resistant to acids and should be cleaned with pH neutral cleaners.

LEED CREDITS

The product is an inherently non-emitting source of VOCs (stone, ceramic, metals, powder-coated metals, plated or anodized metal, glass, cement, clay brick, and unfinished or untreated solid wood) and has no integral organic-based surface coatings, binders, or sealants.

Zellige tiles are considered ‘inherently non-emitting sources’ under the Low-emitting Materials Credit of LEEDv4/v4.1. This is currently the only credit for our Zellige tile that is eligible to be used toward LEED.

‘Inherently non-emitting’ means that these tile types have been shown to not contribute emissions to indoor environments and are therefore exempt from demonstrating compliance with CDPH v1.1-2010 or CDPH v1.2-2017.

Use of these tiles as Wall or Flooring materials should be entered in the LEED v4.1 low-emitting materials Calculator and identified as ‘inherently non-emitting’ in the Products Tab (Column L).

Disclosures for MR Credit Material Ingredient Disclosures under LEEDv4/v4.1, are not available at this time. We are exploring our disclosure options and have not established a timeline for completion.

Disclosures for MR Credit Environmental Product Declarations under LEEDv4/4.1, are not available at this time. We are exploring our disclosure options and have not established a timeline for completion.

Contribution to MR Credit Material Sourcing under LEEDv4/v4.1, does not apply as there is no recycled content, no bio-based materials, no wood, no reused products included in our tile at this time. Extended producer responsibility programs are highly difficult to manage given the nature of end-of-use tile removal methods. *Tile can last hundreds of years but fashions often change, which is the dominant reason for its removal. We work hard to ensure our terracotta tiles can withstand the test of time while remaining timeless.*

RECYCLED CONTENT

There is no recycled content in our zellige tiles at this time. See material sourcing disclosure above.

PERCENTAGE OF PRE-CONSUMER AND/OR POST-CONSUMER MATERIALS

There is no pre-consumer or post-consumer material content in our tiles at this time. See material sourcing disclosure above.

FIRE RATING

Typically, ceramic tile does not need to have fire rating testing performed. It is our understanding from TCNA that the explanation that ceramic is inorganic, inert, and typically free of materials that could burn or produce smoke is generally enough to satisfy a specifier and that testing is not necessary. Also, the temperatures observed in the testing are typically lower than the temperatures at which ceramic tiles are fired.

Zellige is a ceramic tile and falls under the description, “because ceramic tile is non-flammable and does not produce smoke in a fire, it inherently meets the flame spread and smoke development requirements of Section 803 of the International Building Code (IBC) for interior wall and ceiling materials.” Please follow the link for a TCNA document supporting this and many other positive attributes to using ceramic tiles. [TCNA Bulletin: Ceramic Tile for a Safe & Healthy Home](#).