Villi

BRILLIANT GLASS TILES & MOSAICS



Product Guide 2023





Unique & Brilliant

VILLI designs, develops and manufactures glass tiles and glass mosaics with world-class standards for quality, beauty and aesthetics.

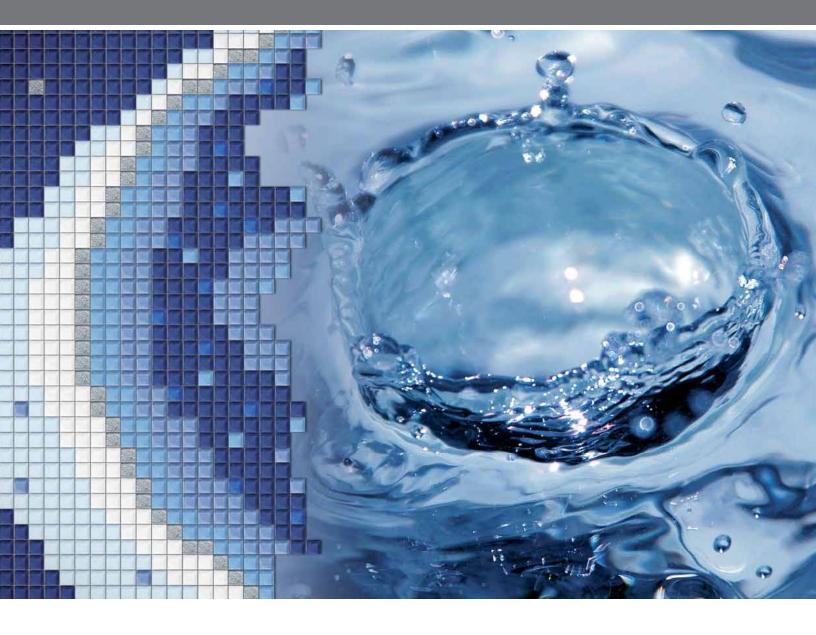
Utilizing an innovative manufacturing process, VILLI products are created to provide a unique interplay of brilliant light and color.

Unlike any other product available, VILLI glass has a depth, texture and reflectance that will bounce light and color throughout your space. No matter where it is installed, VILLI will bring new sophistication to the places you live, work and play. It's brilliant.

VILLI USA 1340 Stonefield Court ● Alpharetta, GA 30004 ● USA T 678-990-5084 ● F 678-990-5088 sales@villiusa.com

www.villiusa.com

GENERAL INFORMATION



Unlimited Creative Possibilities

The VILLI product line with its **wide range of colors and sizes** gives planners and designers all the scope they require to put their ideas into practice. Outstanding design for tiles and mosaics and the various surfaces offer **unlimited creative possibilities**. The profound depth of our products reflected in the interplay of light and shadow creates living spaces with a sense of well-being unknown hitherto. This is the expression of **stylish luxury and elegance**.

The Villi name stands for variety and perfection. The product range includes 6 square field tiles, 13 rectangular field tiles and a variety of

mosaics mounted on nets. The **modular design** of these sizes combined with **absolute dimensional accuracy** of every VILLI product allows for a **perfect combination of any formats**. Our mosaics, with a **joint width of only 1/8"**, are preset on 12" x 12" **mesh sheets**, ensuring a perfect fit. When the mosaics are used for trimmings or ornamental elements, these **mesh sheets can be cut to any size** as necessary. When using Villi products in underwater applications, it is important to eliminate any hollow spaces underneath the tile. For this reason, mosaics for underwater use are face mounted, using foil, which is a special order item.



SIZES TILES

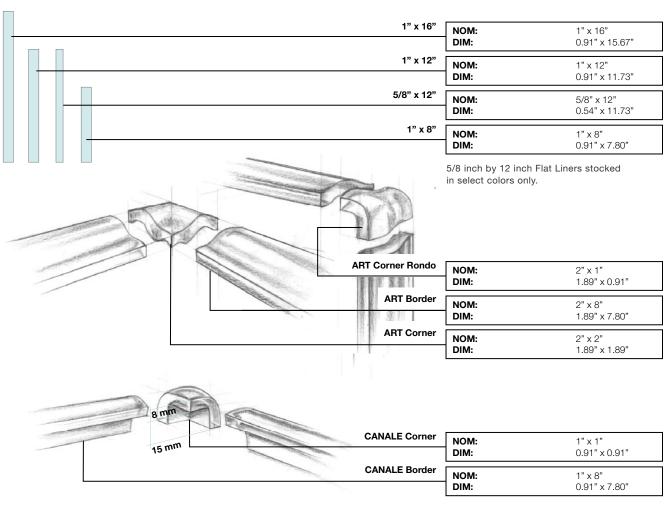
NOM:	Nominal measurement			
DIM:	Actual measurement			
Tolerance:	± 0.016"			
Modular combination:	YES			
Joint width:	0.079"			
Other sizes available on request				

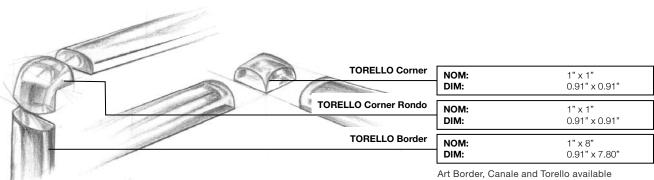
12" x 24"	NOM: DIM:	12" x 24" 11.72" x 23.54"
8" x 24"	NOM: DIM:	8" x 24" 7.78" x 23.54"
4" x 24"	NOM: DIM:	24" x 4" 3.84" x 23.54"
16" x 16"	NOM:	16" x 16"
8" x 16"	NOM: DIM:	15.66" x 15.66" 8" x 16" 7.78" v 15.66"
4" x 16"	NOM: DIM:	7.78" x 15.66" 4" x 16" 3.84" x 15.66"
2" x 16"	NOM: DIM:	2" x 16" 1.98 x 15.66
12" x 12"	NOM:	12" x 12"
4" x 12"	DIM: NOM:	11.72" x 11.72" 4" x 12"
3" x 12"	DIM: NOM:	3.84" x 11.72" 3" x 12"
2" x 12"	NOM:	2.86" x 11.72" 2" x 12"
8" x 8"	DIM:	1.98" x 11.72"
4" x 8"	NOM: DIM:	8" x 8" 7.78" x 7.78"
3" x 8"	NOM: DIM:	4" x 8" 3.84" x 7.78"
2" x 8"	NOM: DIM:	3" x 8" 2.86" x 7.78"
	NOM: DIM:	2" x 8" 1.98" x 7.78"
6" x 6"	NOM: DIM:	6" x 6" 5.81" x 5.81"
3" x 6"	NOM: DIM:	3" x 6" 2.86" x 5.81"
4" x 4"	NOM: DIM:	4" x 4"
	DIIVI:	3.84" x 3.84"

GENERAL INFORMATION

SI7FS TRIM PIECES &

NOM:	Nominal measurement
DIM:	Actual measurement

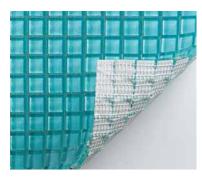




in 8 inch lengths only.



SIZES MOSAICS





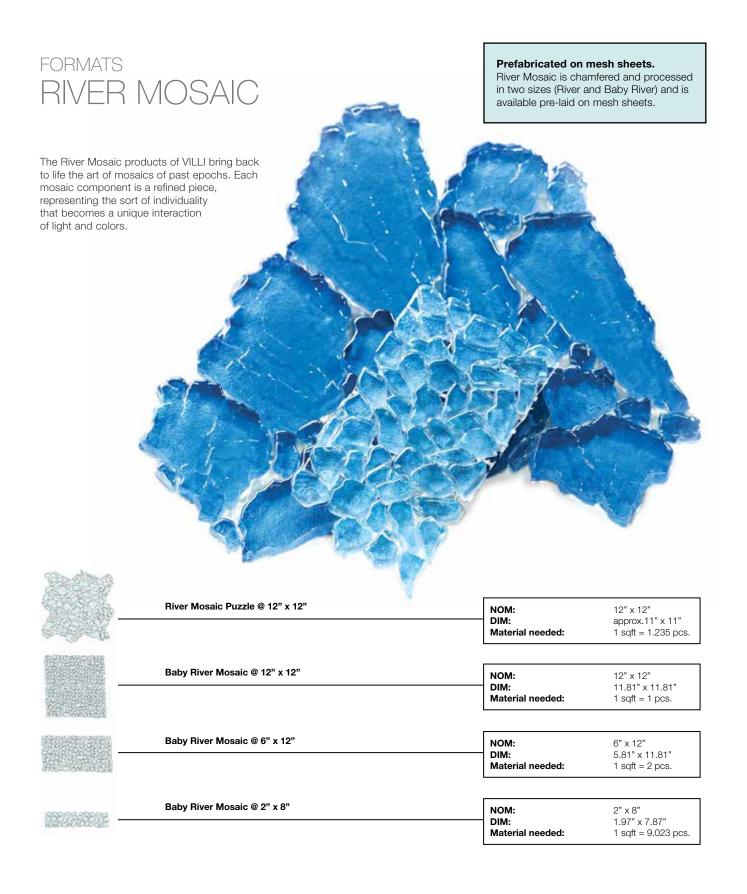
Preset on mesh sheets (joint width 2mm)

Sheet (foil) on the front for underwater applications and Metallic (joint width 2mm)

NOM:		Nominal measurement			
DIM:		Actual measurement			
Tolerance mosaic		+ 0.016" - 0.016"			
Tolerance mesh sheet		+ 0.016" - 0.016"			
Prefabricated on mesh sheets.					
Modular combination: YES					
Joint width: 0.079"					
Other formats available on request					

	NOM: DIM:	2" x 4" 1.98" x 3.84"
2" x 4" @ 12" x 12" (stocked in selected colors only)	Prefabricated on: NOM: DIM:	12" x 12" 11.81" x 11.81"
	Material needed:	1 sqft = 1 pcs.
2" x 2" @ 12" x 12"	NOM: DIM: Prefabricated on:	2" x 2" 1.98" x 1.98"
	NOM: DIM:	12" x 12" 11.81" x 11.81"
	Material needed:	1 sqft = 1 pcs.
OFFSET 1" x 2" @ 12" x 12"	NOM: DIM: Prefabricated on:	1" × 2" 0.91" × 1.98"
	NOM: DIM:	12" x 12" 10.69" x 11.71"
	Material needed:	1 sqft = 1.14 pcs.
	NOM: DIM:	1" x 2" 0.91" x 1.98"
PARALLEL 1" x 2" @ 12" x 12"	Prefabricated on: NOM: DIM:	12" x 12" 11.81" x 11.81"
	Material needed:	1 sqft = 1 pcs.
411 411 0 4011 4011	NOM: DIM:	1" x 1" 0.91" x 0.91"
1" x 1" @ 12" x 12"	Prefabricated on: NOM: DIM:	12" x 12" 11.81" x 11.81"
	Material needed:	1 sqft = 1 pcs.

GENERAL INFORMATION



	Overview Produ	verview Product Range			UNICOLOR				DECOR					
	0:	Packing	sq.ft./ box	xoq/sql		GLOSSY	МАТТЕ	ANTICO	FOSSIL	SKID RES.	BAROQUE	ELEMENTS	ONYX	RELIEF
	Size 16" x 16"	7				•	•	-	•	• •	•	•	-	•
			12.45	50.05										
	12" x 12"	12	12.00	47.40		•	•	-	•	•	-	-	-	-
	8" x 8"	12	5.33	21.00		•	•	-	-	•	-	-	-	-
	6" x 6"	24	6.00	24.24		•	•	-	-	-	-	-	-	-
	4" x 4"	48	5.33	20.64		•	•	-	-	•	-	-	-	-
	12" x 24"	6	12.00	47.64		•	•	-	-	-	-	-	-	-
	8" x 24"	6	8	30.00		•	•	-	-	-	-	-	-	-
E S	4" x 24"	18	12	47.70		•	•	-	-	-	-	-	-	-
D TILES	8" x 16"	7	6.23	25.13		•	•	-	-	-	-	-	-	-
FIELD	4" x 16"	14	6.22	25.06		•	•	-	-	-	-	-	-	-
	4" x 12"	18	6.00	23.76		•	•	-	-	-	-	-	-	-
	4" x 8"	24	5.33	21.12		•	•	-	-	-	-	-	-	-
	3" x 12"	48	12	48.00		•	•	-	-	-	-	-	-	-
	3" x 8"	48	8	36.00		•	•	-	-	-	-	-	-	-
	3" x 6"	48	6	23.52		•	•	-	-	-	-	-	-	-
	2" x 16"	28	6.22	28.00		•	•	-	-	-	-	-	-	-
	2" x 12"	36	8	27.00		•	•	-	-	-	-	-	-	-
	2" x 8"	36	4	18.00		•	•	-	-	-	-	-	-	-
	1" x 16"	12	1.33	5.3		•	•	-	-	-	-	-	-	-
	1" x 12"	12	1	4.00		•	•	-	-	-	-	-	-	-
	1" x 8"	12	0.66	2.52		•	•	-	-	-	-	-	-	-
	5/8" x 12"	108	5.63	23.76		•	•	-	-	-	-	-	-	-
	BORDER ART CORNER	12 4		4.00 1.00		•	•	-	-	-	-	-	-	-
	RONDO CANALE BORDER	2 12		0.5 4.00		•	•	-	-	-	-	-	-	-
		4 12		1.00 4.00		•	•	-	-	-	-	-	-	-
	TORELLO CORNER RONDO	4		1.00		•	•	-	-	-	-	-	-	-
	2" x 4"	6	6.00	1.00 21.42		•	•	-	-	_	_	-	-	-
AIC														
MOSAIC	@ 12" x 12"	6	5.95	23.80		-	-	-	•	-	-	-	-	-
	2" × 2" @ 12" × 12"	6	6.00	22.80		•	•	•	-	-	-	-	•	-
	OFFSET 1" x 2" @ 12" x 12"	6	5.28	19.37		•	•	•	-	-	-	-	-	-
	PARALLEL 1" x 2" @ 12" x 12"	6	6.00	22.08		•	•	•	-	-	-	-	-	-
	1" x 1" @ 12" x 12"	6	6.00	19.92		•	•	•	•	-	-	•	•	-
	Multiformat	6	6.00	21.2		•	•	-	-	-	-	-	-	-
	Pencils	6	6.00	19.02		-	-	-	-	-	-	-	-	-
	Buttons 1" @ 12" x 12"	6	6.00	17.58		-	-	-	-	-	-	-	-	-
	Buttons 3/4" @ 12" x 12"	6	5.22	18.06		-	-	-	-	-	-	-	-	-
	River Mosaic	7	5.67	21.61		•	_	_	_	_	_	_	•	-
SAIC	@ 12" x 12" Baby River Mosaic @ 12" x 12"	6	6.00	21.61		•	-	-	-	-	-	-	•	-
RIVER MOSAIC	Baby River Mosaic	12	6.00	22.05		•	-	-	-	-	-	_	-	-
Ä	Baby River Mosaic	12	1.33	4.85		•	-	-	-	-	-	-	•	-
	₩ Z X O													

INSTALLATIONS





TILES UNICOLOR



	Size	Packaging	Sq. Ft.	Order Code
	16" x 16"	7	12.44	colorcode-4040-08-000
	12" x 12"	12	12.00	colorcode-3030-08-000
	8" x 8"	12	5.33	colorcode-2020-08-000
	6" x 6"	24	6.00	colorcode-1515-08-000
	4" x 4"	48	5.33	colorcode-1010-08-000
	12" x 24"	6	12.00	colorcode-6030-08-000
	8" x 24"	9	12.00	colorcode-6020-08-000
GLOSSY	4" x 24"	12	8.00	colorcode-6010-08-000
LOR GL	8" x 16"	7	6.22	colorcode-4020-08-000
TILES UNICOLOR	4" x 16"	14	6.22	colorcode-4010-08-000
TILES	2" x 16"	36	6.00	colorcode-4050-08-000
	4" x 12"	18	6.00	colorcode-3010-08-000
	3" x 12"	48	12.00	colorcode-3075-08-000
	2" x 12"	36	6.00	colorcode-3050-08-000
	4" x 8"	24	5.33	colorcode-2010-08-000
	3" x 8"	48	8.00	colorcode-2075-08-000
	2" x 8"	72	8.00	colorcode-2050-08-000
	3" x 6"	48	6.00	colorcode-1575-08-000





TILES UNICOLOR

Matte

The delicate coat on the top side and a subsequent second fusing process give the surface a matte, slightly rough touch. That means the surface has not been sand-blasted and has closed pores. This makes it resistant to fingerprints, and grease stains are easier to clean.



0001 Bright White	0002 Pergamon
0024 Clear Grey	0014 Surl
0015 lbe	0016 Blue Cloud
0010 Royal Blue	CO17 Turquoise

Other colors/sizes available on request

Size	Packaging	Sq. Ft.	Order Code	
16" x 16"	7	12.44	colorcode-4040-08-001	
12" x 12"	12	12.00	colorcode-3030-08-001	
8" x 8"	12	5.33	colorcode-2020-08-001	
6" x 6"	24	6.00	colorcode-1515-08-001	
4" x 4"	48	5.33	colorcode-1010-08-001	
12" x 24"	6	12.00	colorcode-6030-08-001	
8" x 24"	9	12.00	colorcode-6020-08-001	
4" x 24"	12	8.00	colorcode-6010-08-001	ATTE
8" x 16"	7	6.22	colorcode-4020-08-001	UNICOLOR MATTE
4" x 16"	14	6.22	colorcode-4010-08-001	
2" x 16"	36	6.00	colorcode-4050-08-001	TILES
4" x 12"	18	6.00	colorcode-3010-08-001	
3" x 12"	48	12.00	colorcode-3075-08-001	
2" x 12"	36	6.00	colorcode-3050-08-001	
4" x 8"	24	5.33	colorcode-2010-08-001	
3" x 8"	48	8.00	colorcode-2075-08-001	
2" x 8"	72	8.00	colorcode-2050-08-001	
3" x 6"	48	6.00	colorcode-1575-08-001	

Static coefficient of friction	:
Dry	0.9
Wet	0.7

TILES UNICOLOR

TILES UNICOLOR Skid Resistant Floor Tiles



Static coefficient of friction:				
Dry	1.1			
Wet	1.05			

	Size		Packaging	Sq. Ft.	Order Code
DLOR SKID RESISTANT FLOOR TILES				Availal showr	ole in every color n in the adjacent color pallette
UNICOLOR		16" x 16"	7	12.45	colorcode-4040-08-003
TLES		12" x 12"	12	12	colorcode-3030-08-003
F		8" x 8"	12	5.33	colorcode-2020-08-003
		4" x 4"	48	5.33	colorcode-1010-08-003







TILES UNICOLOR FOSSI Wall & Floor



Size	Packaging	Sq. Ft.	Order Code	
			in every color the adjacent color pallette	TILES UNICOLOR FOSSIL
16" x 16"	7	12.45	colorcode-4040-08-114	
12" x 12"	12	12.00	colorcode-3030-08-114	

BORDERS



Glossy & Matte

	Size		Packing	Sq. Ft.	Order Code
	Flat Liner	1" x 16"	12	1.33	GLOSSY: colorcode-4025-08-408
	Flat Liner	1" x 12"	12	1.00	GLOSSY: colorcode-3025-08-408
ш	Flat Liner	1" x 8"	12	0.67	GLOSSY: colorcode-2025-08-408 MATTE: colorcode-2025-08-409
SY, MATTE	Flat Liner	5/8" X 12"	108	5.625	GLOSSY: colorcode-3015-08-408 MATTE: colorcode-3015-08-409
0 0		BORDER	12		GLOSSY: colorcode-2050-08-400
S G L		CORNER	4		GLOSSY: colorcode-5050-08-401
EOE	ART	RONDO	2		GLOSSY: colorcode-5050-08-402
<u>a</u> <u>≅</u>	- M-	BORDER	12		GLOSSY: colorcode-2025-08-403
Ε	CANALE	CORNER	4		GLOSSY: colorcode-5525-08-404
		BORDER	12		GLOSSY: colorcode-2025-08-405
		CORNER	4		GLOSSY: colorcode-5525-10-406
	TORELLO	RONDO	4		GLOSSY: colorcode-2525-10-407

Glossy available in every color shown in the adjacent color palette • Matte available as special order and stocked in selected colors in 1" x 8" and 5/8" x 12" sizes - Call for in-stock colors



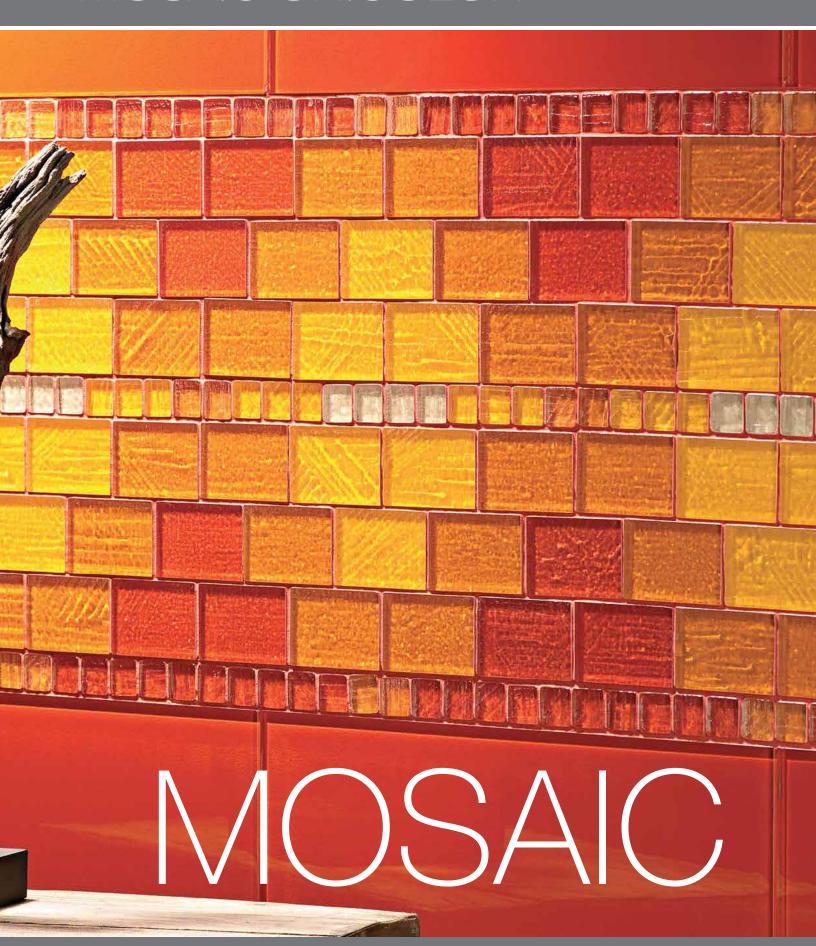






5/8" x 12" Flat Liner

MOSAIC UNICOLOR





MOSAIC UNICOLOR Glossy

	0:-	_	De el de el	0 [4	Ouelan Oa da
	Siz	<u>ze</u>	Packing	Sq. Ft.	Order Code
					n in the adjacent color palette, plus any om blend program (by special order)
	OFF SET	2" x 4" @ 12" x 12"	6	6.00	colorcode-1050-08-000
					n in the adjacent color palette, plus any om blend program (by special order)
		2" x 2" @ 12" x 12"	6	6.00	colorcode-5050-08-100
pecial order					n in the adjacent color palette, plus any om blend program (by special order)
ble by s	OFFSET	1" x 2" @ 12" x 12"	6	5.28	colorcode-5025-08-103
may not be stocked in all colors but can be made available by special order					n in the adjacent color palette, plus any om blend program (by special order)
itocked ir MOSA	PARALLEL	1" x 2" @ 12" x 12"	6	6	colorcode-5025-08-102
All sizes may not be s					n in the adjacent color palette, plus any om blend program (by special order)
		1" x 1" @ 12" x 12"	6	6.00	colorcode-2525-08-100
					n in the adjacent color palette, plus any om blend program (by special order)
		Multiformat @ 12" x 12"	6	6.00	colorcode-3030-08-120



MOSAIC UNICOLOR

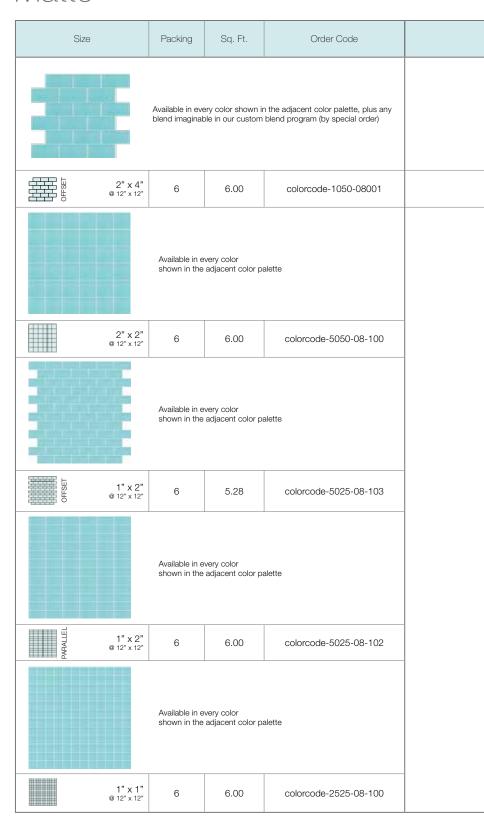


The delicate coat on the top side and a subsequent second fusing process give the surface a matte, slightly rough touch. That means the surface has not been sand-blasted and has closed pores. This makes it resistant to fingerprints, and grease stains are easier to clean.



Other colors available upon request

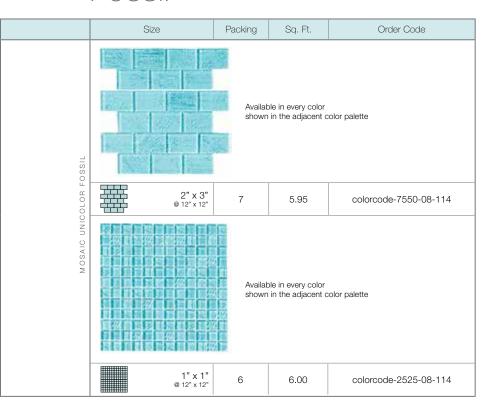
Mosaic unicolor Matte







MOSAIC UNICOLOR FOSSI

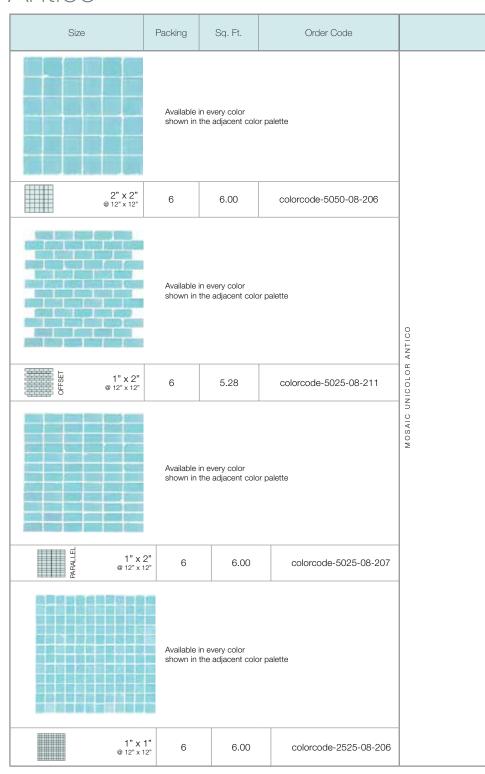




MOSAIC ANTICO



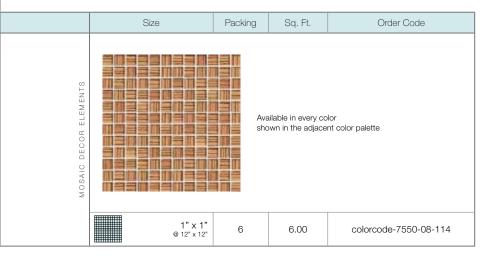
MOSAIC UNICOLOR Antico

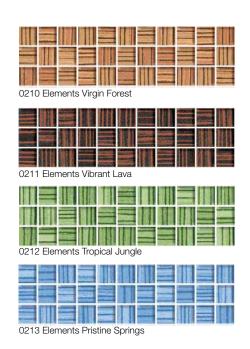






MOSAIC DECOR Elements

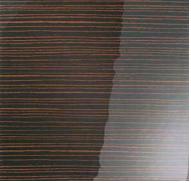




TILES DECOR

TILES DECOR Elements





0210 Elements Virgin Forest

0211 Elements Vibrant Lava





0212 Elements Tropical Jungle

0213 Elements Pristine Springs



Size			
16" x 16"			
Packaging	Sq. Ft.		
7	12.44		
Order Code Elements			
Elements Virgin Forest	0210-4040-08-000		
Elements Vibrant Lava	0211-4040-08-000		
Elements Tropical Jungle 0212-4040-08-000			
Elements Pristine Sprin	gs 0213-4040-08-000		

Size		
	8" x 16"	
Packaging	Sq. Ft.	
7	6.22	
Order Cod	e Elements	
Elements Virgin Forest	0210-4020-08-000	
Elements Vibrant Lava	0211-4020-08-000	
Elements Tropical Jung	le 0212-4020-08-000	
Elements Pristine Sprin	gs 0213-4020-08-000	

Size		
	4" x 16"	
Packaging	Sq. Ft.	
14	6.22	
Order Cod	e Elements	
Elements Virgin Forest	0210-4010-08-000	
Elements Vibrant Lava	0211-4010-08-000	
Elements Tropical Jung	le 0212-4010-08-000	
Elements Pristine Sprin	gs 0213-4010-08-000	





Size			
	16" x 16"		
Packaging	Sq. Ft.		
7	12.44		
Order Code	e Elements		
Elements Virgin Forest Deco Structured Relief	0210-4040-08-030		
Elements Vibrant Lava Deco Structured Relief	0211-4040-08-030		
Elements Tropical Jungle Deco Structured Relief	0212-4040-08-030		
Elements Pristine Springs Deco Structured Relief	0213-4040-08-030		



0210 Elements Virgin Forest Deco Structured Relief



0212 Elements Tropical Jungle Deco Structured Relief



Deco Structured Relief



0213 Elements Pristine Springs Deco Structured Relief

INNOVATIVE PRODUCTS





River Mosaic GLOSSY

		Size	Packaging	Sq. Ft.	Order Code
\ > 8 8 0	避	River Mosaic @ 12" x 12"	7	5.67	colorcode-3030-08-300
GL		Baby River Mosaic @ 12" x 12	6	6.00	colorcode-3030-08-301
	≥	Baby River Mosaic @ 6" x 12"	12	6.00	colorcode-3015-08-301
R <	convents	Baby River Mosaic @ 2" x 8"	12	1.32	colorcode-2005-08-301

Available in every color shown in the adjacent color palette





Diamond Series

This unique shaped, geometric diamond mosaic is sized to be installed and enjoyed in either horizontal or vertical formats, and features both all glass and Carrara marble/glass mixes. All glass versions are available in Bright White, Surf and Silver Grey, plus a mix of bright white and our 3 grey colors. Carrara marble/glass mixes feature a random mix of marble and our 3 grey colors, Clear Grey, Dark Grey and Anthracite.

Size		
Diamonds 4" x 2"		
Packaging Sq. Ft.		
6	6	
Order Code		
colorcode-1050-08-500		



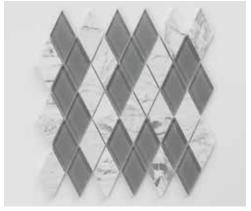
1554 Mix Grey with Bright White all glass



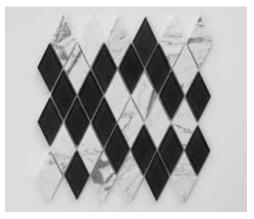
0001 Bright White all glass



1556 Carrara with 0027 Dark Grey

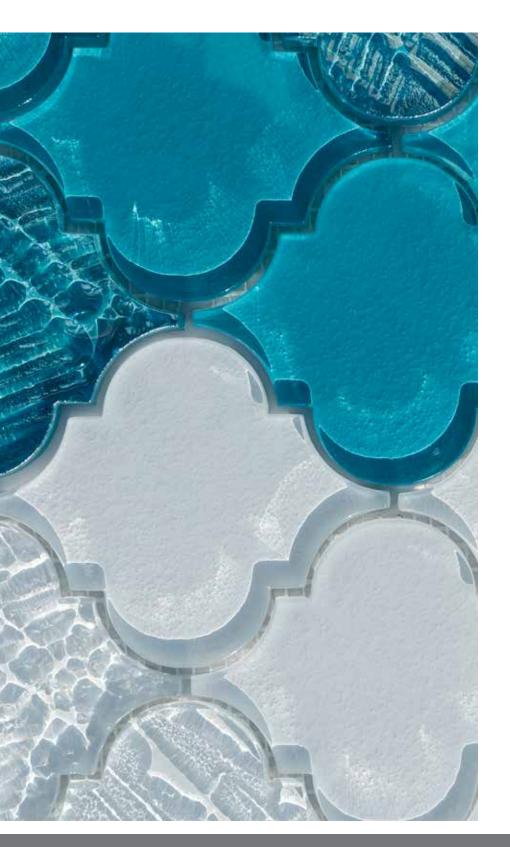


1555 Carrara with 0024 Clear Grey



1557 Carrara with 0050 Anthracite

INNOVATIVE PRODUCTS





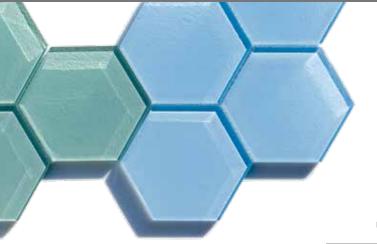
Arabesque and Hexagons

Hip and retro at the same time, our Arabesque features a mix of 1/3 structured tile with 2/3 glossy finish, which brings depth and pop to the reflective properties of Villi glass. We also stock Arabesque in all glossy in Silver Grey.

Our large hexagons deliver a beautiful look, especially with the versatility of using glossy, matte or both in areas where these deep colors and statement-making shapes are desired.

Both Arabesque and Hexagons are offered in our six top-selling colors.





ARABESQUE

Size		
Arabesque 4" x 5"		
Packaging Sq. Ft.		
6	5.166	
Order Code		
colorcode-3225-08500		

HEXAGON GLOSSY

Size		
Hexagons 6" x 5"		
Packaging	Sq. Ft.	
6	3.936	
Order Code		
colorcode-1315-08-700		

HEXAGON MATTE

Size		
Hexagons 6" x 5"		
Packaging Sq. Ft.		
6	3.936	
Order Code		
colorcode-1315-08-701		

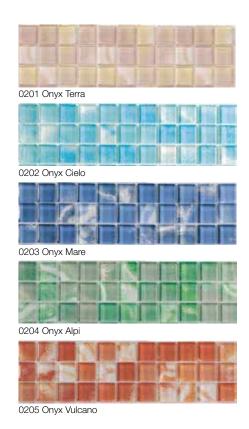


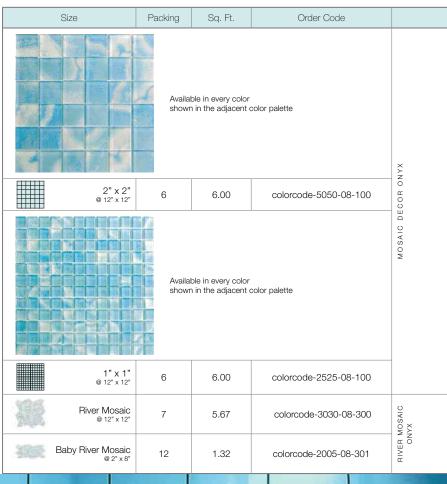




MOSAIC MULTICOLOR

MOSAIC DECOR Onyx Glossy

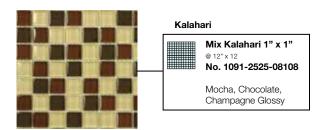


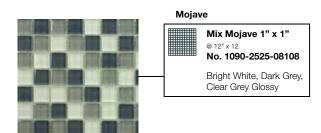


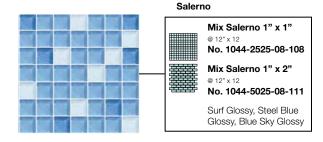




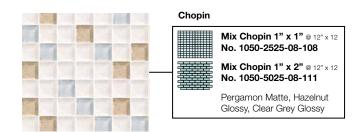
MOSAIC MULTICOLOR Mixes Glossy

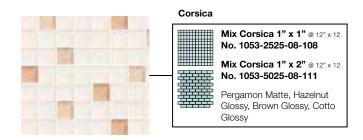


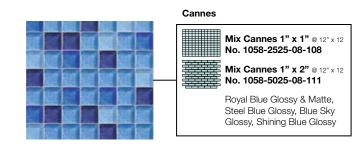


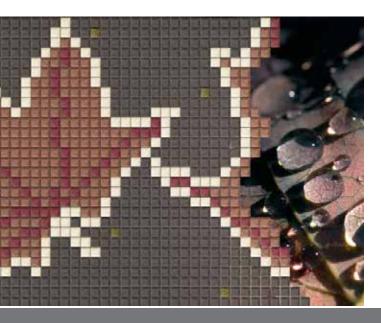


MOSAIC MULTICOLOR Mixes Glossy/Matte







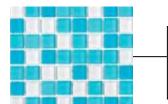






Mix Chai 1" x 1" @ 12" x 12 No. 1088-2525-08-108

Highland Green Glossy & Matte, Champagne Glossy & Matte, Grey Stone Glossy & Matte, Green Olive Glossy & Matte





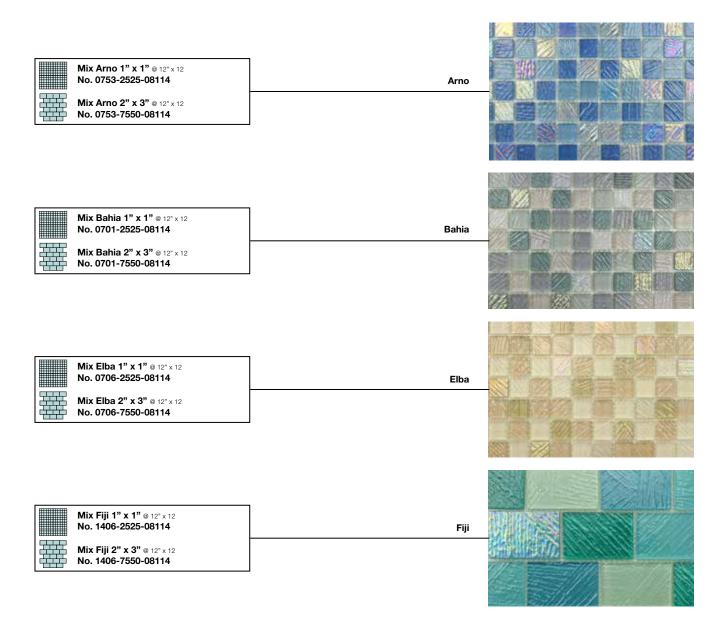
Taurus

Mix Taurus 1" x 1" @ 12" x 12 No. 1018-2525-08-108

> Bright White Glossy, Blue Cloud Glossy & Matte, Turquoise Matte

MOSAIC MULTICOLOR

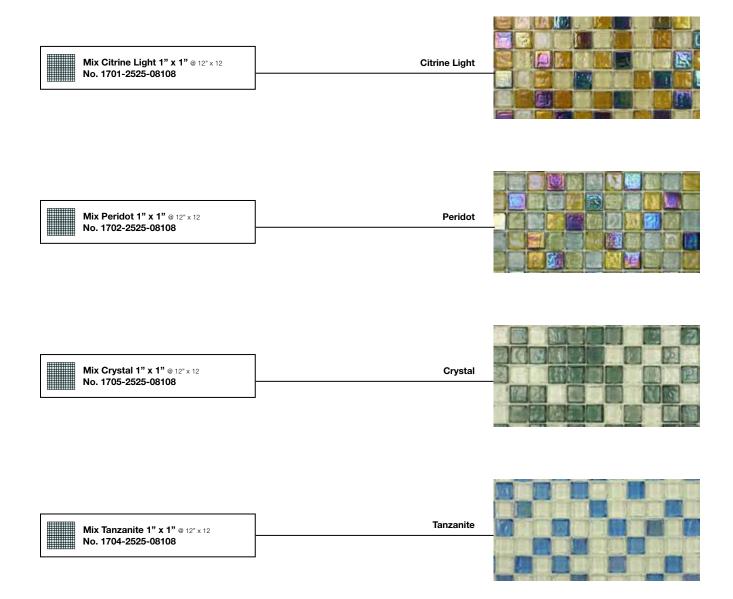
MOSAIC MULTICOLOR Mixes Fossil





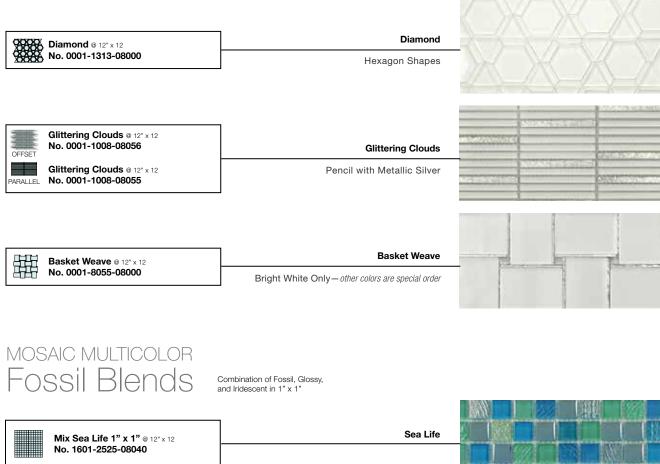
MOSAIC MULTICOLOR Jewel Blends

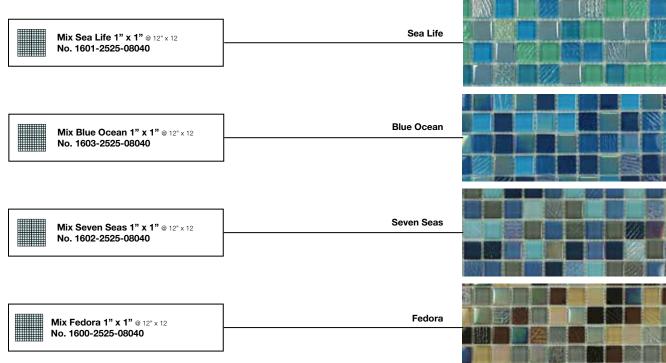
Limited Availability



MOSAIC MULTICOLOR

MOSAIC MULTICOLOR Specialty Designs







MOSAIC MULTICOLOR Mixes Glass & Metal Coating

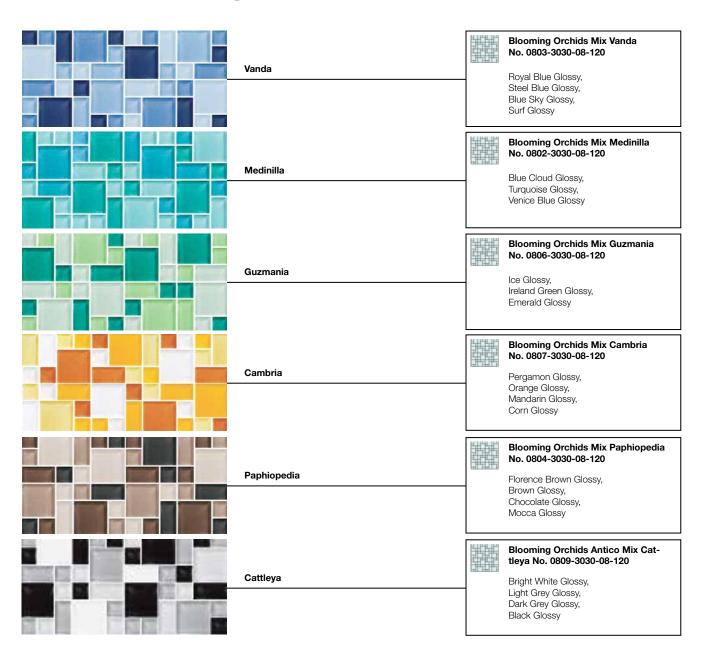
Mix Savannah 1" x 1" No. 1071-2525-08-006 Bright White Glossy, Bright White Matte, Hazelnut Glossy, Bronze (Metal Coating)	Savannah *	
Mix Glacier 1" x 1" No. 1070-2525-08-006 Bright White Glossy, Clear Grey Glossy, Light Silver (Metal Coating), Dark Silver (Metal Coating)	Glacier *	
Mix Savannah Off-Set No. 1071-0803-08058 Bright White Glossy, Bright White Matte, Hazelnut Glossy, Bronze (Metal Coating)	Savannah *	
Mix Glacier Off-Set No. 1070-0803-08058 Bright White Glossy, Clear Grey Glossy, Light Silver (Metal Coating), Dark Silver (Metal Coating)	Glacier *	
Mix Savannah Parallel No. 1071-0803-08059 Bright White Glossy, Bright White Matte, Hazelnut Glossy, Bronze (Metal Coating)	Savannah *	
PARALLEL Mix Glacier Parallel No. 1070-0803-08059 Bright White Glossy, Clear Grey Glossy, Light Silver (Metal Coating), Dark Silver (Metal Coating)	Glacier *	

 $^{^{\}star}$ These mosaics can be used in wet areas but for vertical wall application only.

These mosaics are not to be submerged or to be used in underwater areas. They have excellent abrasion, corrosion and oxidation resistance.

MOSAIC MULTICOLOR

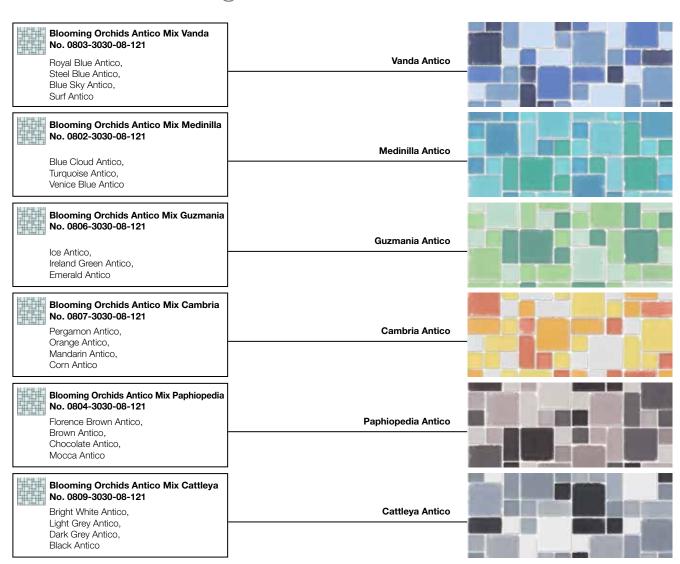
Mosaic multicolor Mixes Blooming Orchids Glossy Multi-Format





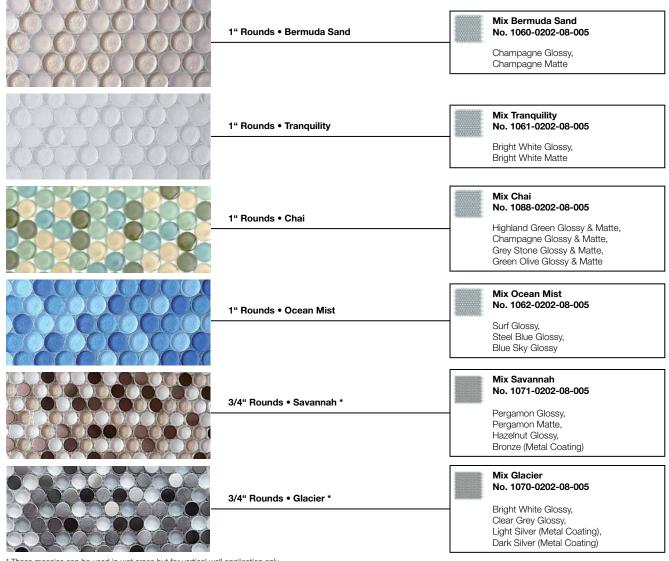


Mixes Blooming Orchids Antico multiformat



BUTTONS

Buttons



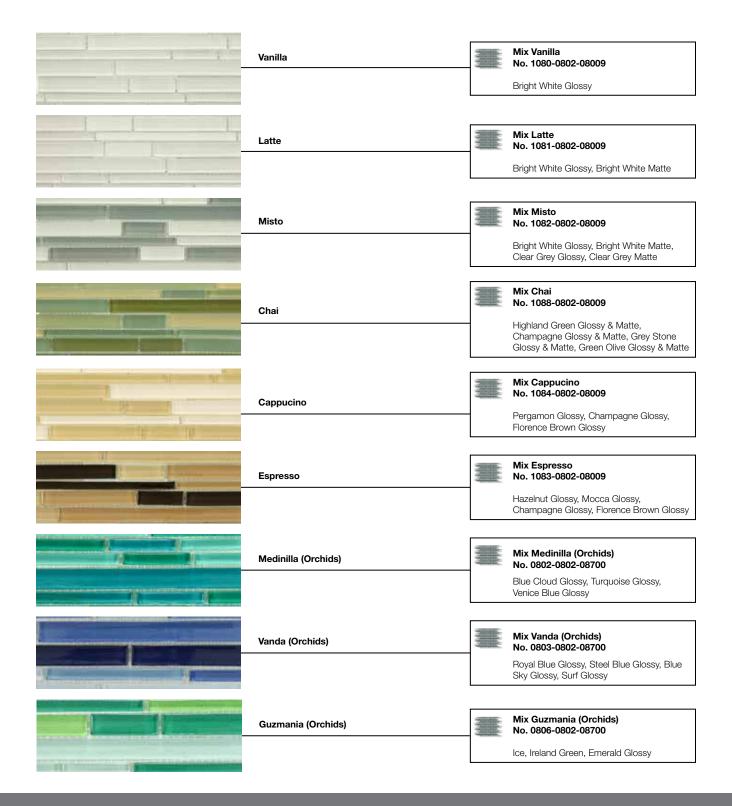
^{*} These mosaics can be used in wet areas but for vertical wall application only.

These mosaics are not to be submerged or to be used in underwater areas. They have excellent abrasion, corrosion and oxidation resistance.





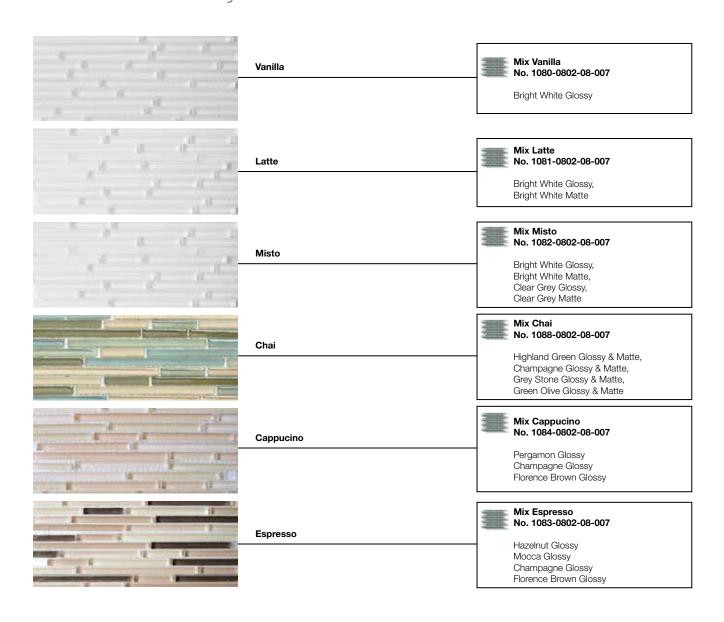
Random Width and Random Length on 12 x 12 Net Pencils Brick (Linear)



PENCILS

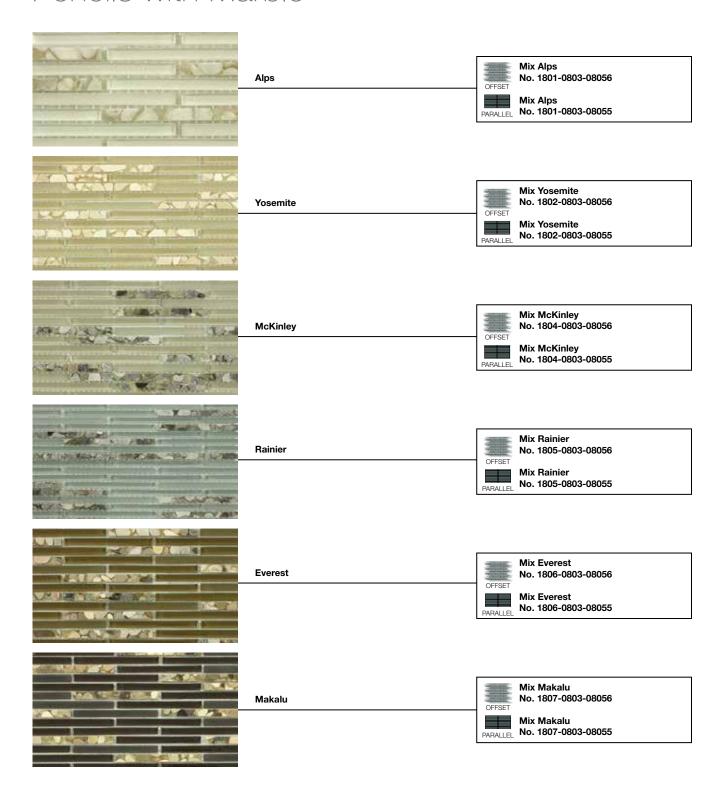


1/4" Random Length on 12 x 12 Net Pencils Glossy & Matte





1/4" x 4" on 12 x 12 Net Pencils with Marble

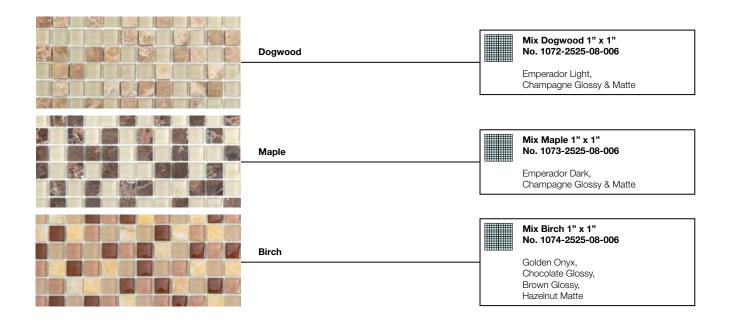


^{*} These mosaics can be used in wet areas but for vertical wall application only.

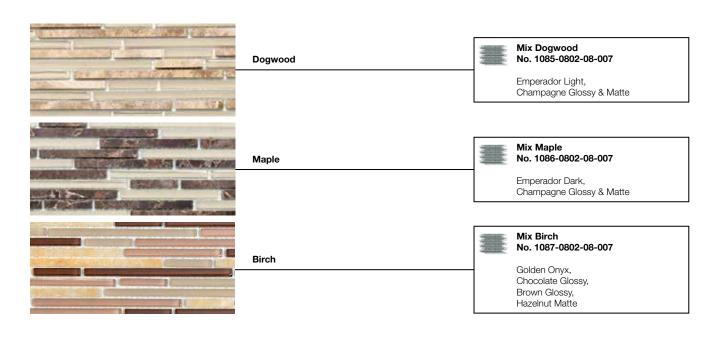
These mosaics are not to be submerged or to be used in underwater areas. They have excellent abrasion, corrosion and oxidation resistance.

STONE MIXES

MOSAIC MULTICOLOR Mixes Glass & Stone



1/4" Random Length on 12 x 12 Net Pencils Glass & Stone







Light and shadow, water and air, fire and earth - the series Onyx is modeled after the varied and colorful interplay of the elements and, in a timeless manner, pays homage to the beauty of nature – right in your home.



0201 Onyx Terra



0202 Onyx Cielo



0203 Onyx Mare



0204 Onyx Alpi



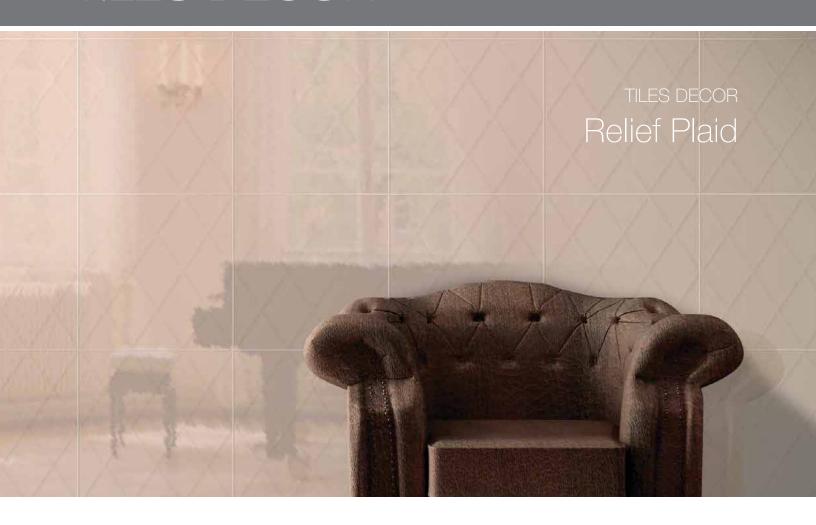
0205 Onyx Vulcano

River Mosaic

Size		Packaging	Sq. Ft.	Order Code	
避	River Mosaic @ 12" x 12"	7	5.67	colorcode-3030-08-300	
	Baby River Mosaic @ 12" x 12"	6	6.00	colorcode-3030-08-302	\ SSO \ .
[12]1]	Baby River Mosaic @ 6" x 12"	12	6.00	colorcode-3015-08-301	υ × × ν
sprivates	Baby River Mosaic @ 2" x 12"	12	1.33	colorcode-2005-08-301	

Available in every color shown in the adjacent color palette

TILES DECOR



Size			
	16" x 16"		
Packaging	Sq. Ft.		
7	12.45		
Order Code Relief Lines (Deco Str. Relief)			
Bright White Deco Structured Relief	0001-4040-23-014		
Florence Brown Deco Structured Relief	0003-4040-23-014		
Chocolate Deco Structured Relief	0007-4040-23-014		
Black Deco Structured Relief	0009-4040-23-014		
Lemon Grass Deco Structured Relief	0046-4040-23-014		







< 0001 Bright White





0009 Black

< 0046 Lemon Grass



TILES DECOR Relief Lines & Waves







0007 Chocolate

0009 Black







0001 Bright White

< 0046 Lemon Grass







0046 Lemon Grass

0009 Black

< 0001 Bright White





0003 Florence Brown

< 0007 Chocolate



Size				
	16" x 16"			
Packaging	Sq. Ft.			
7	12.45			
Order Code Relief Lines (Deco Str. Relief)				
Bright White	0001-4040-23-015			
Florence Brown	0003-4040-23-015			
Chocolate	0007-4040-23-015			
Black	0009-4040-23-015			
Lemon Grass	0046-4040-23-015			
Order Code Relief Wa	aves (Deco Str. Relief)			
Bright White	0001-4040-23-016			
Florence Brown	0003-4040-23-016			
Chocolate	0007-4040-23-016			
Black	0009-4040-23-016			
Lemon Grass	0046-4040-23-016			

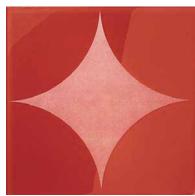
TILES DECOR



Size			
	16" x 16"		
Packaging	Sq. Ft.		
7	12.45		
Order Code Elements			
Retro Classic Circles 0001 Bright White Deco Matte	0001-4040-20-004		
Retro Classic Circles 0009 Black Deco Matte	0009-4040-20-004		
Retro Classic Circles 0030 Red Deco Matte	0030-4040-20-004		

Other colors/sizes available on request

Classic Circles



0030 Red Deco Matte



0001 Bright White Deco Matte



0009 Black Deco Matte



TILES DECOR Baroque Daphne





0001 Bright White Deco Matte



0035 Champagne Deco Matte

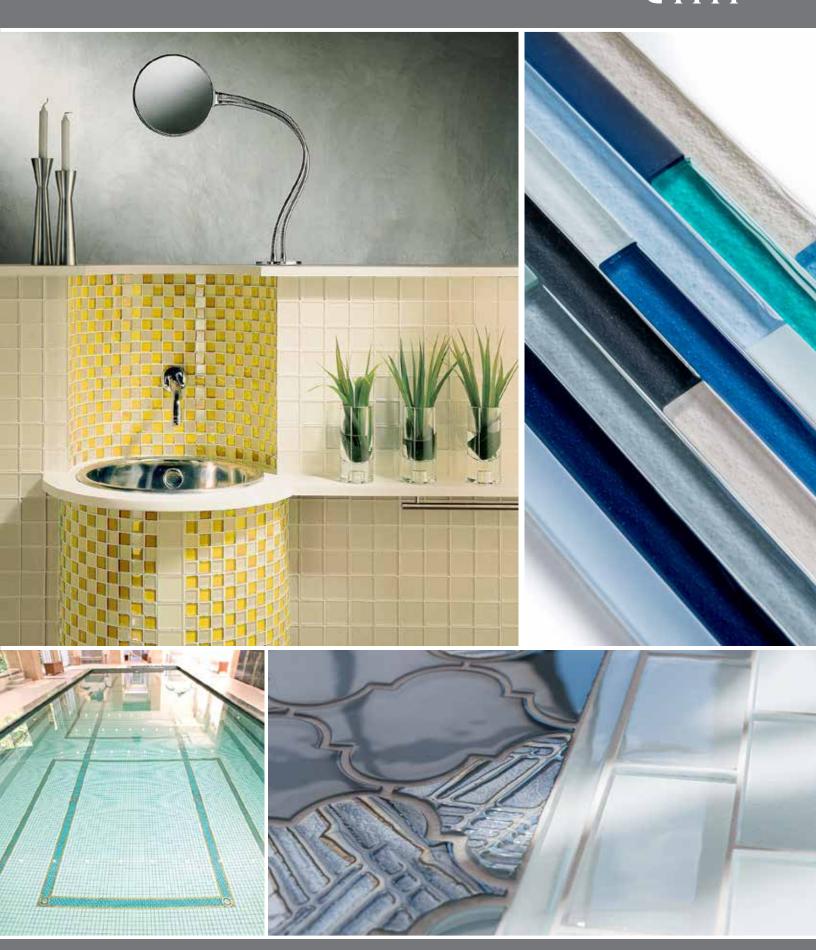


0009 Black Deco Matte

Size			
	16" x 16"		
Packaging	Sq. Ft.		
7	12.45		
Order Code Elements			
0001 Bright White Deco Matte	0001-4040-20-007		
0035 Champagne Deco Matte	0035-4040-20-007		
0009 Black Deco Matte	0009-4040-20-007		



Villi



INSTALLATION GUIDELINES

PLEASE READ THESE INSTALLATION INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTALLATION!

VILLI makes high-quality, architectural building materials. Installation of large format glass tiles requires skillful techniques and training, and it is essential to adhere strictly to the relevant instructions for installation. For this reason installation should only be carried out by properly trained professionals. The owner or end user of the tiles is responsible for determining the acceptability of the product for the particular installation being considered. If the customer has any doubt as to whether the tile is suited to the application being considered it is strongly suggested a call be made to Villi USA to discuss the concern.

COLOR / SHADE

Glass always has its own natural coloring, which increases as the thickness/density increases. The color of the final consignment may deviate slightly from the color of the original sample. This is referred to as a shade variation and does not constitute any reason to return the goods. This color variation is reduced with Opti-Glass, but is not completely eradicated. We strongly recommend that all tiles should be dry-laid and examined for variation and shading prior to installation. VILLI USA assumes NO responsibility for problems related to product installation and No adjustments will be made after installation.

Important factors for a successful Villi installation:

PREPARATIONS

The contractor is to examine substrates and advise the General Contractor and Architect of existing conditions and surface contamination requiring correction before work commences. Before starting, substrates are to comply with deflection requirements as defined by International Building Code (IBC), International Residential Code (IRC), or applicable local building code. Substrates are to be cleaned to remove curing compounds, sealers, soil, mortar, dirt, dust, etc. Curing compounds and sealers are to be mechanically removed (e.g. metal bead-blasting, grit / sand blasting, diamond wheel grinding with vacuum attachment). After removal of the curing compounds and sealers, all rough and uneven substrates are to be brought into required tolerances. For tiles with edges shorter than 15 inches (375mm), maximum allowable variation is 1/4 inch in 10 feet (6 millimeters in 3 meters) from the required plane, with no more than 1/16 inch variation in 12 inches (1.5 millimeters variation in 300 millimeters) when measured from the high points in the surface. For tiles with at least one edge 15 inches (375 millimeters) in length, maximum allowable variation is 1/8 inch in 10' (3 millimeters in 3 meters) from the required plane, with no more than 1/16 inch variation in 24 inches (1.5 millimeters variation in 600 millimeters) when measured from the high points in the surface. For modular substrate units, such as exterior glue plywood panels or adjacent concrete masonry units, adjacent edges cannot exceed 1/32 inch (0.8 millimeters) difference in height. Use LATICRETE 3701 Fortified Mortar. Dry, dusty concrete or masonry surfaces must be water washed and excess water removed just prior to the application of LATICRETE installation materials.

EXPANSION AND CONTROL JOINTS

Existing joints in substrate must be carried through the tile work and conform to architectural details. Expansion joints to be installed where tile work abuts restraining surfaces, such as perimeter walls, curbs, columns, corners, etc. Expansion joints to be installed at all "changes of plane" in tile work. Refer to Tile Council of North America (TCNA) Detail EJ-171 (Current Year) for industry recommendations

INSTALLATION OF CRACK SUPPRESSION MEMBRANE

Install HYDRO BAN® over all hairline cracks (\leq 1/8" or 3mm) in surfaces, prior to installing tiles, in accordance with the LATICRETE® written installation instructions. Refer to LATICRETE DS 663.0 and DS 663.5 for complete information.

MIXING

Mix according to LATICRETE printed product instructions included with each product package.

THINSET INSTALLATION OF TILES

Ensure that the backs of the glass tiles have been thoroughly washed, rinsed, and completely dried prior to installation. Use LATICRETE Glass Tile Adhesive Mortar to install tiles, via thin-set method. Installation is to comply with current revisions of ANSI A108.02 (3.11), A108.1B and ANSI A108.5. Use an appropriate sized notched trowel to facilitate full coverage of the thinset mortar to the backs of the tiles. Use the flat side of the trowel to firmly apply LATICRETE Glass Tile Adhesive Mortar onto the substrate. Next, apply LATICRETE Glass Tile Adhesive Mortar in a horizontal direction using notched side of the trowel. Use the flat side of the trowel to knock down the ridges and create a smooth setting bed. Check for voids and fill in where necessary. Next, back butter each clean, dry tile using LATICRETE Glass Tile Adhesive Mortar. Verify that 100% coverage has been achieved by removing a tile while the thin-set mortar is still fresh. The face of the glass tile can also be checked before setting to verify the appearance of full coverage. Tiles must be dry prior to installation to avoid the appearance of water spots on backs of tile. Apply glass tile into the wet thin-set mortar using firm, even pressure to establish contact and eliminate any voids. Remove excess thin-set mortar from in between tile edges. If voids or water spots in the thin-set mortar are visible through the tiles, remove the tile and correct the installation at this point. Allow the tile installation to cure a minimum of 48 hours at 70°F (21°C) prior to grouting. Clean excess thin-set mortar from the face of the glass tiles and joints between pieces while fresh, before it hardens.

EPOXY GROUTING

Store liquid components of SPECTRALOCK® PRO Premium Grout† for 24 hours @ 70-80°F (21-27°C), prior to use, to facilitate mixing and application. Substrate temperature must be 40-95°F (4-35°C). Verify joints are free of dirt, debris, thin-set mortar or grout spacers. Sponge or wipe dust/dirt off glass and remove all water standing in joints. Cut open pouch and pour SPECTRALOCK PRO Premium Grout Part A Liquid into a clean mixing pail. Then open pouch and pour SPECTRALOCK PRO Premium Grout Part B Liquid into the mixing pail. Mix by hand or with a slow speed (<300 rpm) mixer until the two liquids are well blended. Then, while mixing, add SPECTRALOCK Grout Part C Powder and blend until uniform. For narrow joints, it is acceptable to leave out up to 10% of the SPECTRALOCK Grout Part C Powder to produce a more fluid mix. Install SPECTRALOCK PRO Premium Grout in compliance with current revisions of ANSI A108.02 (3.13) and ANSI A108.6 (3.0 - 4.0). Spread using a sharp edged, firm rubber float and work grout into joints. Using strokes diagonal (at 45° angle) to the grout lines, pack joints full and free of voids/pits. Then hold float face at a 90° angle to grouted surface and use float edge to "squeegee" off excess grout, stroking diagonally to avoid pulling grout out of filled joints. Once excess grout is removed, a thin film/haze will be left. Initial cleaning of the remaining film/haze can begin approximately 20 minutes after grouting (wait longer when temperatures are cooler). Begin by mixing one cleaning additive packet with 2 gallons (7.6 L) of clean water in a clean bucket to make cleaning solution. Dip a clean sponge into the bucket and then wring out cleaning solution until sponge is damp. Using a circular motion, lightly scrub grouted surfaces with the damp sponge to loosen grout film/haze. Then drag sponge diagonally over the panel surfaces to remove froth. Rinse sponge frequently and change cleaning solution at least every 50 ft2 (4.7m2). Discard sponges as they become "gummy" with residue. Check work as you clean and repair any low spots with additional grout. One (1) hour after finishing first cleaning, clean the same area again following the same procedure but utilizing a clean white scrub pad and fresh cleaning solution. Rinse scrub pad frequently. Drag a clean sponge diagonally over the panel surfaces to remove froth. Use each side of sponge only once before rinsing and change cleaning solution at least every 50 ft2 (4.7m2). Allow cleaned areas to dry and inspect panel surfaces. For persistent grout film/haze (within 24 hours), repeat scrubbing procedure with undiluted white vinegar and clean pad. Rinse with clean water and allow surface to dry. Inspect grout joint for pinholes/voids and repair them with freshly mixed LATICRETE® SPECTRALOCK® PRO Premium Grout †. Caution: Do not use acid cleaners on epoxy grout less than 7 days old.

PORTLAND CEMENT GROUTING

Verify grout joints are free of dirt, debris, thin-set mortar and grout spacers. Sponge or wipe dust/dirt off all surfaces. Remove all water standing in joints. Surface temperature must be between 40-90° F (4-32°C). Mixing: Pour approximately 64 oz. (1.9 L) of clean, potable water into a clean mixing container. Add a 25 lb. (11.3 kg) bag of LATICRETE PERMACOLOR™ Grout to the container while



mixing. Mix with a slow speed mixer to a smooth, stiff consistency. Allow to slake for 5 minutes and remix. Install grout per current revisions of ANSI A108.1A (7.0 Grouting of tile), ANSI A108.02 (4.5 Cleaning tile) and ANSI A108.10. Dampen dry surfaces with clean water. Spread using a sharp edged, hard rubber float and work grout into joints. Using diagonal (at 45° angle to direction of grout line) strokes, pack joints full and free of voids/pits. Hold float face at a 90° angle to panel surface and use float edge to "squeegee" off excess grout, stroking diagonally to reduce pulling grout out of filled joints. Initial cleaning can begin when grout has become firm, typically 15-20 minutes after grouting @ 70° F (21°C). Higher temperatures may require faster time to initial cleaning; wider joints or lower temperatures may require a longer time to initial cleaning. Begin initial cleaning by lightly dampening the entire grouted area with a damp sponge. Then, wash clean the entire area with a damp (not wet) sponge. Drag a clean, dampened sponge diagonally over the panel surfaces to remove grout haze left after "squeegeeing." Rinse towel/sponge frequently. Change rinse water at least every 200 ft2 (19m2). Repeat this cleaning sequence again if grout haze is still present. Allow grout joints to become firm. Buff surface of grout with clean coarse cloth. Inspect joint for pinholes/voids and repair them with freshly mixed grout. Within 24 hours, check for remaining haze and remove it with warm soapy water and a nylon scrubbing pad, using a circular motion, to lightly scrub surfaces and dissolve haze/film. Do not use acid cleaners on latex Portland cement grout less than 10 days old.

PROTECTION

The contractor must take precautions to protect the finished work from damage by other trades. Allow the cement grout to cure for a minimum of 7 days at 70° F (21° C) before aggressive cleaning.

COLD WEATHER NOTE

The curing of installation materials is retarded by low temperatures and finished work should be protected for an extended period of time. Typically, for every 18° F below 70° F (10°C below 21°C), installation materials take twice as long to cure.

GROUT JOINT WIDTH

VILLI glass tiles should be set with a minimum of 1/8 inch grout joint. We also recommend non-sanded grout to prevent any scratching on the tile surface. If applications call for sanded grout, we recommend the use of a soft rubber float to minimize the possibility of scratching the tile. After installation, it is recommended that the tile be cleaned with a commonly accepted grout cleaner, e.g. Aqua Mix (1-800-366-6877) or TEC (1-800-832-9023).

CUTTING VILLI TILES

There are various ways to cut Villi tiles. These include:

SCORING AND BREAKING

Scoring can be done using a glass cutter (tile cutter, e.g. hand cutter 6 or 8 mm carbide wheel housed in a ball bearing casing. The breaking is then done evenly, applying a constant pressure, using glazier's pliers. The cut edges should then be sanded with sanding pads, to minimize risk of injury. The lighter you score (apply the least amount of pressure to score the tile) the better it snaps – the glass tile does not break because of the force, it breaks because of the heat generated from the carbide wheel.

USING A WET SAW

Using a wet saw may result in chipping on both the top and bottom of the tile causing an irregular edge and some color loss. Using a wet saw is only recommended when the cut area will be covered by more than ¼" of switch plate or molding. Wet saws generally are not recommended for cutting VILLI tiles. Most wet saws cannot cut the tile without excessive vibrations, which cause chipping. If you do use a wet saw, use a Glass Blade 10" wet saw blade which is made specifically for glass. In addition, the tile has to be cut extremely slowly: Example: One piece of 4x4 glass tile should take approx. 1-1/2 to 2 minutes to cut. Use masking tape or blue painters tape all the way around the tile when the cut is being made and cutting the tile upside down will prevent the backing from chipping as much and will put the worst edge on the front of the tile. This edge should then be sanded and re-polished if needed.

USING A WATER-JET MACHINE

A water jet machine is an excellent option for cutting Villi products, especially for more difficult cuts. There is a difference in cutting glass versus stone. The water jet machines are set to 50-60,000 psi. For glass, it must be reduced to 18-20,000 psi. Also, there should either be a change to the metering disc to restrict the amount of sand that is used or a vacuum assist pump should be used. The water jet company can contact Villi for any further questions.

TO CUT OUT A SECTION OF THE TILE E.G. FOR POWER OUTLETS

First, mark out the piece which needs to be cut out. Where the mark-out lines intersect, drill a hole with a diameter of at least 5mm. Using a wet drill bit designed for drilling glass tile, drill half way through the tile from the front, turn it over and then drill half way through from the back, meeting in the middle. This is necessary to avoid chipping and stress fractures once the tile is set. The cutting should then be done using a water-cooled glass saw. The saw should be positioned at right angles to the tile.

DRILLING HOLES

Holes with a smaller diameter can be drilled using a diamond drill suitable for drilling glass, while constantly using cooling water. When drilling holes starting from a 10 mm diameter, care must be taken to drill on both sides. First drill on the colored side halfway through the tile, then drill on the glass side. This is necessary to avoid chipping the color and potential breaking due to stress. It is advisable to use a rabbet or similar aid. While drilling, it is essential to use cooling water.

INSTALLATION OF BATHROOM FIXTURES & FITTINGS

When installing bathroom fixtures/fittings (e.g. toilets, sinks, mirrors, etc.) by means of screws, place suitable plastic washers between the screws/bearing surface and the glass tile. When you tighten the screws, the plastic washers ensure an even distribution of pressure and prevent the tiles from breaking under the stress.

PLACING HARDWARE AND ACCESSORIES

- All hardware anchors or blocking for heavy objects must be set directly into the structure. Do not put any weight loads on the immediate substrate (cementitious board, greenboard, hardibacker, etc.) and never on to the glass tile itself.
- Shower doors and glass panel hardware should be set before setting glass tile. Do not set heavy items directly onto the glass. Blocking is required where doors attach to the wall. This reduces stress to the wall.
- The glass must be physically separated from towel bars, light fixtures, hooks, or any other hardware. Use cork material or 1/16" rubber sheeting to separate hardware from the glass tile. Cut to size and shape as needed.

CLEANING INSTRUCTIONS FOR GLASS TILES

GENERAL INFORMATION

Market research, studies and, above all, practical experience confirm that glass scores excellently well in comparison with other covering materials. The decisive criteria include, above all, long-lasting beauty and easy cleaning, together with high functionality, in both private homes and public areas. When using cleaning agents, please observe the instructions for use and the danger warnings given by the manufacturers. We cannot accept any liability for damage caused through failure to follow these instructions and warnings. Never use cleaning agents which contain hydrofluoric acid or any of its compounds (fluoride). Even when heavily diluted, these will corrode the glass tiles.

Important: When cleaning, always also take the surrounding materials into account!

BASIC GUIDELINES

There is an old saying which has not lost its wisdom: "dirt which is never carried inside need never be cleaned away!" Shoe-scraper grids, doormats and walk-off areas in front of the entrance area stop a great deal of dirt from getting in. Optimal cleaning results can be achieved using clean water and a microfiber cloth: simply dampen the cloth and polish the glass tiles/mosaics – and finished! In the event of heavy soiling, glass should always be rinsed with clean water beforehand, to remove dust and silica sand. If cleaning agents must be used, then these should

INSTALLATION GUIDELINES

contain a small amount of alcohol or acid, and be used with a microfiber cloth. CAUTION: Please do not use any blades or lambskin – both of these cleaning aids can damage the glass! All cleaning devices must always be free of "grainy" elements.

CLEANING

A distinction is made between the final building cleaning, basic cleaning and maintenance cleaning (daily cleaning).

Final building cleaning or first cleaning

This refers to the cleaning at the end of building work, immediately after completing the surface. After the heaviest dirt has been rinsed off, the thorough cleaning is carried out using a suitable cleaning agent.

Grout joints

Grout joints must always be protected by wetting them with water beforehand. Once they are saturated with water the joint sealer cannot absorb any further liquids (cleaning agents), and therefore cannot suffer corrosion. Acidic cleaning agents corrode the (cement-based) joint sealer. After use, rinse thoroughly and neutralize if necessary.

- · Cement-based joint sealer: clean with cement residue remover
- · "Epoxy" joint sealer (clinics): clean with silicone remover

Tiles / Mosaics

Usually cleaned using basic sanitary cleaning agents (phosphoric acid – pH 0.5 – in a concentrated form: 5 – 10%), to achieve the highest possible degree of cleanliness.

Facades

Each facade must undergo a final cleaning after being laid or mechanically mounted. Mechanically-held facades preferably require a neutral cleaning to remove oily and greasy dirt produced during assembly, while conventionally cemented facades require acid-based cleaning to remove the cement residue.

Basic cleaning (precision building cleaning)

This is usually carried out using basic sanitary cleaning agents (phosphoric acid - pH 0.5- in a concentrated form: 5-10%), to achieve the highest possible degree of cleanliness.

Maintenance cleaning, cleaning for daily use

The "everyday cleaning" is trouble-free and will be necessary at varying intervals, according to the amount of dirt and use: weekly, daily, or several times a day in the event of especially intensive use. Generally, water and a microfiber cloth suffice for maintenance cleaning. We recommend cleaning with citric acid cleaning agents (pH 2-2.5) in sanitary facilities. Cleaning agents containing special care agents are not necessary and may even cause problems if continually used: sticky layers of grease, wax and plastic can build up, which not only look unsightly, but are also bad for hygiene, safety (danger of slipping) and cleaning.

Sanitary areas

If cleaning agents are used, these should contain a small amount of alcohol, be free of tensides or be slightly acidic.

Living areas

Normal dirt can be most easily removed using slightly alkaline (up to pH 10) or neutral cleaning agents.

Cleaning in clinics

Surface disinfectants can be recommended with no problem: alcohol-based, spray-on and pour-on disinfectants, hand disinfectants, wound disinfectants.

CLEANING DIFFERENT VILLI SURFACES

Glossy and Matte

Clean using clean water and microfiber cloth, alcohol-based / tenside-free cleaning agent – acidic maintenance cleaning agent (sanitary areas). The "Matte" surface is virtually non-porous (i.e. grease- and oil-resistant) and should be cleaned in the same way as glass or a mirror surface.

CAUTION: DO NOT USE aggressive LIME-SCALE REMOVERS!

PLEASE NOTE: Do not use any cleaning agents which have a sealing effect or add a surface layer.

Fossil, Structured Relief

The same method as in the final building cleaning is recommended, but in addition it is essential to thoroughly clean the surface "grooves". Immediately rinse with a lot of water and clean the surface using cement residue remover. Clean using clean water and microfiber cloth, alcohol-based / tenside-free cleaning agent – acidic maintenance cleaning agent (sanitary areas)

Skid Resistant (floor tile)

Clean using clean water and microfiber cloth, alcohol-based / tenside-free cleaning agent – acidic maintenance cleaning agent (sanitary areas)

Deco Matte

CAUTION: Do NOT USE aggressive LIME-SCALE REMOVERS!
PLEASE NOTE: Do not use any cleaning agents which have a sealing effect or

PLEASE NOTE: Do not use any cleaning agents which have a sealing effect or add a surface layer. Clean with clean water and microfiber cloth, alcohol-based/tenside-free cleaning agent.

River Mosaic (mosaic pieces)

The toughened safety glass used for the manufacture of mosaic pieces is basically more "delicate" than float glass. The important thing is that, immediately after laying, the River Mosaic should be cleaned (see recommended final building cleaning) to remove any joint sealer residue from the fine surface lines. Afterwards, thoroughly rinse with water. Clean with clean water and microfiber cloth, alcohol-based / tenside-free cleaning agent – acidic maintenance cleaning agent (sanitary areas).

CONSULT RECOMMENDED ADHESIVE AND GROUTED PRODUCTS ON FOLLOWING PAGE.

LIMITED WARRANTY

VILLI glass products are produced using a worldwide patented procedure. The organic color pigments are melted into the glass therefore no corrosion can occur and change the color. VILLI products are produced from homogeneous glass slates; they don't absorb water and are therefore frost resistant. VILLI products can be installed in and outdoors. VILLI products are manufactured in accordance with industry standards, and they are warranted to be reasonably free of defects in materials and workmanship. When properly handled and correctly installed, VILLI glass tiles are guaranteed to conform (within accepted industry standards and tolerances) to the manufacturer's declared specifications. Villi USA cannot accept responsibility for the performance of these products after they are installed. Except for the warranties set forth above, Villi makes no other warranties, expressed or implied, including but not limited to any implied warranties of merchantability or fitness for a particular purpose.

Additional information is available at www.villiusa.com

For further information contact: sales@villiusa.com, or call toll free: 1-866-724-5836



Physical Properties

Weight	8 mm Thickness • 4.1 lbs/sq.ft
Water	absorption 0%
Frost-proof	✓
Color-fast, no corrosion	✓
Light-fast	✓
Surface resistant to acid and lye	e.g. chlorine
Pigments are fused in and are therefore color-fast and do not corrode	✓
Scratch hardness on the Mohs scale	6
Break strength of tiles	795 lbs/sqi
Required for ceramic	280 lbs/sqi
Thermal expansion on temperature change of 100°C	1 mm/m
Electrical conductivity	0

Tile Council Of North America - Product Test Results

Tests Run	Require	d Minimums	Test Results-Villi Glass Products
ANSI A137.2-2012 Section 7.9: "Thermal Shock Resistance of Glass Tile" (a.k.a. immersion test)	Visible defects? No		Observations? None
	Mosaic and po	rcelain tiles = 250 lbf	Average of 640 lbf
ASTM C648-04 (2009): "Standard Method for	Glazed wa	all tiles = 150 lbf	
Breaking Strength of Ceramic Tile"		temperature Mosaic iles = 250 lbf	
	Cast Mosaic (Glass tiles = 350 lbf	
ANSI A137.1-2012 Section 9.6.1: "Wet Dynamic	0.42 or higher		3 tiles tested
Coefficient of Friction (DCOF)"—Matte Finish	0.42	or riigriei	Tile 1 = 0.82 Tile 2 = 0.84 Tile 3 = 0.72
ISO 10545-4: "Determination of Modulus of Rupture	Fused Large Format Glass Tile	Min av breaking strength = 600 N	2767 N
and Breaking Strength"		Min av MOR = 12 N/mm ²	MOR = 68 N/mm ²
Mohs' Scratch Hardness	No minimum		6 (same as Feldspar)
ANSI A137.2-2012 Section 7.7: "Shear Bond	Large Format Glass Tile	28 Day dry: Min 150 PSI	Average = 392 PSI
Strength of Glass Tile"		21 Day dry + 7 Day Submerged: Min 100 PSI	Average = 220 PSI
ASTM C372: Standard Test Method for Linear Thermal Expansion of Porcelain Enamel and Glaze Frits and Fired Ceramic Whiteware Products by the Dilatometer Method.	There is no standard for glass tiles		Test results are available on request

Recommended adhesive and grouting products

VILLI recommends the use of the following LATICRETE products:

Latex Portland Cement Thick Bed Mortar: LATICRETE® 3701 Fortified Mortar

Crack Suppression Membrane: HYDRO BAN®

Latex Portland Cement Thinset Mortar: Glass Tile Adhesive Mortar Stain-Resistant Epoxy Grout: SPECTRALOCK® PRO Premium Grout

Polymer-Fortified Cement Grout: PERMACOLOR® Grout

Latex Portland Cement Unsanded Grout: LATICRETE 1600 Unsanded

Grout mixed with LATICRETE 1776 Grout Enhancer (for joint widths less than or equal to 1/8 inch [3mm])

100% Silicone caulk: LATASIL™

For questions relating to setting materials, please contact LATICRETE International, Inc., Bethany, CT, USA

Care should be taken when using light colored Villi products or light colored grout. Use a white colored adhesive to prevent shadowing through the tile and visible thinset bubbles in the grout lines. Back-buttering each piece of tile with the flat edge of the trowel will help to provide a void free installation; good contact with the mortar bed is also recommended – 100% coverage is needed! Larger tiles may require a larger notched trowel. Refer to current TCNA Handbook for Ceramic Tile Installations.

BEAUTY



Villi





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