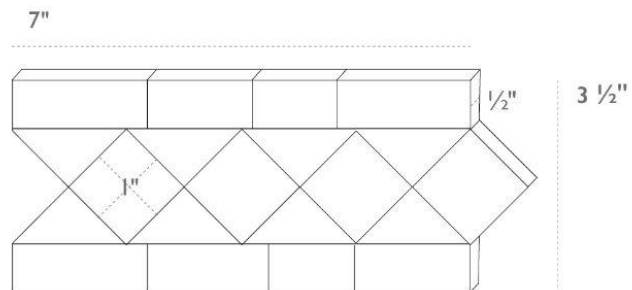
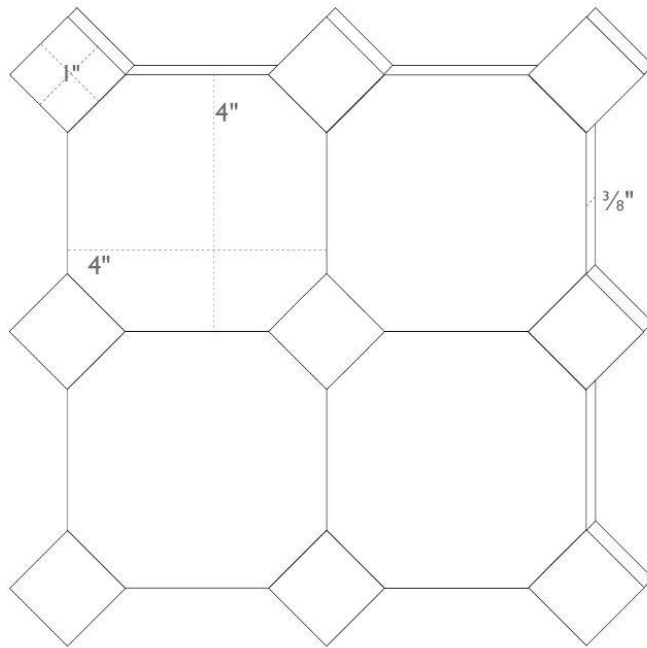


# ZIO & SONS + clé

| 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

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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!**

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## 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 shipping 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. \*PLEASE CONFIRM YOUR INSTALLER'S LEVEL OF ARTISAN TILE EXPERIENCE. Your installation will only be as good as your installer.
- 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.

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## 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.

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## 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.

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## SEALING, MAINTENANCE, AND CARE

- Please follow Laticrete's [Sealing, Maintenance, and Care guide](#) for more guidance on sealing, cleaning, maintaining, and caring for your tile installation.
- **If you have any questions regarding Laticrete products or how to use them, please contact Laticrete directly by phone: 1-800-243-4788 X 1235.**

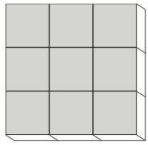
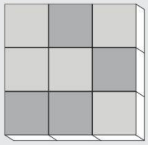
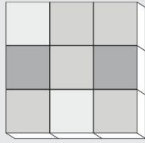
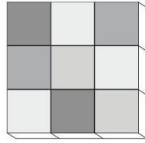
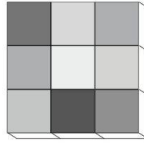
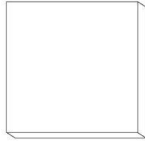
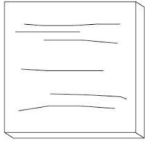
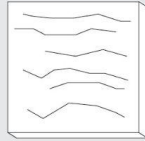
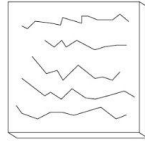
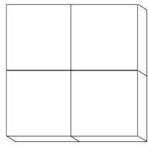
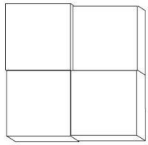
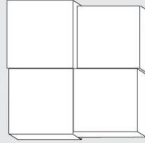
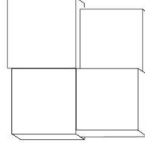
# ADDITIONAL SPECIFICATIONS

## 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.

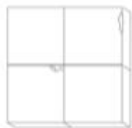
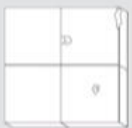
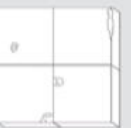






The following is a guide for the different degrees of variation that we have assigned our tiles:

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.



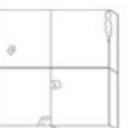

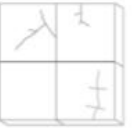
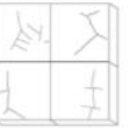
| CATEGORY          | LEVEL 1   | LEVEL 2  | LEVEL 3   | LEVEL 4  | LEVEL 5   |
|-------------------|---|--|---|--|---|
| COLOR VARIATION   |  <p>low</p>     |  <p>slight<br/>(for unglazed tile)</p> |  <p>medium</p>  |  <p>heavy</p>    |  <p>extreme</p> |
| TEXTURE VARIATION |  <p>smooth</p> |  <p>slight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

## IMPERFECTIONS

**Glazed tiles:** All Zio & Sons glazed zellige tiles are rated 'level 2 prevalent' for pits/chips and cracks/crazing, with the exception of charred cedar which is rated 'level 3 heavy' 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       |  <p>will occur</p> |  <p>prevalent</p> |  <p>heavy<br/>(charred cedar)</p> |
| CRACKS / CRAZING |  <p>light</p>      |  <p>medium</p>    |  <p>heavy<br/>(charred cedar)</p> |
| IRON SPOTS       |  <p>light</p>     |  <p>medium</p>   |  <p>heavy</p>                    |

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

|            | LEVEL 1   | LEVEL 2  | LEVEL 3  |
|------------|---|--|--|
| PITS/CHIPS |  <p>will occur</p> |  <p>prevalent</p> |  <p>heavy</p> |
| CRACKS     |  <p>light</p>      |  <p>medium</p>    |  <p>heavy</p> |

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## 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.)

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## PRODUCT DESCRIPTION

Handmade, glazed terracotta tiles.

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## PRODUCT COMPONENTS

Clay, glaze, pigments.

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## 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.

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## DIMENSIONS

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

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

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## 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.

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## FREEZE/THAW RESISTANCE (ASTM C1026)

Zellige tiles are not freeze/thaw resistant.

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## WATER ABSORPTION (ASTM C373)

Natural: avg. 21.9%

Glazed: avg. 22.9%



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## ACID RESISTANCE

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

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## 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.*

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## RECYCLED CONTENT

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

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## 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.

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## 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.](#)