

### eometro

The turn of the Century inspired design style of Geometro incorporates nostalgic micro recycled glass hexagons into patterns echoing a distinct time & place.

This standalone collection includes 12 patterns in 3 colorways. Understated yet elegant, the Classic line combines black, white and gray. Drawing on the sights and sounds of the seashore, the Coastal line blends 3 shades of blue with white.

Contact your local distributor if you have inquiries about stock availability & custom orders.

Geometro has an extensive palette of special order colors & shapes available.



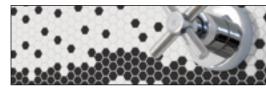
6-31 Geometro Stock Collection



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Pattern Install Disagram



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#### **Applications**



Interior Walls



Interior Floors





Bath Walls Steam Room Applications



Bath Floors



**Exterior Walls** 



Exterior Floors



Pools & Spas Full Submersion

#### **Specifications**

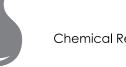


Lineal Thermal Expansion Tested (Mantel face and hearth, not approved for interior firebox)





Frost Resistant



Chemical Resistant



RECYCLED GLASS

Geometro spans 129 strikings colors - including options with 2 finishes: polished and matte. Crafted entirely from recycled glass that is ground to fine power and molded under extreme pressure and head. Colored with inert natural minerals & enamel, it is full body product immune from fading or discoloration, showing equal color thru & thru.

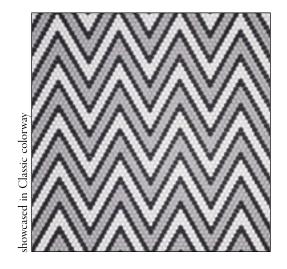
Tested for hardness and scoring a Mohs hardness of 5.5, excellent resistance to UV, common household chemicals, foot traffic, stains, and frost while delivering a slip resistance of R9, it is an excellent choice for both vertical and horizontal surfaces, both indoors and outdoors as well as fully submerged pools & spas.



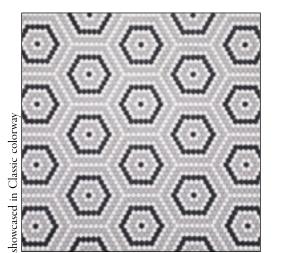
4

# GEOMETRO COLLECTION

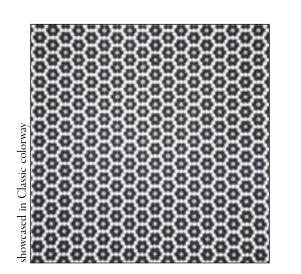
PATTERNS



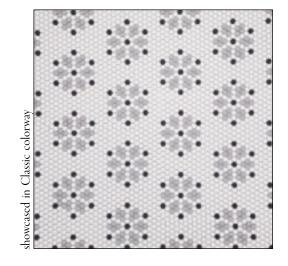
Amiens



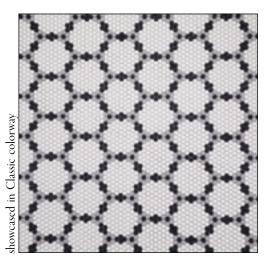
Belfort



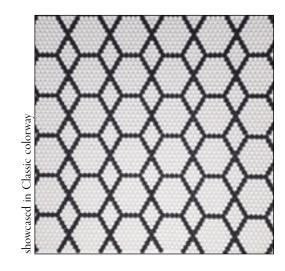
6



Bayeux

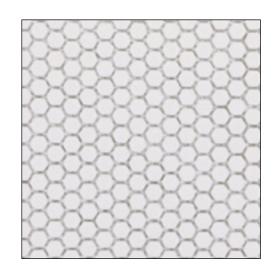


Bourges

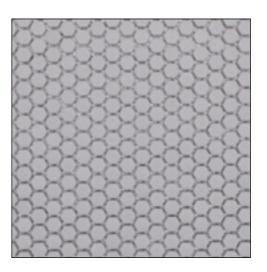


Tulle





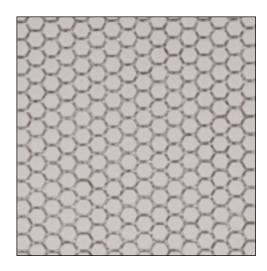
Cloud



Smoke



#### GEOMETRO COLLECTION SOLIDS



Flaxen



Dusk



Flint



Journey down the Somme river to Amiens, France. Life follows the river in Amiens with floating market gardens that have you take a lovely meandering path.

# AMIENS



Item #: GLSGEOAMIENSCOAS





CLOUD

# COUNTRY

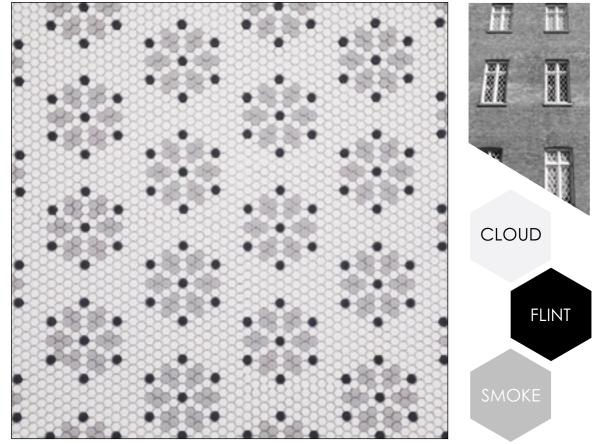
Sheet Yield: 1.09 sqft Box Yield: 7.63 sqft







Travel to the medieval center of the Normandy region, Bayeux, France. Bayeux the pattern is a wink to the art of tapestry embroidery.



CLASSIC

COASTAL

Item #: GLSGEOBAYEUXCLAS

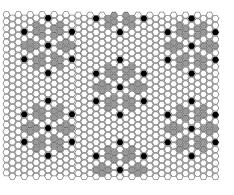


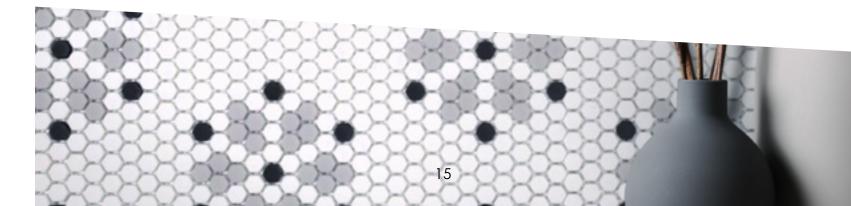
Item #: GLSGEOBAYEUXCOAS



Item #: GLSGEOBAYEUXCOUN

BAYEUX



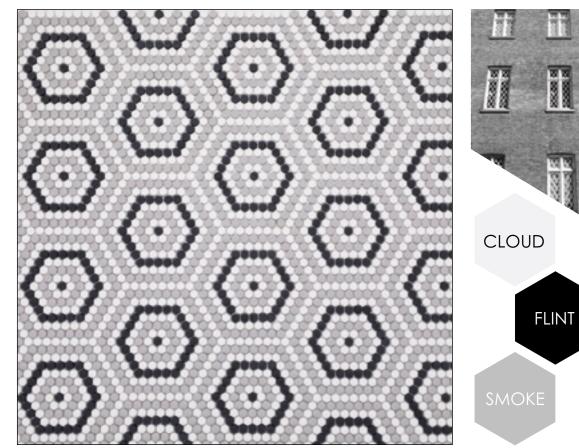


#### Sheet Yield: 0.97 sqft Box Yield: 6.79 sqft



The beauty of Belfort, France is matched by its resilience. Our pattern draws inspiration from the fortifications of Belfort's old quarter.

# BELFORT



Item #: GLSGEOBELFORTCLAS



Item #: GLSGEOBELFORTCOAS



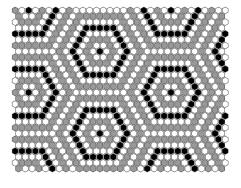
COASTAL

CLASSIC



Item #: GLSGEOBELFORTCOUN

BELFORT





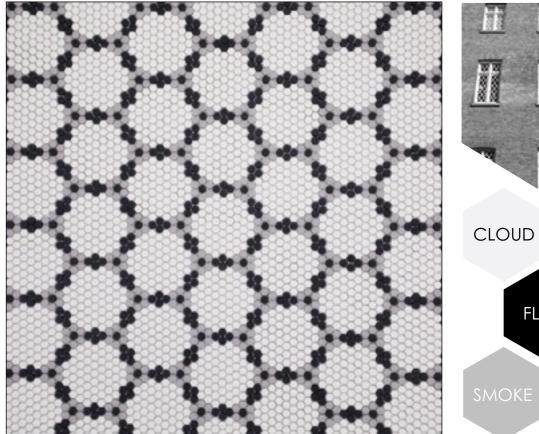
#### Sheet Yield: 1.05 sqft Box Yield: 7.35 sqft



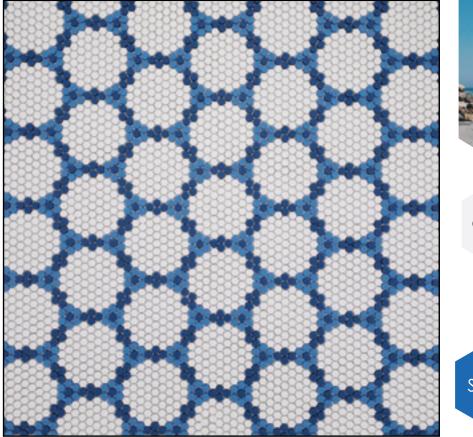
# cathedral.

# BOURGES

Gorgeous Bourges offers Understated elegance just like it's name sake Bourges, France. A perfect blend of rustic & ornate harkening to the half-timbered homes present in Bourges offset by it's world heritage site Gothic



Item #: GLSGEOBOURGESCLAS



Item #: GLSGEOBOURGESCOAS



1000

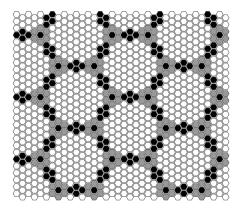
No.

FLINT

CLASSIC

Item #: GLSGEOBOURGESCOUN

BOURGES











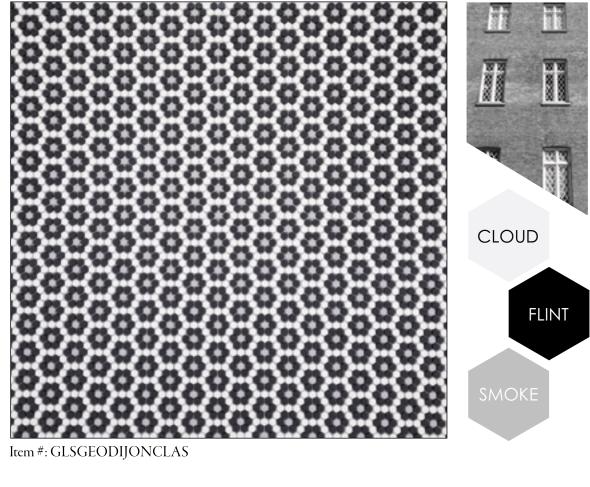


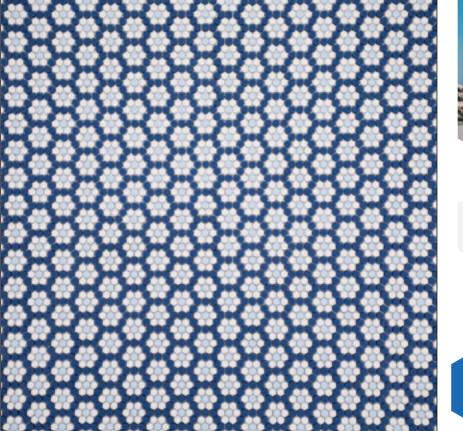
Sheet Yield: 1.13 sqft Box Yield: 7.91 sqft



Dijon France, the captial of the historic Burgundy region. This pattern is a reflection of the melange of influnces found in Dijon - Art Deco to Gohic

# DIJON





Item #: GLSGEODIJONCOAS



COASTAL

CLASSIC



Item #: GLSGEODIJONCOUN

DIJON





#### Sheet Yield: 1.13 sqft Box Yield: 7.91 sqft

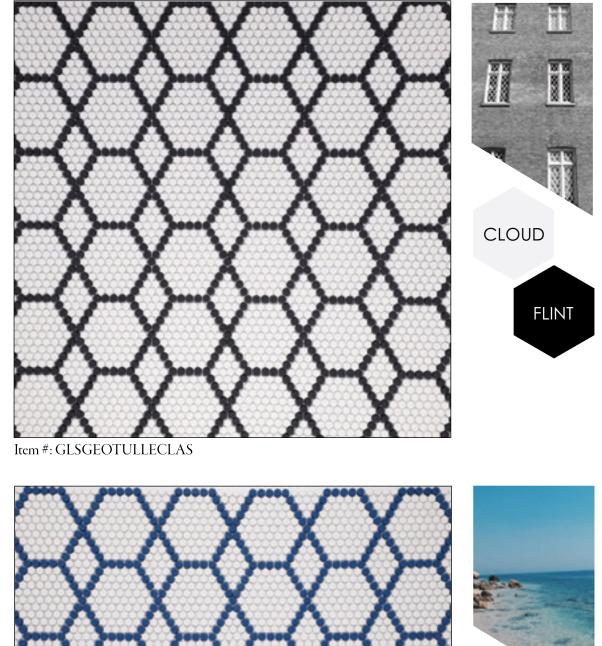


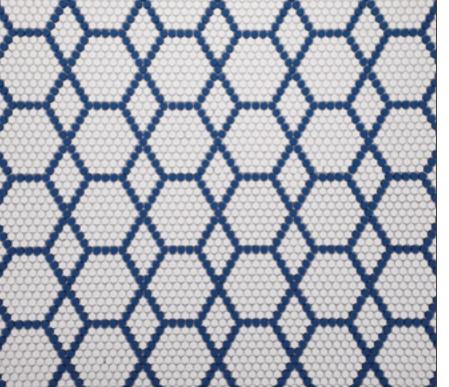
Take mak Tulle delic

# TULLE

Take a trip to the heart of lace making, Tulle, France.

Tulle is a modern homage to the delicate woven nature of lace.

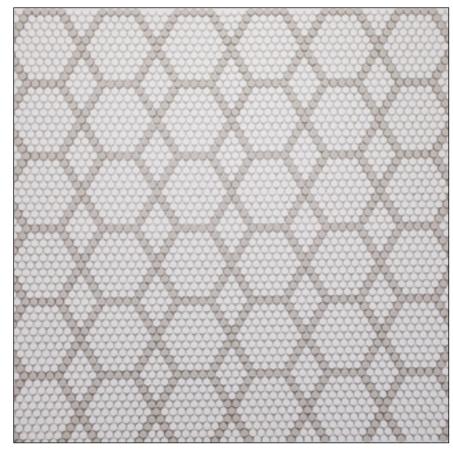




Item #: GLSGEOTULLECOAS



CLASSIC



Item #: GLSGEOTULLECOUN





COUNTRY

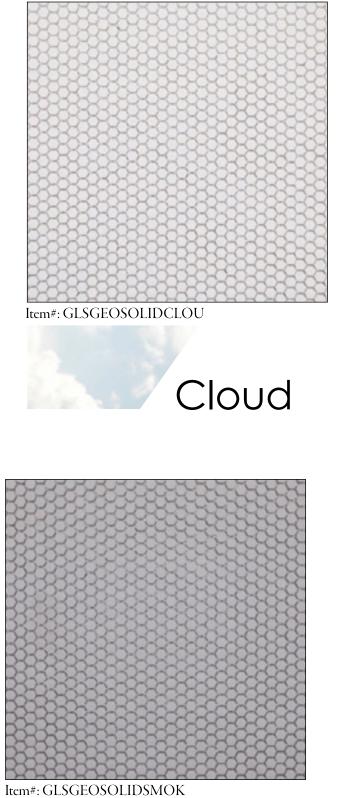
CLOUD



Sheet Yield: 0.94 sqft Box Yield: 6.58 sqft

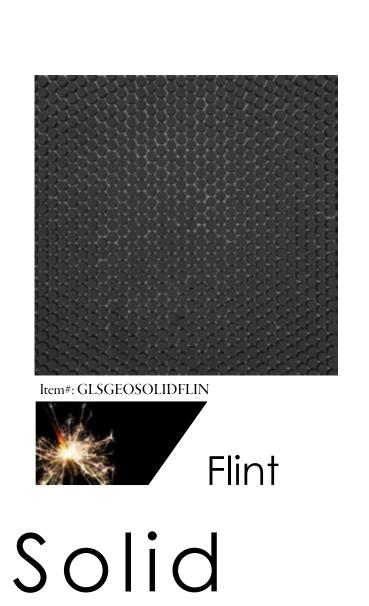
# GEOMETRO COLLECTION

SOLIDS









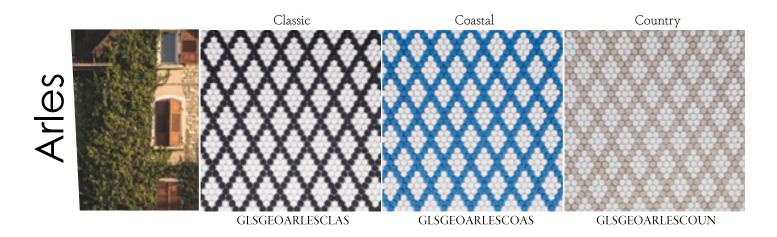
Sheet Yield: 1.01 sqft Box Yield: 7.07 sqft

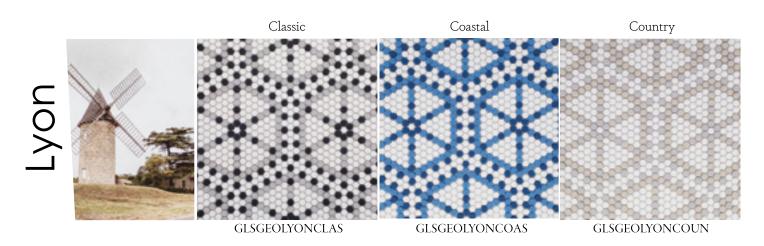


# SPECIAL ORDER PATTERNS

Contact your customer service representative for more information.

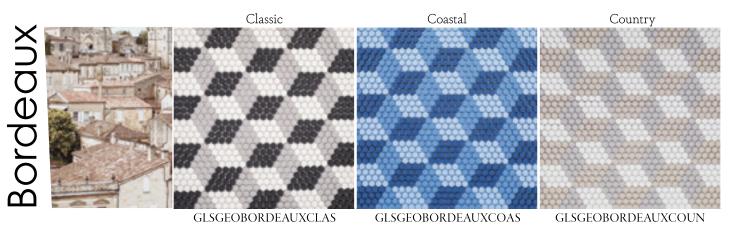
Lead time & special pricing may apply.

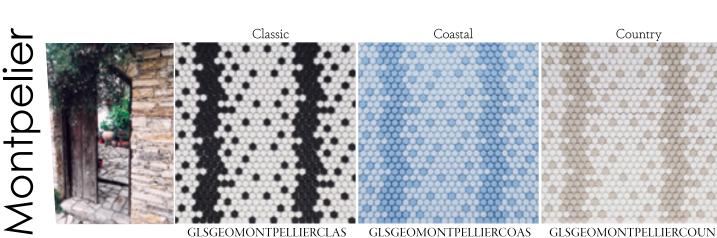


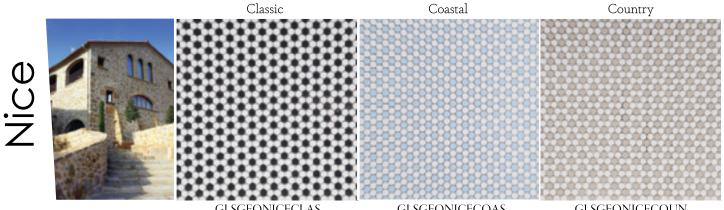


Classic Coastal Country

- GLSGEOAVIGNONCLAS
- GLSGEOAVIGNONCOAS
- GLSGEOAVIGNONCOUN







GLSGEONICECLAS

GLSGEONICECOAS

GLSGEONICECOUN

# COLOR PALETTE

129 COLOR OPTIONS • MATTE OR POLISHED • RECTIFIED CAST & NON-RECTIFIED CAST RECYCLED GLASS



| OASIS   | CASCADE | ANTIGUA   |
|---------|---------|-----------|
|         |         |           |
| OCEAN   | PEACOCK | ISLE      |
|         |         |           |
| BASIL   | SEAWEED | PINE      |
|         |         |           |
|         |         |           |
| ARAKEET | JUNIPER | ARTICHOKE |
| ARAKEET | JUNIPER | ARTICHOKE |
| VINE    | JUNIPER | ARTICHOKE |
|         |         |           |
|         |         |           |
| VINE    | FERN    | OLIVE     |

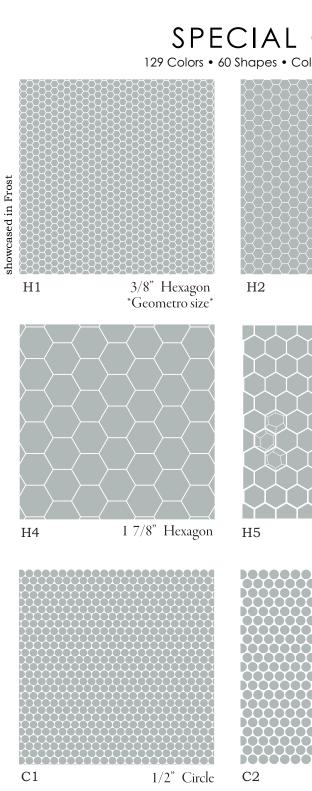
# COLOR PALETTE

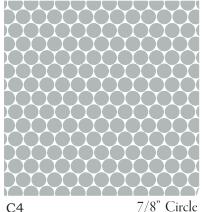
129 COLOR OPTIONS • MATTE OR POLISHED • RECTIFIED CAST & NON-RECTIFIED CAST RECYCLED GLASS



| APPLE    | SCARLET | CLAY     |
|----------|---------|----------|
|          |         |          |
| LUEBERRY | HAZE    | MULBERRY |
|          |         |          |
| METHYST  | IRIS    | EGGPLANT |
|          |         |          |
| CHAGONY  | COAL    | GRAVEL   |
|          |         |          |
| GRIT     | SHADOW  | TWILIGHT |
|          |         |          |
| LEATHER  | COIN    | GRAPHITE |
|          |         |          |
|          |         |          |
| IRON     | FLINT   |          |





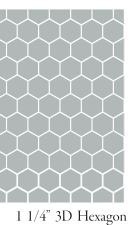


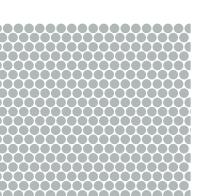
7/8" Circle C5

#### SPECIAL ORDER SHAPES 129 Colors • 60 Shapes • Color Blend Pattern Options • Matte or Polished





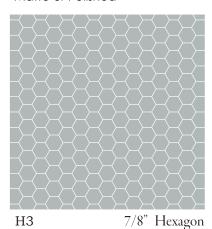


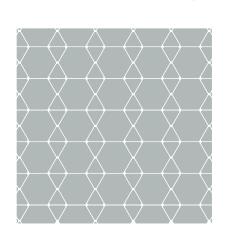


5/8" Circle

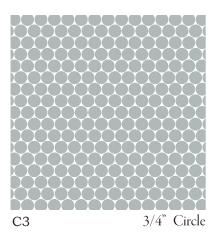


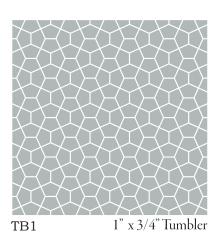
1 7/8" Circle

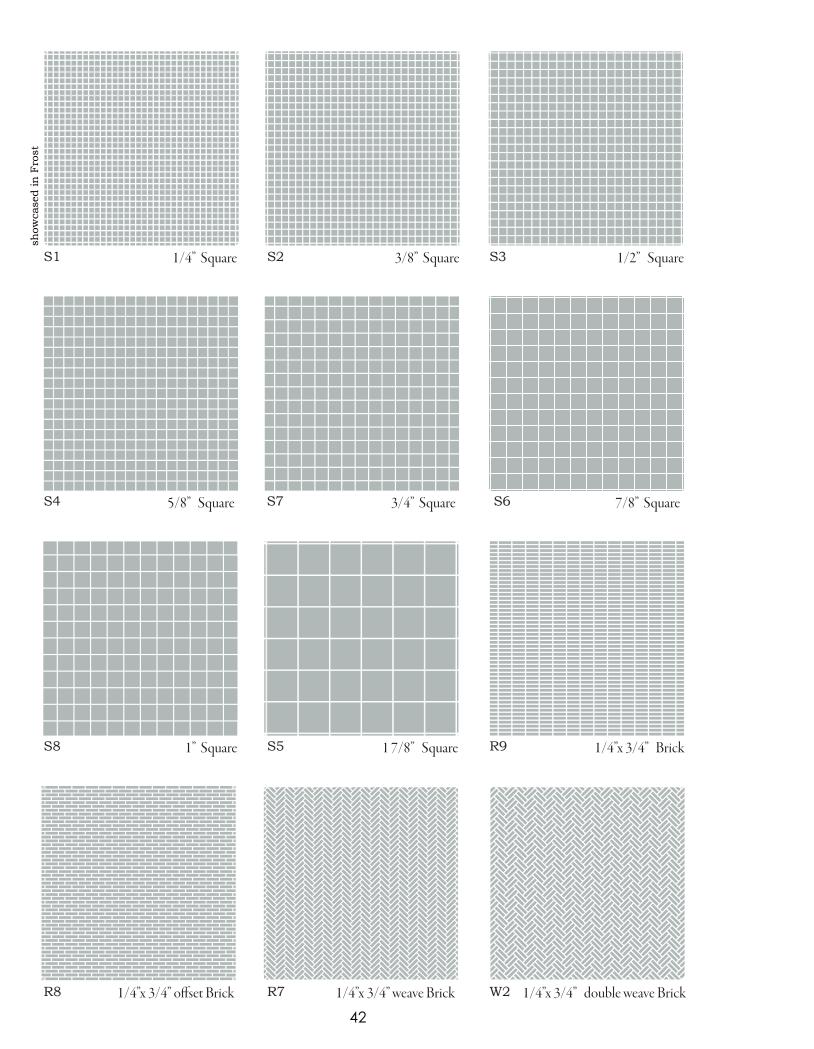




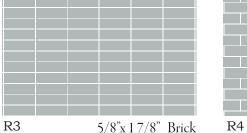
H6 1 7/8" Hexagon & Triangle

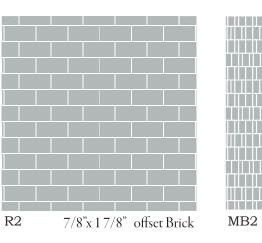


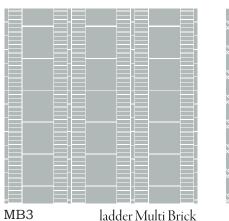




Е. showcased W1 R5 1/4"x 3/4" Weave

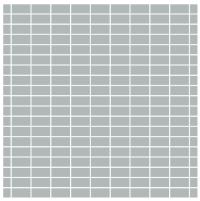




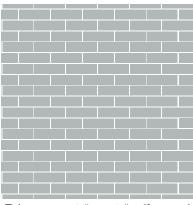


R2

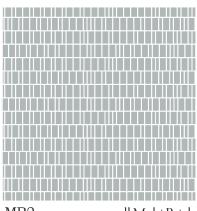
MB4



5/8"x 1 1/5" Brick



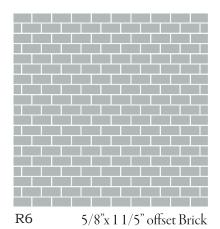
5/8"x 1 7/8" offset Brick

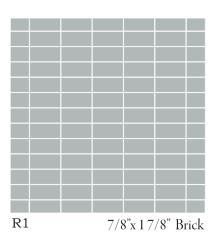


small Multi Brick



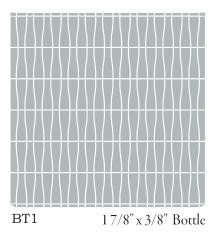
zig-zag Multi Brick 43

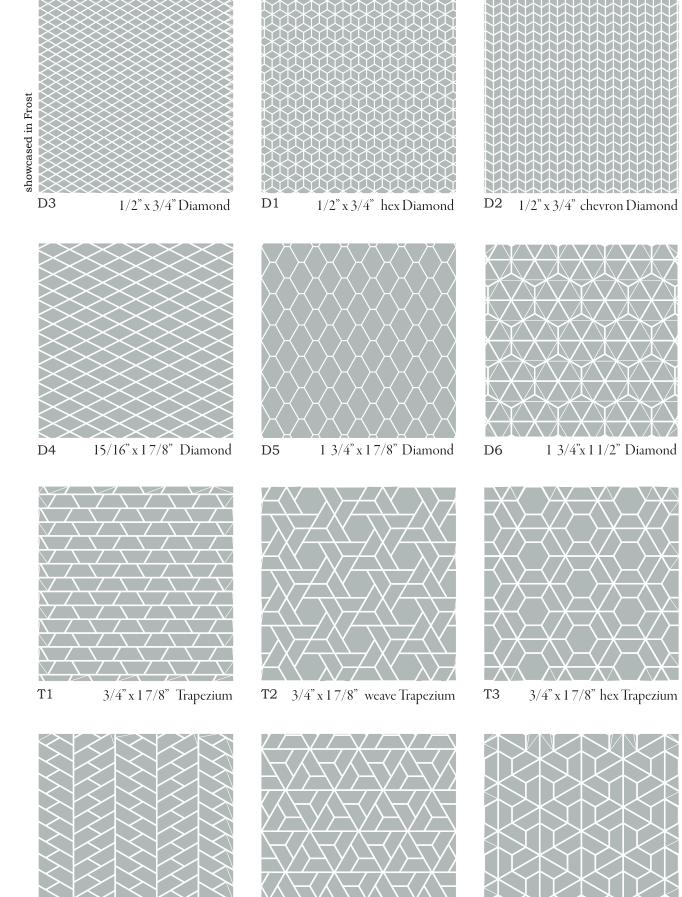




MB1

large Multi Brick



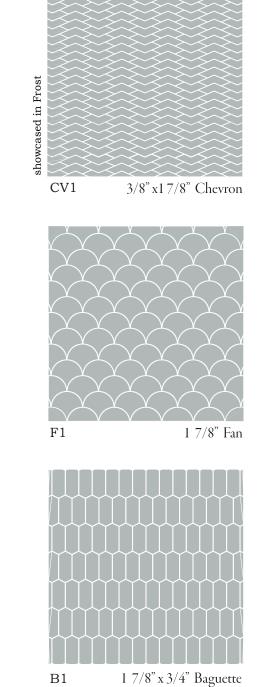


T4 3/4" x 17/8" chevron Trapezium

T5 3/4" x 1 7/8" triangle Trapezium

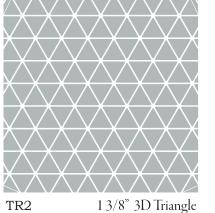


T6 3/4" x 1 7/8" star Trapezium





F2

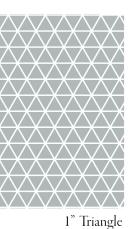


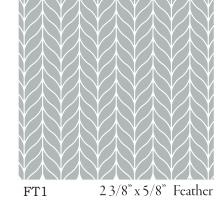


B2

1 3/8" 3D Triangle

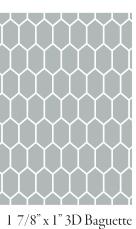
TR1





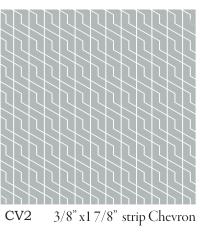
OG1

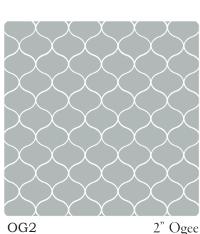
1 3/8" x 2" 3D Ogee

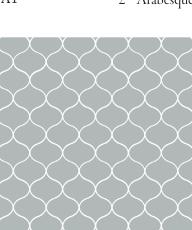


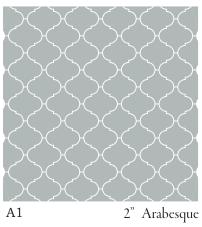






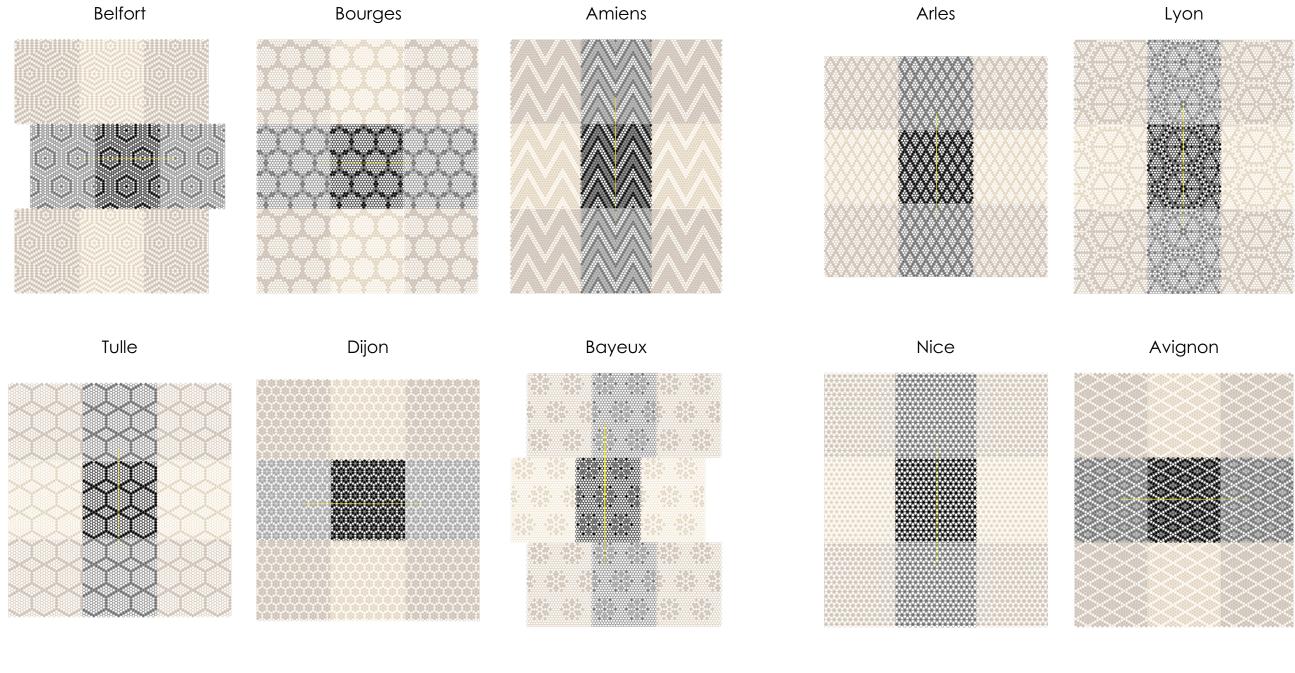




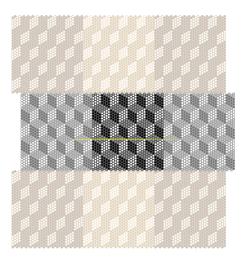


2" Ogee

## PATTERN INSTALL DIAGRAMS



#### Bordeaux



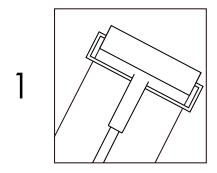
#### Montpellier



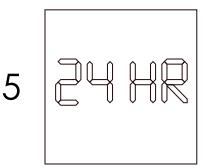
# INSTALLATION GUIDE

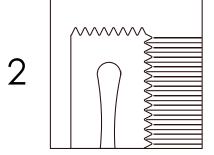
Follow Each Step as directed for best results.

Follow each step as directed for best results. It is strongly suggested to dry fit all inlays before applying thin set. Review pattern diagrams prior to installation; this will help to view each pattern in the inlay space available & catch any possible mistakes.

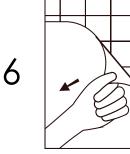


Apply a crack insulation membrane over substrate per the membrane manufacturer's instructions.

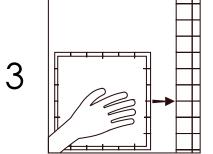




Use a V-notch trowel to apply a white glass tile thin-set mortar. Comb notches in one direction.



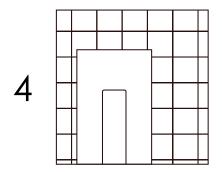
7



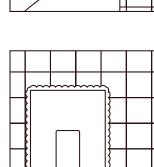
Set sheets into thin-set

\* either face-tape side out or mesh side to the wall.

\* Geometro shapes 10mm or above come face-taped. 10mm & below are back mesh mounted.



Lightly tap sheets with rubber grout float.





Wait 24 hours (minimum).

Remove film-face and remove excess thin-set from grout joints with a razor knife if necessary.

Apply grout per grout manufacturer's

All materials should be used according to manufacturer's instructions. If the mosaic includes glass tiles, please note that due to the translucent nature of glass, the color of the bonding material will impact the ultimate look of the tile. We recommend the use of specific white bonding mortars; some mixed with specific latex admix.

See the following list for required thin-set and follow manufacturer's recommended cure times for all setting materials. Pools, spas and all submerged applications require a minimum 21-day cure time after grouting and before submersion or exposure to heavy water use.

Although we require the use of highest performing setting materials for installing our products, occasionally, due to the transparent and/or light translucent nature of some of our products, visible effects, also known as "ghosting", may occur behind glass tiles.

#### When Mixing Setting and Grouting Materials:

- 1 Measure liquid and powder per manufacturer's recommendations.
- 2 Machine mixing will provide more consistent results.
- 3 Do not exceed 300 rpm or manufacturer's recommendations.
- 4 Setting and grouting materials need to slake (set) 10 to 15 minutes after mixing and be remixed before use.

#### Acceptable Setting Systems (white)

- Custom Building Products: MegaFlex Crack Prevention Mortar
- Custom Building Products: MegaLite Crack Prevention Mortar
- Flextile: 52 Versatile Floor Mortar
- Hydroment ReFlex Ultra-Premium Latex-Modified Thin Set Mortar
- Kerakoll: H40 Tenax Single Component Thin-Set
- Laticrete: 254 Platinum Multipurpose Thin Set Mortar
- Mapei: Adhesilex P10 mixed with Keraply mortar additive
- TEC (H.B. Fuller): Super Flex Premium Performance Universal Latex-Modified Thin-Set Mortar
- FOR METAL (Geometro 2.0): Litokol LitoElastic Epoxy

#### **Unacceptable Setting Systems**

- Organic adhesive (mastic) due to yellowing and low bond strength
- Epoxy due to low flexibility, as well as degeneration in UV sunlight

#### Movement Joints

Movement joints are essential for the success of most tile installations. Follow recommendations on Movement Joints EJ171-07 in the "2008 TCA Handbook for Ceramic Tile Installation." Movement joint requirements will vary depending on substrate, climate and size of installation. An architect or design professional should be consulted when specifying the exact number and location of each movement joint. Saw-tooth joints are not recommended. Certain application may require a different type of sealant.

#### Acceptable Flexale Joint Fillers

- Hydroment: Chem-Calk 900 One-Part Urethane Sealant
- Kerakoll: Sigibuild PU Poly-Urethane Sealant
- Laticrete: Latasil 100% Silicone
- Silaflex: 1A or 2C Polyurethane-based Sealant

#### Grout

Install grout mix according to manufacturer's instructions. Grout should be full and uniformly finished. Due to the impervious quality of glass, the grout will take longer to begin setting-up. For initial cleaning of grout from the tile face, use clean, dry cheesecloth. This wicks additional moisture from the grout and avoids washing out the joints. Use on a clean, damp sponge for the final cleaning and smoothing of the joints. For final polishing of excess haze use a clean, soft cloth.

#### Acceptable Grouts

- Custom Building Products: Prism SureColor Grout (can go in pools)
- Custom Building Products: Fusion Grout
- Custom Building Products: Polyblend Sanded Tile Grout ٠
- Flextile: 600 Polymer Sanded Floor Grout
- Hydroment: Sanded Ceramic Tile Grout
- Kerakoll: Fugabella 2-12
- Laticrete: 1500 Series Tile Grout or Equivalent
- Mapei: Ker200 Series and Ker700 Series Ultra/Color
- Tec: AccuColor Premium Sanded Tile Grout
- Litokol Starlike (for LeMer)
- Litokol Starlike grout or Customs Prism (for Gunmetal Geometro 2.0)

An Acrylic grout admix can improve freeze-thaw resistance. Check manufacturer's recommendations.

#### **Unacceptable Grout**

- Epoxy Grout due to low flexibility, as well as degeneration in UV sunlight
- Non-sanded grout due to shrinkage

#### Anti-Fracture/Waterproofing Membranes

- Aquafin 1K and 2K/M: Cementitious waterproofing system
- Custom Building products: RedGard Waterproofing and Crack Prevention Membrane
- Hydroment: Gold Anti-fracture and waterproofing membrane
- Laticrete: 9235 waterproof & anitfracture membrane
- Tec: T1-324 Triple-Flex waterproofing/crack isolation membrane
- Xypex: Concentrate

We do not recommend membranes directly behind the setting material when installing translucent or transparent glass tile.

Consult grout manufacturers before considering blue, green or red grout in submerged applications.



#### **Test Results of ROHS Directive**

ppm = Parts Per Million | ND = Not Detected

| Tested Elements | Results |
|-----------------|---------|
| CADMIUM (cd)    | ND      |
| LEAD (cd)       | ND      |

#### **Radioactivity of Building Materials**

Radioactivity of building materials were evaluated in accordance with GB 6566-2010, type A decoration materials.

| Tested Elements                                 | Results |
|---|---------|
| RADIUM-226 Radioactivity Rate Activity, Bq/kg   | 4.906   |
| THORIUM-232 Radioactivity Rate Activity, Bq/kg  | 2.999   |
| POTASSIUM-40 Radioactivity Rate Activity, Bq/kg | 48.61   |

#### Type A Decoration Materials

Radioactivity of building materials were conform to requirements specified in GB 6566-2010, type A decoration materials.

| Requirements               | Results |
|----------------------------|---------|
| IRRADIATION < 1.0          | < 0.1   |
| EXTERNAL IRRADIATION < 1.3 | < 0.1   |

#### **Recycled Content of Material**

The factory declares that the contents of enamel glass mosaic are silica (SIO2) and zirconium silicate; and all materials are recycled from collet. No other new raw materials are added during the manufacturing process. The recycled content of materials is 98%.

#### Water Absorption Test (ISO 10545-3:1995)

Specimen dimensions: 20mm x 20mm x 7mm, 9pcs in each group.

| Group No. | Test Results | Average |
|-----------|--------------|---------|
| 1         | 1.00         |         |
| 2         | 0.43         |         |
| 3         | 0.49         |         |
| 4         | 0.57         |         |
| 5         | 1.09         | 0.67    |
| 6         | 0.66         |         |
| 7         | 0.51         |         |
| 8         | 0.61         |         |
| 9         | 0.63         |         |
| 10        | 0.72         |         |

#### Resistance to Stain Test (ISO 10545-14:1995)

Specimen dimensions: 20mm x 20mm x 7mm, 15pcs.

| Group No. | Green Staining | lodine 13g/L | Olive Oil |
|-----------|----------------|--------------|-----------|
| 1         | 5              | 5            | 5         |
| 2         | 5              | 5            | 5         |
| 3         | 5              | 5            | 5         |
| 4         | 5              | 5            | 5         |
| 5         | 5              | 5            | 5         |

#### Thermal Stability

Specimen dimensions: 20mm x 20mm x 7mm, 50pcs.

| Test Items               | Test Method                      | Test Results  |
|--------------------------|----------------------------------|---|
| Thermal Stability        | With reference to GB/T 7697-1996 | No cracking/breakage on surface of all test specimens |
| Thermal Shock Resistance | ISO 10545-9:2013                 | Fully resistance                                      |
| Frost Resistance         | ISO 10545-12: 1995/Cor I: 1997   | Fully resistance                                      |

#### **Coefficient of Friction**

Test method: GB/T 4100-2006 Annex M determining the coefficient of friction of ceramic tile specimens: 170mm x 170mm, 3pcs. All test samples were cut from the products with the size of 320mm x 320mm.

| Test Items                         | Test Results |  |
|------------------------------------|--------------|--|
| icient of Friction for Dry Surface | 0.77         |  |
| cient of Friction for Wet Surface  | 0.50         |  |

Coeffic Coeffic

#### Resistance to Surface Abrasion

Test method: Refer to ISO 10545-7:1996 Ceramic tiles-part 7: Determination of resistance to surface abrasion for glazed tiles. Specimens: mosaic Test Results: After 1500 revolutions, visual failure occurred.

#### **Chemical Resistance**

Test method: GB/T 4100-2006 Annex M determining the coefficient of friction of ceramic tile specimens: 170mm x 170mm, 3pcs. All test samples were cut from the products with the size of 320mm x 320mm.

| Aqueous                            | Aqueous Test Solutions               |                    | Test Results |  |
|------------------------------------|--------------------------------------|--------------------|--------------|--|
| Household Chemicals                | Ammonium Chloride solution, 100g/l   | Visual Examination | Class: GA    |  |
| Swimming Pool Salts                | Sodium Hypochlorite solution, 20mg/l | Visual Examination | Class: GA    |  |
|                                    | Hydrochloric Acid solution, 3% (V/V) | Visual Examination | Class: GA    |  |
| Low Concentrations Acids & Alkalis | Citric Acid Solution, 100g/l         | Visual Examination | Class: GA    |  |
|                                    | Potassium Hydroxide solution, 30g/l  | Visual Examination | Class: GA    |  |

#### Water Absorption Test (ASTM C 373)

Samples were dried to a constant weight in an oven at 150 C, then cooled and weighed. Then were immersed in distilled water (boiling vigorously for 5 hours before cooling gradually to a total elapsed time of 29 hours). Samples were removed from water, wiped dry and immediately reweighed.

| SAMPLE NO. | DRY WT. (GRAMS) | WET WT. (GRAMS) | PERCENT WATER ABSORPTION | AVERAGE |
|------------|-----------------|-----------------|--------------------------|---------|
| 1.         | 31.46           | 31.46           | 0.00%                    |         |
| 2.         | 31.30           | 31.30           | 0.00%                    |         |
| 3.         | 29.87           | 29.87           | 0.00%                    | 0.00%   |
| 4.         | 30.44           | 30.44           | 0.00%                    |         |
| 5.         | 30.78           | 30.78           | 0.00%                    |         |

#### **Reference:**

ANSI A 137.1 (General) - When tested as described in ASTM C 373, the tile in the sample shall be impervious for porcelain paver tile and shall be impervious, vitreous or semi-vitreous for natural clay paver tile.

| Impervious Tile      | (0.5% or less Water Absorption) |
|----------------------|---------------------------------|
| Vitreous Tile        | (0.5%-3.0% Water Absorption)    |
| Semi-Vitreous Tile   | (3.0%-7.0% Water Absorption)    |
| Unglazed Quarry Tile | (Max. 5.0% Water Absorption)    |

Materials Tested Comply with Specifications. Materials Tested Did Not Comply with Specifications. No Established Criteria for Acceptable Limits. **For Information Only.** 

#### Moisture Expansion (ASTM C-370 \*Modified)

Each specimen was cut as possibly close from the center of a tile to an approximate facial dimension of 3"-3/4" x 3/4", then measured to an accuracy of 0.0001 inch. Specimens were put into an autoclave and subjected to a steam pressure of 150 PSI for five (5) hours. After pressure was released by opening a blow-off valve, the specimens were dried to a constant weight and remeasured. \*Modification: Sample Size Limitation - 0.50 Hexagon Glass Buttons

| SPECIMEN NO. LENGTH INITIA | L LENGTH FINAL | PERCENT MOISTURE EXPANSION | AVERAGE |
|----------------------------|----------------|----------------------------|---------|
| 1. 0.38850                 | 0.38850        | 0.00%                      |         |
| 2. 0.38735                 | 0.38740        | 0.01%                      |         |
| 3. 0.39740                 | 0.39740        | 0.00%                      | 0.01%   |
| 4. 0.39950                 | 0.39960        | 0.03%                      |         |
| 5. 0.39990                 | 0.39990        | 0.00%                      |         |

Materials Tested Comply with Specifications.

Materials Tested Did Not Comply with Specifications.

- No Established Criteria for Acceptable Limits.
- For Information Only.









RECTIFIED RECYCLED GLASS

# eometro

The contemporary style of Geometro features innovative geometric patterns, in a trendy color palette, which are key to the modern look.

Our Rectified Recycled Glass collection offers a near-perfect straight edge, and a flat surface. Five new patterns, four solid colors in a square shape, all in a matte finish. It is crafted entirely from recycled glass that is ground to fine powder and molded under extreme pressure and heat. Colored with inert natural minerals and enamel, it is a full body product immune from fading or discoloration, showing equal color thru & thru.

Our special-order program spans to one hundred twenty-nine striking colors, and sixty shapes in both matte and polish finish.

Find your inspiration on a picture, fabric swatch, or a magazine cut-out.

Geometro glass tiles welcome mixing and matching colors and finishes transforming any inspiration into a custom design.

Our experienced team is available to navigate our material selection and fully understand your design intent.

|           | 03 | PYTHON<br>Hydra • Draco • Hopi                                 |
|-----------|----|--|
|           | 09 | HIGHLAND<br>Bristol • Preston • Lancaster                      |
|           | 15 | MISSONI<br>Retro • Zip • Vintage                               |
|           | 21 | HYGGE<br>Log • Glow  |
|           | 25 | BARCODE<br>Puzzle • Crypto                                     |
|           | 29 | SOLIDS<br>Chalk • Frost • Graphite • Raven                     |
|           | 32 | COLOR PALETTE<br>Special Order Shapes                          |
|           | 42 | CUSTOM GLASS MOSAIC<br>Artistic Mosaic • Pixel Art             |
|           | 48 | INSTALLATION GUIDELINES<br>Pattern Diagrams • Settings Systems |
| $\approx$ | 52 | SPECIFICATIONS<br>Testing Results • Applications               |







PYTHON

# HYDRA

PART NUMBER GLSGEOPYTHHYDR

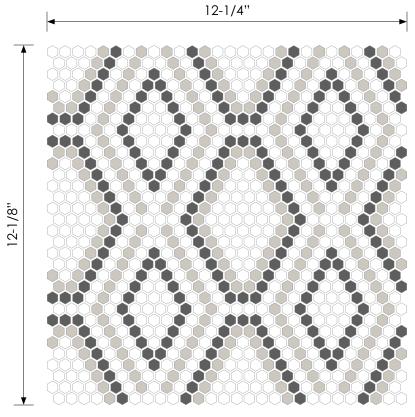
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

SF/SHEET 1.03

**SF/CASE** 10.30

CASE QUANTITY 10 PCS







# DRACO

PART NUMBER GLSGEOPYTHDRAC

MATERIAL RECTIFIED RECYCLED GLASS

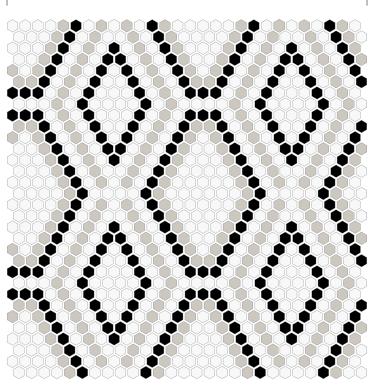
FINISH Matte

SF/SHEET 1.03

**SF/CASE** 10.30

CASE QUANTITY 10 PCS







ASH

#### HOPI PYTHON

**PART NUMBER** GLSGEOPYTHHOPI

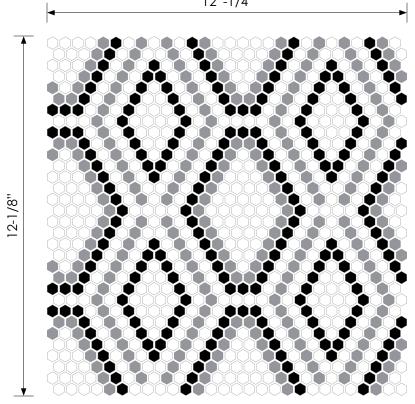
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

SF/SHEET 1.03

**SF/CASE** 10.30

CASE QUANTITY 10 PCS





3/8" RAVEN

STEEL CHALK







# HLAND H

# BRISTOL HIGHLAND

PART NUMBER GLSGEOHIGHBRIS

MATERIAL RECTIFIED RECYCLED GLASS

FINISH

MATTE

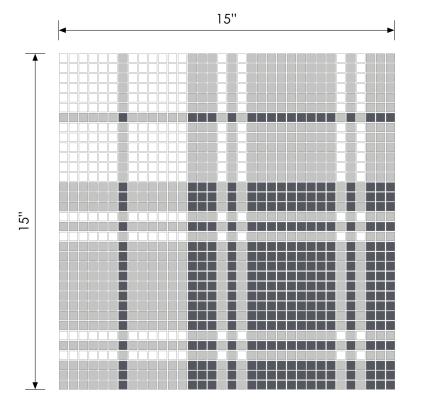
SF/SHEET

1.56

SF/CASE 15.60

**CASE QUANTITY** 

10 PCS









PART NUMBER GLSGEOHIGHPRES

MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

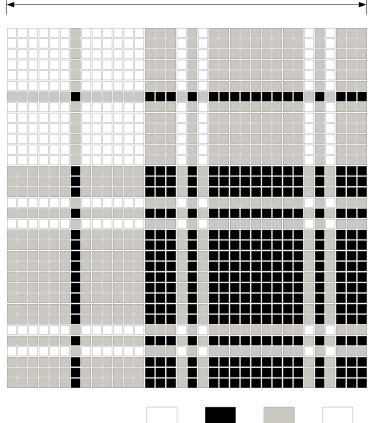
SF/SHEET 1.56

SF/CASE 15.60

**CASE QUANTITY** 10 PCS

15"

×.



3/8"

RAVEN

ASH

CHALK 11

# LANCASTER HIGHLAND

## PART NUMBER GLSGEOHIGHLANC

MATERIAL RECTIFIED RECYCLED GLASS

FINISH

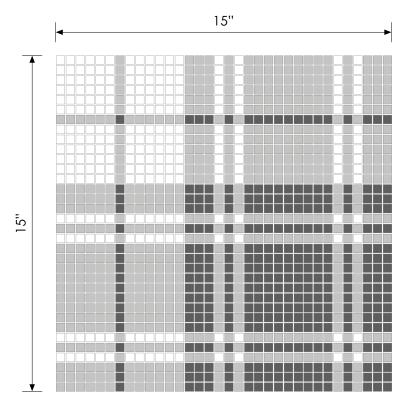
MATTE

SF/SHEET

1.56

**SF/CASE** 15.60

CASE QUANTITY 10 PCS

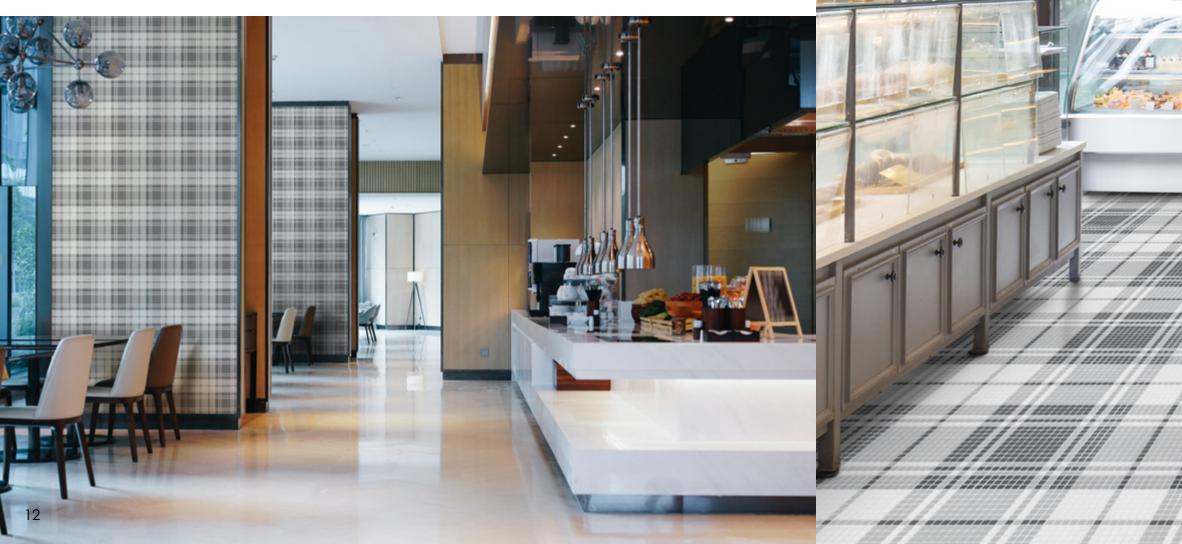




3/8" GRAPHITE FROST

CHALK

TAXABLE PARTY.









# NISSO N

# RETRO MISSONI

PART NUMBER GLSGEOMISSRETR

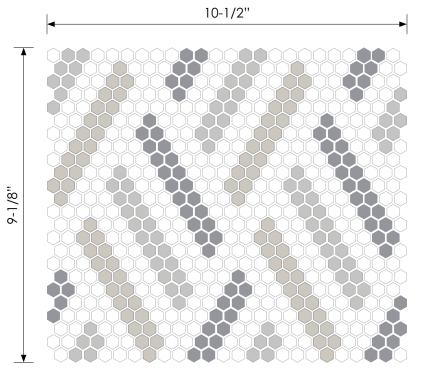
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

SF/SHEET 0.67

SF/CASE *6*.70

CASE QUANTITY 10 PCS









# ZIP MISSONI

PART NUMBER GLSGEOMISSZIP

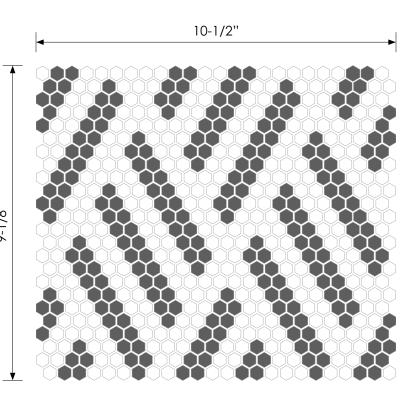
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

SF/SHEET 0.67

SF/CASE 6.70

**CASE QUANTITY** 10 PCS





# VINTAGE

MISSONI

PART NUMBER GLSGEOMISSVINT

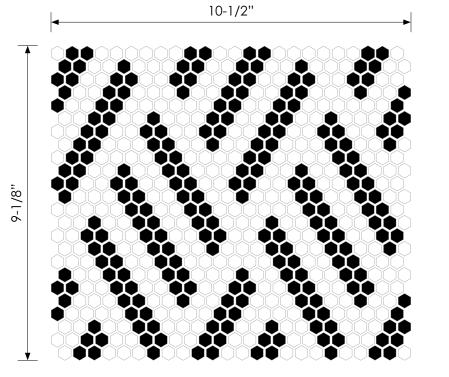
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

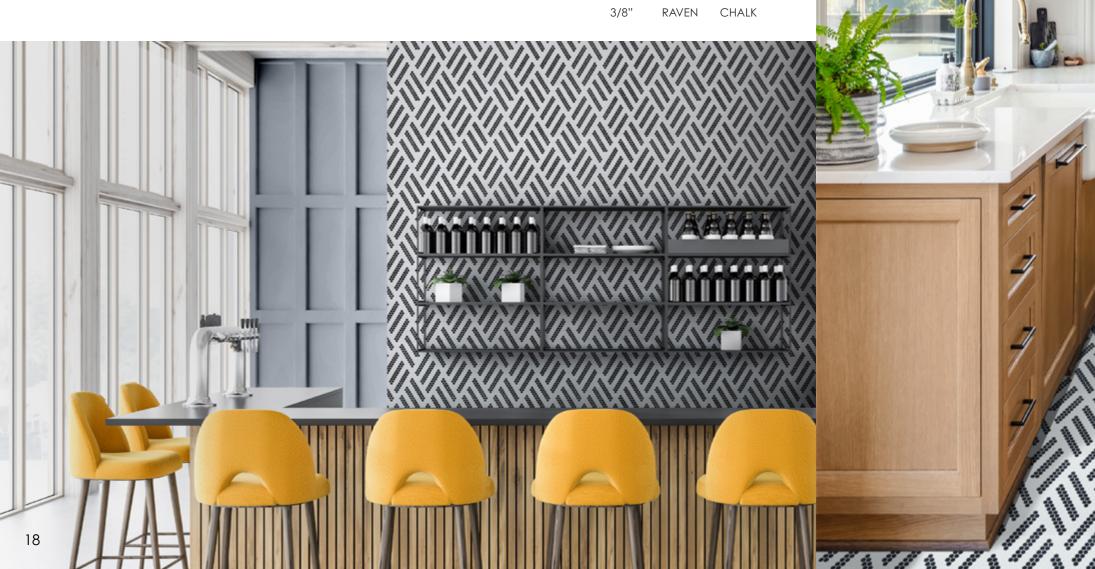
**SF/SHEET** 0.67

**SF/CASE** 6.70

CASE QUANTITY 10 PCS











# н С С С Г

# LOG

### PART NUMBER GLSGEOHYGGLOG

MATERIAL RECTIFIED RECYCLED GLASS

# FINISH

MATTE

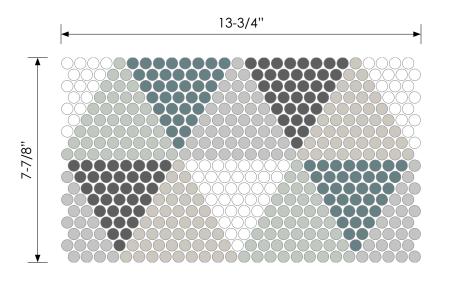
# SF/SHEET

0.75

### **SF/CASE** 7.50

# CASE QUANTITY

10 PCS









# GLOW

PART NUMBER GLSGEOHYGGGLOW

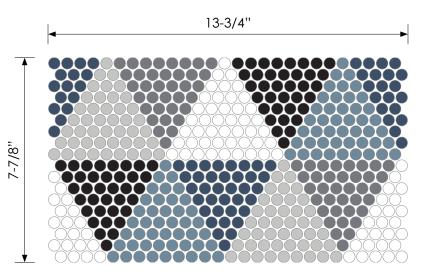
MATERIAL RECTIFIED RECYCLED GLASS

FINISH MATTE

SF/SHEET 0.75

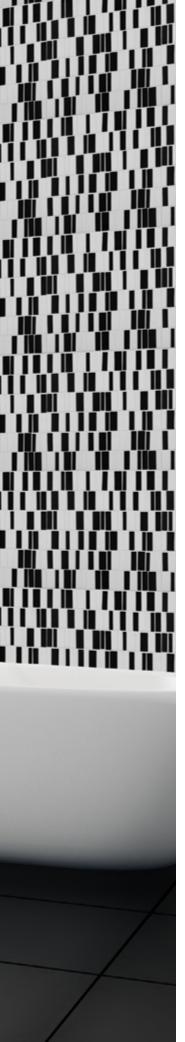
**SF/CASE** 7.50

CASE QUANTITY 10 PCS









# $\bigcirc$ BARCO

# PUZZLE

### PART NUMBER GLSGEOBARCPUZZ

MATERIAL RECTIFIED RECYCLED GLASS

FINISH

MATTE

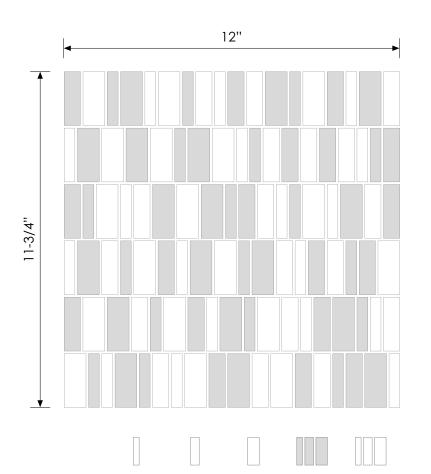
SF/SHEET

0.98

**SF/CASE** 9.80

CASE QUANTITY

10 PCS



ICE

CHALK

3/8"

9/16"

3/4"





# CRYPTO BARCODE

PART NUMBER GLSGEOBARCCRYP

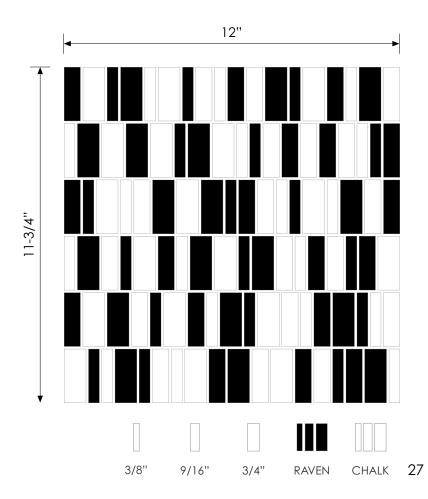
MATERIAL RECTIFIED RECYCLED GLASS

finish Matte

SF/SHEET 0.98

**SF/CASE** 9.80

CASE QUANTITY 10 PCS





# SOLIOS

# SOLIDS

# MATERIAL

RECTIFIED RECYCLED GLASS

# PART NUMBER

CHALK • GLSGEOSOLIDCHALS2 FROST • GLSGEOSOLIDFROSS2 GRAPHITE • GLSGEOSOLIDGRAPS2 RAVEN • GLSGEOSOLIDRAVES2

## FINISH

MATTE

# SF/SHEET

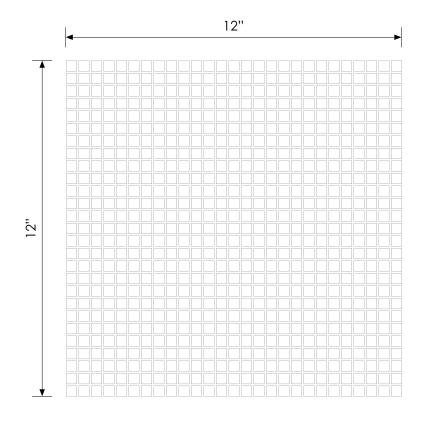
1.00

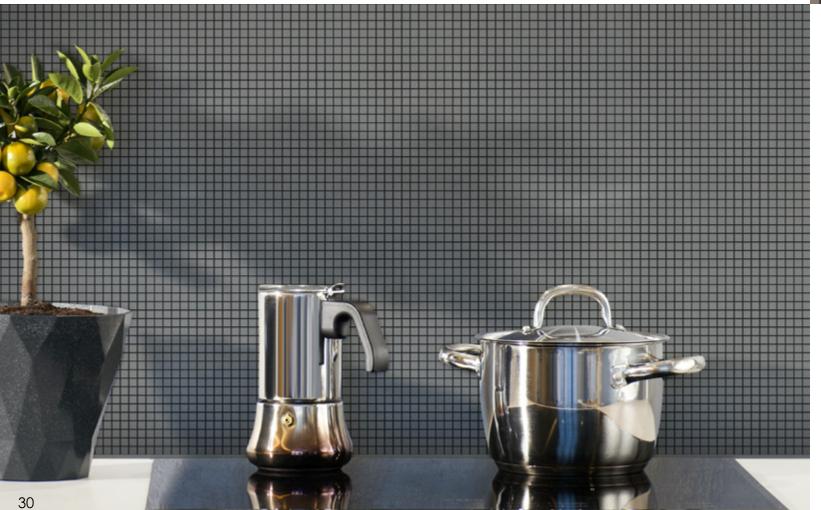
# SF/CASE

10.00

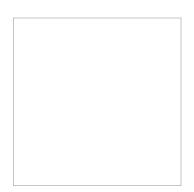
# CASE QUANTITY

10 PCS



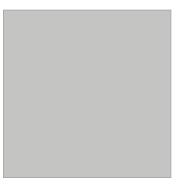






CHALK









RAVEN

# COLOR PALETTE

129 COLOR OPTIONS • MATTE OR POLISHED • RECTIFIED CAST & NON-RECTIFIED CAST RECYCLED GLASS



| OASIS   | CASCADE | ANTIGUA   |
|---------|---------|-----------|
|         |         |           |
| OCEAN   | PEACOCK | ISLE      |
|         |         |           |
| BASIL   | SEAWEED | PINE      |
|         |         |           |
|         |         |           |
| ARAKEET | JUNIPER | ARTICHOKE |
| ARAKEET | JUNIPER | ARTICHOKE |
| VINE    | JUNIPER | ARTICHOKE |
|         |         |           |
|         |         |           |
|         | FERN    | OLIVE     |

# COLOR PALETTE

129 COLOR OPTIONS • MATTE OR POLISHED • RECTIFIED CAST & NON-RECTIFIED CAST RECYCLED GLASS

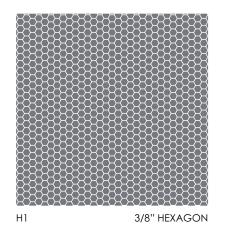


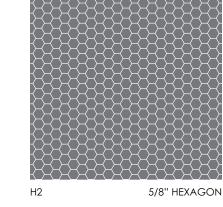
34

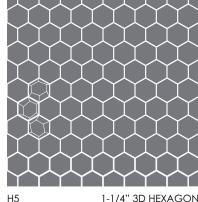
| APPLE           | SCARLET | CLAY     |
|-----------------|---------|----------|
|                 |         |          |
| LUEBERRY        | HAZE    | MULBERRY |
|                 |         |          |
| METHYST         | IRIS    | EGGPLANT |
|                 |         |          |
|                 |         |          |
| OHAGONY         | COAL    | GRAVEL   |
| OHAGONY         | COAL    | GRAVEL   |
| OHAGONY<br>GRIT | COAL    | GRAVEL   |
|                 |         |          |
| GRIT            |         |          |
|                 | SHADOW  | TWILIGHT |

# SPECIAL ORDER SHAPES

129 COLORS • 60 SHAPES • COLOR BLEND PATTERN OPTIONS • MATTE OR POLISHED

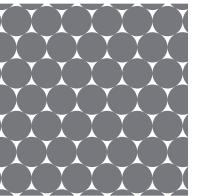


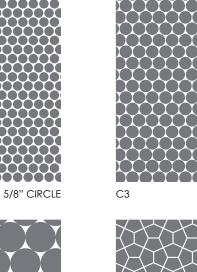




1-1/4" 3D HEXAGON

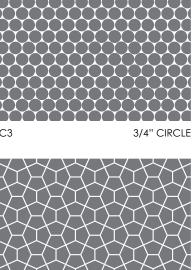
C2

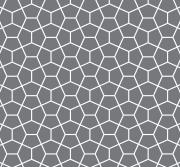




H3

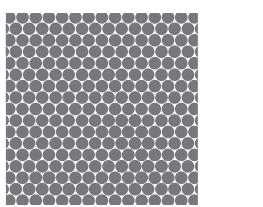
H6





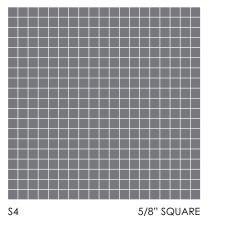
1-7/8" HEXAGON & TRIANGLE

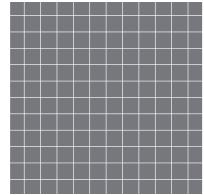
7/8" HEXAGON



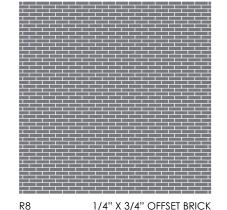


S1 1/4" SQUARE



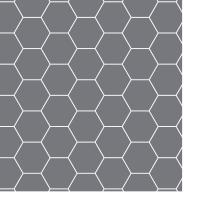


1" SQUARE

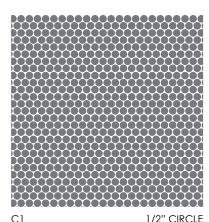


S8

1/4" X 3/4" OFFSET BRICK



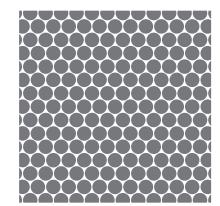
1-7/8" HEXAGON



H4

C4

36



C5

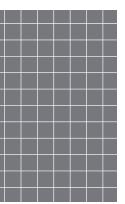
TB 1

1" X 3/4" TUMBLER

R7

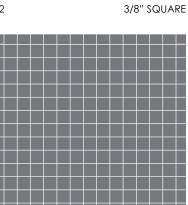






1-7/8" SQUARE

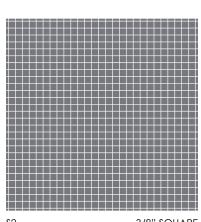
3/4" SQUARE

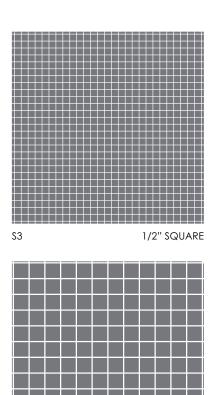


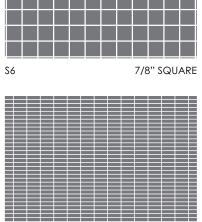
S2

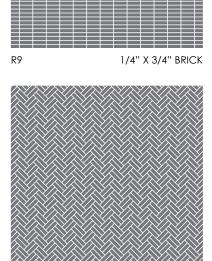
S7

S5





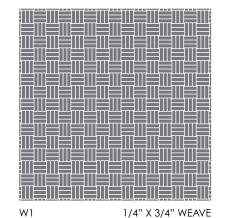


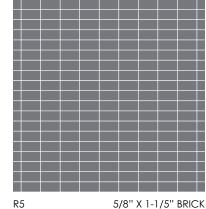


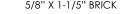
1/4"X3/4" DOUBLE WEAVE BRICK W2

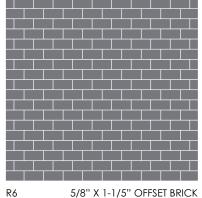
# SPECIAL ORDER SHAPES

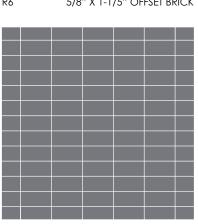
129 COLORS • 60 SHAPES • COLOR BLEND PATTERN OPTIONS • MATTE OR POLISHED



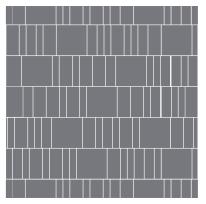


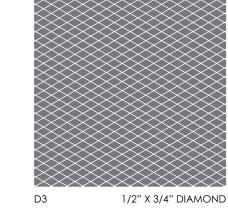




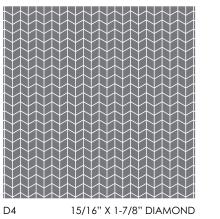


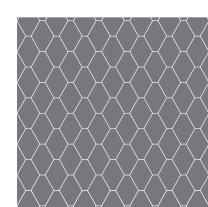








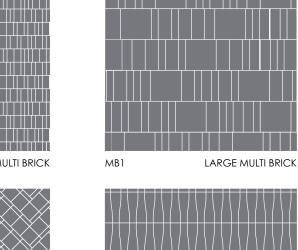




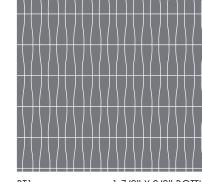
D5







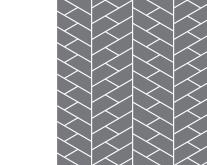
R1

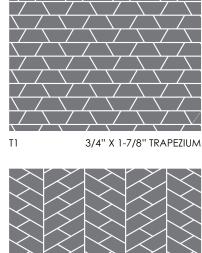


1-7/8" X 3/8" BOTTLE

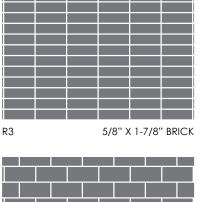


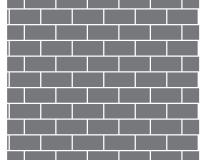
T4 3/4" X 1-7/8" CHEVRON TRAPEZIUM



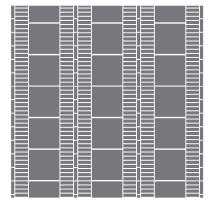


MB3

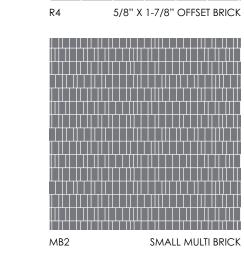


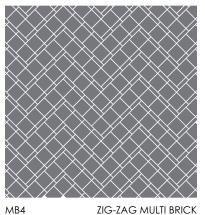


R2 7/8" X 1-7/8" OFFSET BRICK



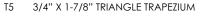
LADDER MULTI BRICK

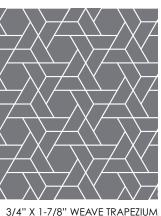




- - ZIG-ZAG MULTI BRICK

BT1



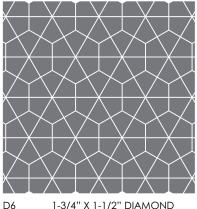


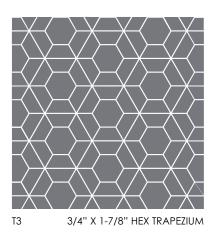
1-3/4" X 1-7/8" DIAMOND

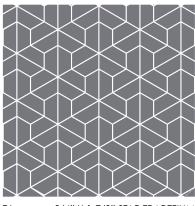
1/2" X 3/4" HEXAGON DIAMOND

|                     | $\mathbb{X}$                               |                              | X                                   | X                 |
|---------------------|--|------------------------------|-------------------------------------|-------------------|
| Ŕ                   | $\square$                                  |                              | K K                                 | $\mathbb{X}$      |
| $\Rightarrow$       | k  |                              | $\Rightarrow$                       | $\diamondsuit$    |
| KX<br>K             | $\mathbb{X}$                               |                              | $\overset{\times}{\longrightarrow}$ | $\mathbf{X}$      |
| ¥.                  | ×  | $\langle \downarrow \rangle$ | ¥.                                  | ×                 |
| $\mathbb{X}$        |  | XX                           | $\mathbb{R}$                        | $\bigcirc$        |
| $\downarrow$        | $\langle \! \rangle \! \langle \! \rangle$ | XX                           | $\Rightarrow$                       | $\langle \rangle$ |
| $\bigwedge$         | $\Rightarrow$                              |                              | ${\times}$                          | ${\times}$        |
| K                   | $\square$                                  |                              | XX                                  | $\mathbf{X}$      |
| $\overline{\nabla}$ | $\bigtriangledown$                         |                              | $\overline{\nabla}$                 | $ \leq $          |

1/2" X 3/4" CHEVRON DIAMOND D2







T6

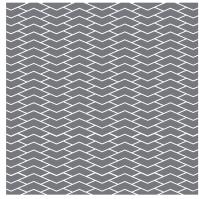
3/4" X 1-7/8" STAR TRAPEZIUM

39

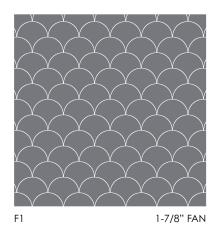
# SPECIAL ORDER SHAPES

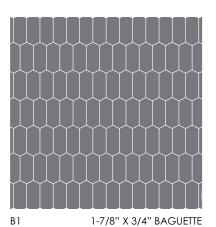
129 COLORS • 60 SHAPES • COLOR BLEND PATTERN OPTIONS • MATTE OR POLISHED

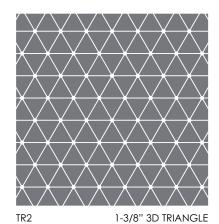
F2

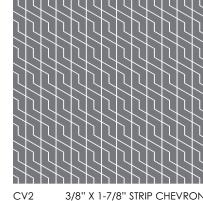


3/8" X 1-7/8" CHEVRON CV1

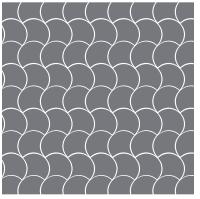




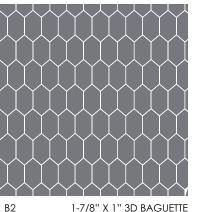




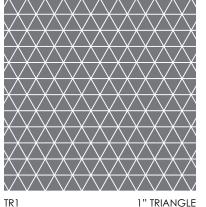
3/8" X 1-7/8" STRIP CHEVRON



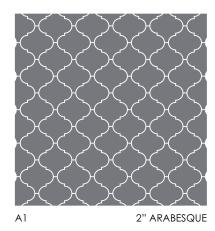
1-7/8" WAVE FAN

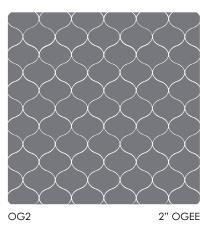


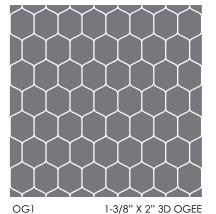
1-7/8" X 1" 3D BAGUETTE



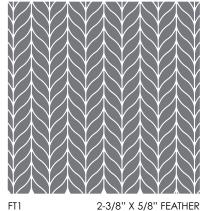
1" TRIANGLE

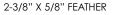






1-3/8" X 2" 3D OGEE





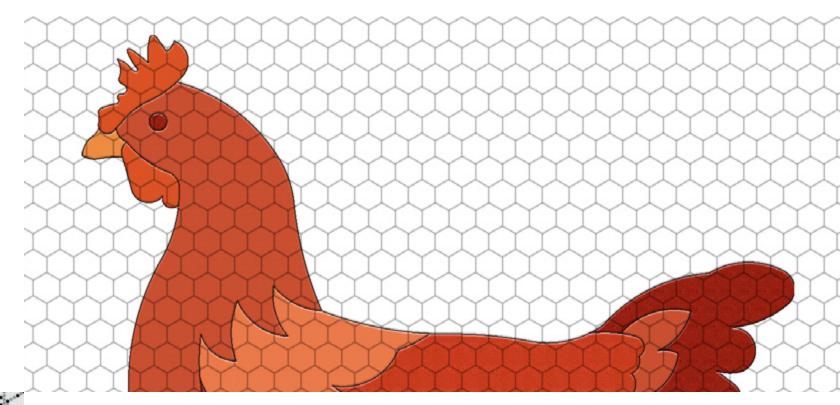


# CUSTOM GLASS MOSAIC

Bring your design ideas and creativity to life. Geometro recycled glass offers a rich and trendy color palette with more than one hundred colors to choose from, sixty different shapes, in two finishes, Matte and Polished.

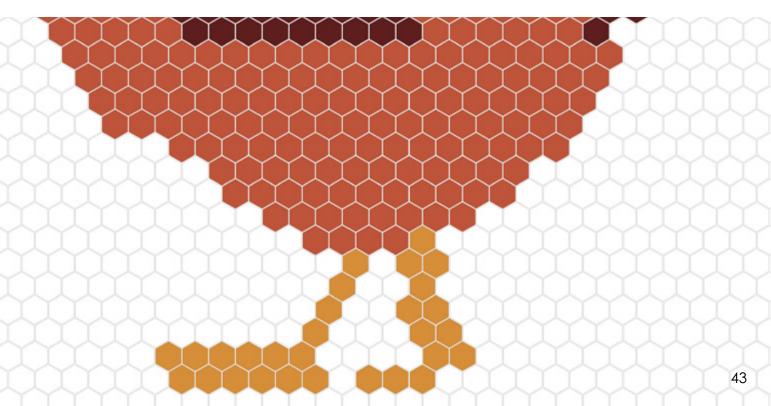
# ARTISTIC MOSAIC

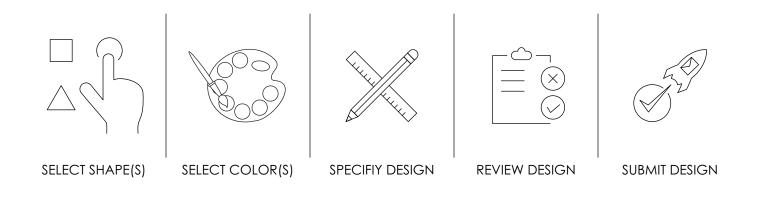
A Mosaic is an artistic technique that uses tiny parts to create a whole image or object. Mosaics are usually assembled using small tiles that can be randomly shaped to fit the design intent.



# PIXEL ART

Pixel mosaic is a modern mosaic art where colored glass pieces of a perfect shape are assembled to create the image needed. With Pixel Art, your images and designs are brought to life.



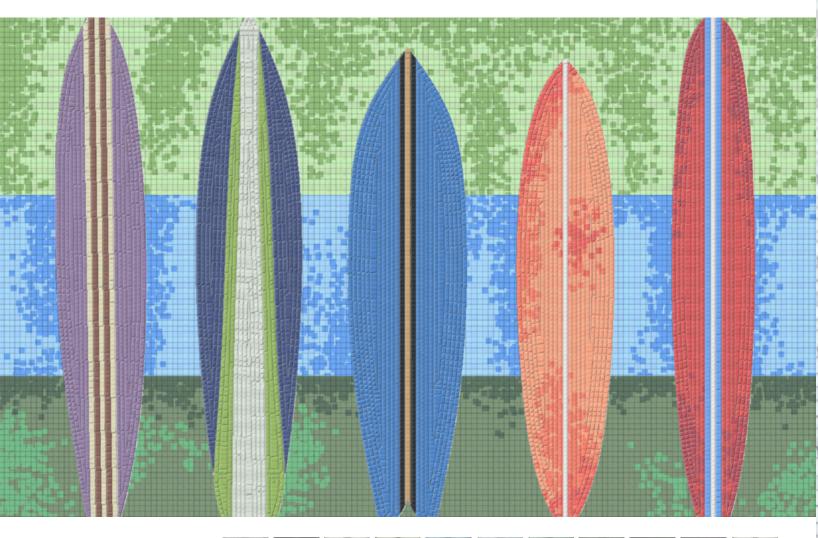


Submit your order(s) to csr@nsrstone.com for price and lead time.

NSR offers a curated selection of glass mosaics, but if in need of something with a personal touch, our customer service team will assist brainstorming your project from start to finish.



# ARTISTIC MOSAIC



Surf Boards Piece size: S2 3/8" Inlay: 60" x 42" Inlay Yield: 17.5 sqft

| CHALK/CLOUD RAVEN/FLINT MINT SAGE ATMOSPHERE GLACIER | BASIL JU | JNIPER SEAWEED | IRIS  | PORCELAIN |
|--|----------|----------------|-------|-----------|
|  | BOSE CAN |                | APPLE |           |





# PIXEL ART

Nordic - Section B Piece size: C3 3/4" Inlay: 120" x 54" Inlay Yield: 45 sqft

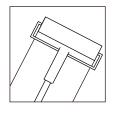




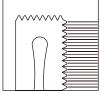
| _  | _ | -  | 1   | 1  |     | 1  | <u> </u>   | -            | -   | <u> </u>     |   |    | -  | Į   | <u> </u> |          |          |   |   |    |           |
|----|---|----|-----|----|-----|----|------------|--------------|-----|--------------|---|----|----|-----|----------|----------|----------|---|---|----|-----------|
| _  | _ | _  |     | 1_ | 1   | 1- | L_         | 1            |     | 1            | - | -  | 1  | 1_  | 1        | <u> </u> | <u> </u> | - |   |    | $\square$ |
| 1  |   |    | 1   |    | 1   | 1_ | -          | -            | -   | _            | _ | 1_ |    | _   |          | L        |          |   |   | L  | 4         |
|    |   |    | L   | 1  | 1   | 1  | 1_         | 1_           | -   | 1_           | _ | 1_ | 1  | 1_  | _        | -        | -        | - | _ | -  |           |
|    |   |    |     | 1  | 1_  |    | 1          | 1            | -   | 1            | _ | -  | 1  | 1   |          | 1        | -        | 1 |   | _  |           |
|    | _ | _  |     | Ĺ  | 1_  |    | 1          | 1            | 1   | -            | _ | 1_ | 1  | 1   | 1        | 1        | 1        |   | - | 1  |           |
| 1  |   | Ĺ  | L   | 1  | 1   |    |            | 1            |     | 1            |   | 1  | 1  | i   | 1        | 1        | 1        | í |   | 1  |           |
|    |   |    |     | 1  |     |    |            |              |     |              |   |    |    | 1   | 1        |          |          | 1 |   | 1  |           |
| 1  |   |    |     | 1  |     |    |            |              |     |              |   |    |    |     |          |          |          |   |   |    |           |
|    |   |    |     | 1  |     |    |            |              |     |              |   | Ē  |    |     |          |          |          | 1 |   |    |           |
|    |   |    |     | 1  | T   |    |            |              |     |              |   | T  |    |     | 1        |          |          |   |   |    |           |
|    | - |    |     | 1  | T   |    | -          | -            |     | -            | - |    | 1  | 1   | 1        | -        | -        | 1 |   | -  |           |
| -1 |   |    | -   | 1  | 1   |    |            | -            |     |              |   | -  | 1  | 1   | -        |          | -        |   |   | -  |           |
|    | - | -  | 1   | 1  |     | -  | -          | -            | -   | -            | - | -  | 1  | 1   | -        |          | -        |   |   | 1  |           |
|    |   | -  | -   | +  | -   | -  | -          | -            | -   | -            | - | -  | -  | 1   |          | -        | -        | - | - | 0  |           |
| -  |   | -  | -   | 1  | 1   | -  | -          |              | -   | -            | - | -  | 1  | -   |          |          | 0        | - |   | -  |           |
| -  | - | -  | -   | 1  | -   | -  | -          | -            | -   | -            | - | -  | -  | -   | -        | -        | -        |   | - |    |           |
| -  |   | -  | -   | -  | -   | -  | -          | -            | -   | -            | - | -  | -  | -   | -        | -        | -        | - | - | -  |           |
| -  |   | -  | -   | -  | -   | -  | -          | -            | -   | -            | - | -  | -  | -   | -        | -        | -        | - | - | -  |           |
| 4  | _ | -  | 1   | Ļ  | -   | -  | -          | -            | -   | -            | - | -  | -  | -   |          | -        | _        | - |   | _  |           |
| 4  | _ | -  | -   | Ļ  | -   | Ļ  | -          | -            | -   | <u> </u>     | - | Ļ  | -  |     |          | 1_       |          | _ |   |    |           |
| 4  | _ | -  | 1   | 1_ | -   | 1  | -          | _            | -   |              | _ | -  | 1  | Ļ   |          | 1_       |          |   | L |    | Ц         |
| 1  |   | L_ | 1   | 1  | 1   |    |            | L            |     |              |   | 1_ |    | 1_  |          | -        | 1_       |   |   |    |           |
| _  |   | L  |     | 1  |     | 1  | 1          |              |     |              |   |    |    | 1   | L        |          |          |   |   |    |           |
|    | _ | _  | 1   |    |     | 1  |            |              |     |              | _ |    |    |     |          |          |          |   |   |    |           |
|    | _ | _  | 1   | 1  |     | _  | _          | _            |     | _            |   | 1  |    |     | 1        | 1        | L        |   |   |    |           |
|    |   |    | L   | 1  | 1   |    |            |              |     |              |   | 1  |    |     |          |          |          |   |   |    |           |
|    |   |    | L   | 1  | 1   |    |            |              |     |              |   | L  |    | 1   |          |          |          | 1 |   | 1  |           |
| Ĩ  |   |    | 1   | 1  | L   | I  |            |              |     | 1            |   | 1  |    |     | 1        |          |          |   |   |    |           |
| 1  |   |    | 1   | Ĩ  | 1   | Î  |            |              |     |              |   | 1  | Γ  | 1   | 1        |          |          |   |   |    |           |
| 1  |   | Í  | 1   | 1  | 1   | 1  | 1          |              |     |              |   | Γ  |    |     |          | 1        | 1        | 1 |   | 1  | 11        |
| 1  |   |    |     | 1  |     | 1  | 1          |              |     |              |   | í  | 1  | T   | ī        | 1        | 1        | 1 |   |    |           |
|    |   |    | 1   | 1  |     |    | 1          |              | í I | ĩ            | 1 |    | Î. | Î   | T        | 1        | 1        |   | 1 |    |           |
| 1  |   |    | 1   | 1  | Ē   |    |            |              | 1   |              |   |    | 1  | 1   | 1        | 1        |          |   | 1 |    |           |
|    |   | -  | î - | 1  | T   | r  |            |              |     |              | T | 1  |    |     |          |          | 1        | 1 |   |    |           |
| 1  |   | -  | 1   | t  | t   | ĩ  |            |              | 1   | 1            |   | 1  | Ē  | i i |          | 1        | 1        | 1 |   | 1  |           |
|    | - | -  | 1   |    | t   | T  |            | 1            |     | 1            | 1 | 1  |    | 1   | 1        | 1        | 1        |   | 1 |    |           |
| 1  | - | -  | 1   | 1  | 1   | r  | 1          |              |     |              | - | 1  | 1  | 1   | 1        | 1        | 1        | 1 | 1 | 1  |           |
|    | - | -  | 1   |    | í   | 1  | 1          | -            |     |              |   | 1  | 1  |     |          |          | t        | 1 | - | 1  |           |
|    | - |    | -   | 1  | -   |    |            |              |     |              |   | Ē  |    | 1   | 1        | 7        | h        | - | - |    |           |
| 1  |   | ī  | -   | 1  | 1   | 1- | A COLORADO | -            |     | 1            |   | 1  | -  | -   | 1        | -        | -        | 1 |   | -  | Н         |
|    |   |    | 1   | 1  | -   | -  |            | -            | -   | 1            | - | -  | -  |     | -        | 1        |          |   | - |    |           |
|    | - |    |     | F  | -   | -  | -          | 1            | -   | -            | - | ţ. | -  | -   |          |          |          | - | - |    |           |
|    | _ | Ļ  | -   | -  | -   | 1- | -          | -            | -   | -            | - | -  |    |     | -        | -        | -        | - | - | -  |           |
| 4  | - |    |     | -  |     | Ļ  | -          | <u> </u>     | -   | -            | - | -  | -  | -   | -        | -        | Ļ        | - | - | -  |           |
| 1  | _ | L  | Ļ   |    | Ļ   | Ļ  | 1          | L            |     |              | - | -  | 1  | -   | -        | -        | -        |   | - | -  |           |
|    |   |    |     |    |     | L  |            | L            |     | L            | L | Ļ  |    | 1   | Ļ        | Ļ        | IL.      | L | Ļ | Ļ  |           |
|    |   |    |     | L  |     | L  |            |              |     |              | L |    | L  |     |          | 1        | L        | 1 |   | ļ  |           |
|    | _ |    |     | L  | L   | 1  |            |              |     |              | L | L  | 1  | L   | 1        |          | Ļ        | Ļ |   | L  |           |
|    | - | L  | L   |    | L   | L  | L          | L            | L   | L            | L | L  | L  |     |          | L        |          | L | L | L  |           |
|    |   | L  | L   | L  | 1   | L  | L          | L            | L   | L            | L |    |    | L   |          | 1        | L        | L | L |    |           |
|    | _ | L  |     |    |     |    |            |              | L   |              | L | L  | L  | 1   | L        | L        |          |   |   |    |           |
|    |   |    | L   | 1  | 1   | L  |            | L            |     |              | L | 1  | L  |     |          |          |          |   |   |    |           |
|    |   |    |     | Γ  |     | I  |            | I            | 1   | 1            |   |    | 1  |     |          | 1        |          |   |   | 47 |           |
|    |   | 1  | T   | T  |     | 1  |            | Γ            | Γ   | I            | 1 | T  | 1  | T   | I        | 1        | T        | T | T | 1/ | 1         |
| -  |   | -  | 200 | -  | 100 | -  | -          | (Protection) | -   | Common State | - | -  | 1  | 1   | 100      | -        | 1        | 1 | - | -  | -         |

# **INSTALLATION GUIDELINES**

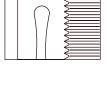
# FOLLOW EACH STEP AS DIRECTED FOR BEST RESULTS



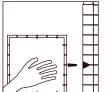
Apply a crack insulation membrane over substrate per the membrane manufacturer's instructions.



Use a V-notch trowel to apply a white glass tile thin-set mortar.



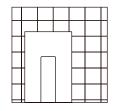
Comb notches in one direction.



Set sheets into thin-set

\*Either face-tape side out or mesh side to the wall. \*Geometro shapes 10mm or above come facetaped.

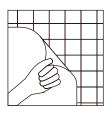
10mm & below are back mesh mounted.



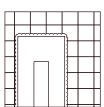
Lightly tap sheets with rubber grout float.



Wait 24 hours (minimum).

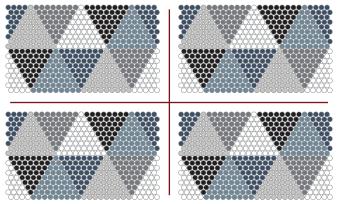


Remove film-face and remove excess thin-set from grout joints with a razor knife if necessary.

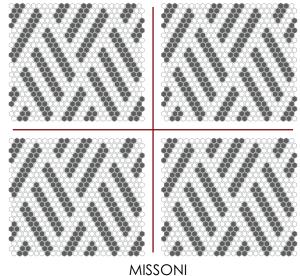


Apply grout per grout manufacturer's instructions.

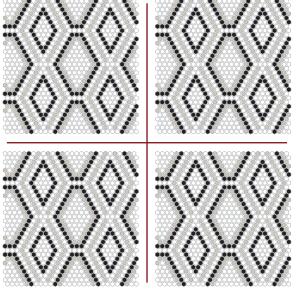
It is strongly suggested to dry fit all inlays before applying thin set. Review pattern diagrams prior to installation; This will help to view each pattern in the inlay space available & catch any possible mistakes.



HYGGE

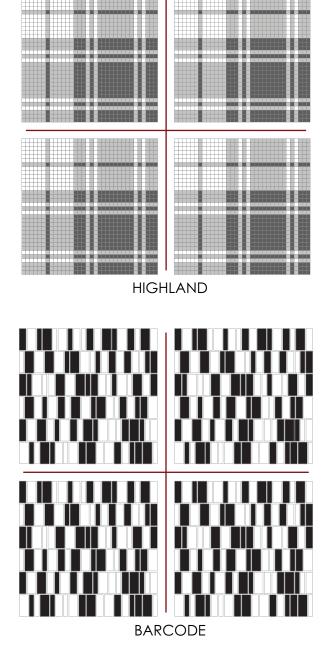






PYTHON

# PATTERN DIAGRAMS



# SETTING SYSTEMS

All materials should be used according to manufacturer's instructions. If the mosaic includes glass tiles, please note that due to the translucent nature of glass, the color of the bonding material will impact the ultimate look of the tile. We recommend the use of specific white bonding mortars; some mixed with specific latex admix.

See the following list for required thin-set and follow manufacturer's recommended cure times for all setting materials. Pools, spas and all submerged applications require a minimum 21-day cure time after grouting and before submersion or exposure to heavy water use.

Although we require the use of highest performing setting materials for installing our products, occasionally, due to the transparent and/or light translucent nature of some of our products, visible effects, also known as "ghosting", may occur behind glass tiles.

### When Mixing Setting and Grouting Materials:

- 1 Measure liquid and powder per manufacturer's recommendations.
- 2 Machine mixing will provide more consistent results.
- 3 Do not exceed 300 rpm or manufacturer's recommendations.
- 4 Setting and grouting materials need to slake (set) 10 to 15 minutes after mixing and be remixed before use.

### Acceptable Setting Systems (white)

- Custom Building Products: MegaFlex Crack Prevention Mortar
- Custom Building Products: MegaLite Crack Prevention Mortar
- Flextile: 52 Versatile Floor Mortar
- Hydroment ReFlex Ultra-Premium Latex-Modified Thin Set Mortar
- Kerakoll: H40 Tenax Single Component Thin-Set
- Laticrete: 254 Platinum Multipurpose Thin Set Mortar
- Mapei: Adhesilex P10 mixed with Keraply mortar additive
- TEC (H.B. Fuller): Super Flex Premium Performance Universal Latex-Modified Thin-Set Mortar
- FOR METAL (Geometro 2.0): Litokol LitoElastic Epoxy

### Unacceptable Setting Systems

- Organic adhesive (mastic) due to yellowing and low bond strength
- Epoxy due to low flexibility, as well as degeneration in UV sunlight

### Movement Joints

Movement joints are essential for the success of most tile installations. Follow recommendations on Movement Joints EJ171-07 in the "2008 TCA Handbook for Ceramic Tile Installation." Movement joint requirements will vary depending on substrate, climate and size of installation. An architect or design professional should be consulted when specifying the exact number and location of each movement joint. Saw-tooth joints are not recommended. Certain application may require a different type of sealant.

### Acceptable Flexale Joint Fillers

- Hydroment: Chem-Calk 900 One-Part Urethane Sealant
- Kerakoll: Sigibuild PU Poly-Urethane Sealant
- Laticrete: Latasil 100% Silicone
- Silaflex: 1A or 2C Polyurethane-based Sealant

### Grout

Install grout mix according to manufacturer's instructions. Grout should be full and uniformly finished. Due to the impervious quality of glass, the grout will take longer to begin setting-up. For initial cleaning of grout from the tile face, use clean, dry cheesecloth. This wicks additional moisture from the grout and avoids washing out the joints. Use on a clean, damp sponge for the final cleaning and smoothing of the joints. For final polishing of excess haze use a clean, soft cloth.

### Acceptable Grouts

- Custom Building Products: Prism SureColor Grout (can go in pools)
- Custom Building Products: Fusion Grout
- Custom Building Products: Polyblend Sanded Tile Grout ٠
- Flextile: 600 Polymer Sanded Floor Grout
- Hydroment: Sanded Ceramic Tile Grout
- Kerakoll: Fugabella 2-12
- Laticrete: 1500 Series Tile Grout or Equivalent
- Mapei: Ker200 Series and Ker700 Series Ultra/Color
- Tec: AccuColor Premium Sanded Tile Grout
- Litokol Starlike (for LeMer)
- Litokol Starlike grout or Customs Prism (for Gunmetal Geometro 2.0)

An Acrylic grout admix can improve freeze-thaw resistance. Check manufacturer's recommendations.

### **Unacceptable Grout**

- Epoxy Grout due to low flexibility, as well as degeneration in UV sunlight
- Non-sanded grout due to shrinkage

### Anti-Fracture/Waterproofing Membranes

- Aquafin 1K and 2K/M: Cementitious waterproofing system
- Custom Building products: RedGard Waterproofing and Crack Prevention Membrane
- Hydroment: Gold Anti-fracture and waterproofing membrane
- Laticrete: 9235 waterproof & anitfracture membrane
- Tec: T1-324 Triple-Flex waterproofing/crack isolation membrane
- Xypex: Concentrate

We do not recommend membranes directly behind the setting material when installing translucent or transparent glass tile.

Consult grout manufacturers before considering blue, green or red grout in submerged applications.

# **TESTING RESULTS**

# Water Absorption Test (ASTM C 373)

Samples were dried to a constant weight in an oven at 150 C, then cooled and weighed. Then were immersed in distilled water (boiling vigorously for 5 hours before cooling gradually to a total elapsed time of 29 hours). Samples were removed from water, wiped dry and immediately reweighed.

| SAMPLE NO. | DRY WT. (GRAMS) | WET WT. (GRAMS) | PERCENT WATER ABSORPTION | AVERAGE |
|------------|-----------------|-----------------|--------------------------|---------|
| 1.         | 31.46           | 31.46           | 0.00%                    |         |
| 2.         | 31.30           | 31.30           | 0.00%                    |         |
| 3.         | 29.87           | 29.87           | 0.00%                    | 0.00%   |
| 4.         | 30.44           | 30.44           | 0.00%                    |         |
| 5.         | 30.78           | 30.78           | 0.00%                    |         |

### Reference:

ANSI A 137.1 (General) - When tested as described in ASTM C 373, the tile in the sample shall be impervious for porcelain paver tile and shall be impervious, vitreous or semi-vitreous for natural clay paver tile.

| Impervious Tile      | (0.5% or less Water Absorption) |
|----------------------|---------------------------------|
| Vitreous Tile        | (0.5%-3.0% Water Absorption)    |
| Semi-Vitreous Tile   | (3.0%-7.0% Water Absorption)    |
| Unglazed Quarry Tile | (Max. 5.0% Water Absorption)    |

Materials Tested Comply with Specifications. Materials Tested Did Not Comply with Specifications. No Established Criteria for Acceptable Limits. For Information Only.

# Moisture Expansion (ASTM C-370 \*Modified)

Each specimen was cut as possibly close from the center of a tile to an approximate facial dimension of 3"-3/4" x 3/4", then measured to an accuracy of 0.0001 inch. Specimens were put into an autoclave and subjected to a steam pressure of 150 PSI for five (5) hours. After pressure was released by opening a blow-off valve, the specimens were dried to a constant weight and remeasured. \*Modification: Sample Size Limitation - 0.50 Hexagon Glass Buttons

| SPECIMEN NO. | LENGTH INITIAL | LENGTH FINAL | PERCENT MOISTURE EXPANSION | AVERAGE |
|--------------|----------------|--------------|----------------------------|---------|
| 1.           | 0.38850        | 0.38850      | 0.00%                      |         |
| 2.           | 0.38735        | 0.38740      | 0.01%                      |         |
| 3.           | 0.39740        | 0.39740      | 0.00%                      | 0.01%   |
| 4.           | 0.39950        | 0.39960      | 0.03%                      |         |
| 5.           | 0.39990        | 0.39990      | 0.00%                      |         |

- Materials Tested Comply with Specifications.
- Materials Tested Did Not Comply with Specifications.
- No Established Criteria for Acceptable Limits.
- For Information Only.

# **Test Results of ROHS Directive**

ppm = Parts Per Million | ND = Not Detected

| Tested Elements | Results |
|-----------------|---------|
| CADMIUM (cd)    | ND      |
| LEAD (cd)       | ND      |

# **Radioactivity of Building Materials**

Radioactivity of building materials were evaluated in accordance with GB 6566-2010, type A decoration materials.

### **Tested Elements**

RADIUM-226 Radioactivity Rate Activity, Bq/kg THORIUM-232 Radioactivity Rate Activity, Bq/kg POTASSIUM-40 Radioactivity Rate Activity, Bq/kg

### Type A Decoration Materials

Radioactivity of building materials were conform to requirements specified in GB 6566-2010, type A decoration materials.

### Requirements

IRRADIATION < 1.0 EXTERNAL IRRADIATION < 1.3

# **Recycled Content of Material**

The factory declares that the contents of enamel glass mosaic are silica (SIO2) and zirconium silicate; and all materials are recycled from collet. No other new raw materials are added during the manufacturing process. The recycled content of materials is 98%.

# Water Absorption Test (ISO 10545-3:1995)

Specimen dimensions: 20mm x 20mm x 7mm, 9pcs in each group.

| Group No. | Test Results |  |
|-----------|--------------|--|
| 1         | 1.00         |  |
| 2         | 0.43         |  |
| 3         | 0.49         |  |
| 4         | 0.57         |  |
| 5         | 1.09         |  |
| 6         | 0.66         |  |
| 7         | 0.51         |  |
| 8         | 0.61         |  |
| 9         | 0.63         |  |
| 10        | 0.72         |  |
|           |              |  |

| Results |  |
|---------|--|
| < 0.1   |  |
| < 0.1   |  |

Average

0.67

# Resistance to Stain Test (ISO 10545-14:1995)

Specimen dimensions: 20mm x 20mm x 7mm, 15pcs.

| Group No. | Green Staining | lodine 13g/L | Olive Oil |
|-----------|----------------|--------------|-----------|
| 1         | 5              | 5            | 5         |
| 2         | 5              | 5            | 5         |
| 3         | 5              | 5            | 5         |
| 4         | 5              | 5            | 5         |
| 5         | 5              | 5            | 5         |

# **Thermal Stability**

Specimen dimensions: 20mm x 20mm x 7mm, 50pcs.

| Test Items               | Test Method                      | Test Results  |
|--------------------------|----------------------------------|---|
| Thermal Stability        | With reference to GB/T 7697-1996 | No cracking/breakage on surface of all test specimens |
| Thermal Shock Resistance | ISO 10545-9:2013                 | Fully resistance                                      |
| Frost Resistance         | ISO 10545-12: 1995/Cor I: 1997   | Fully resistance                                      |

# **Coefficient of Friction**

Test method: GB/T 4100-2006 Annex M determining the coefficient of friction of ceramic tile specimens: 170mm x 170mm, 3pcs. All test samples were cut from the products with the size of 320mm x 320mm.

| Test Items                              | Test Results |
|---|--------------|
| Coefficient of Friction for Dry Surface | 0.77         |
| Coefficient of Friction for Wet Surface | 0.50         |

# Resistance to Surface Abrasion

Test method: Refer to ISO 10545-7:1996 Ceramic tiles-part 7: Determination of resistance to surface abrasion for glazed tiles. Specimens: mosaic Test Results: After 1500 revolutions, visual failure occurred.

# Chemical Resistance

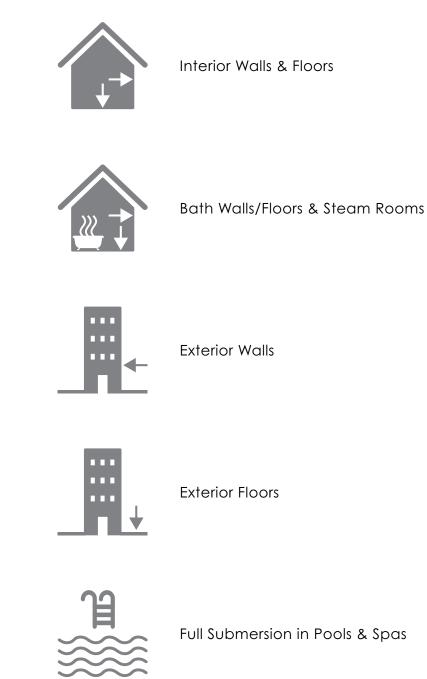
Test method: GB/T 4100-2006 Annex M determining the coefficient of friction of ceramic tile specimens: 170mm x 170mm, 3pcs. All test samples were cut from the products with the size of 320mm x 320mm.

| Aqueous                           | Test Results                         |                    |           |
|-----------------------------------|--------------------------------------|--------------------|-----------|
| Household Chemicals               | Ammonium Chloride solution, 100g/l   | Visual Examination | Class: GA |
| Swimming Pool Salts               | Sodium Hypochlorite solution, 20mg/I | Visual Examination | Class: GA |
|                                   | Hydrochloric Acid solution, 3% (V/V) | Visual Examination | Class: GA |
| ow Concentrations Acids & Alkalis | Citric Acid Solution, 100g/I         | Visual Examination | Class: GA |
|                                   | Potassium Hydroxide solution, 30g/l  | Visual Examination | Class: GA |

# **APPLICATIONS & SPECS**

Tested for hardness and scoring a mohs hardness of 5.5 with excellent resistance to UV, common household chemicals, foot traffic, stains, and frost while delivering a slip resistance of r9.

It is an excellent choice for both vertical and horizontal surfaces, both indoors and outdoors as well as fully submerged pools & spas.





Linear Thermal Expansion Tested





Abrasion Resistance



Frost Resistance



Chemical Resistance



Eco-Friendly

