



# Marseille

SHAPING WALLS, INSPIRING SPACES

2026



ELM SURFACES



A new **Elm Surfaces** in the porcelain industry

Elm Surfaces Ceramics is an American company, based in Tennessee that has set out to research, manufacture and sell top quality porcelain ceramics in North America.

Technological innovation, market presence, attention to detail, the welfare of people and the environment, efficient service and a thorough product range make Elm Surfaces a new benchmark in the North American market for those who are looking for a reliable partner for any building and architecture project using US made top quality porcelain material.

LEARN MORE ABOUT



# Marseille

SHAPING WALLS, INSPIRING SPACES

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APPLICATION 14

STRUCTURES 20

TECHNICAL INFO 87



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Dynamic Indiana Salem Buff Select -  
12"x24"

# CONTEMPORARY ELEGANCE REDEFINED

Marseille by Elm Surfaces introduces a new dimension to Veneer World with its sophisticated three-dimensional surface design. Thin lines of varying thicknesses, shapes and dimensions create a harmonious interplay of textures, perfect for elevating modern indoor and outdoor settings with a touch of creative elegance.



**PROJECT**

WALL DESIGN

Veneer World MarseilleXL Chisel Trail Vein Cut Ivory -

24"x48" FLOOR DESIGN

Trail Vein Cut Ivory - 12"x24" - 24"x48"

# VERSATILITY AND DESIGN IN EVERY SPACE

## PERFECT EVERYWHERE

Thanks to its contemporary look, high-performance porcelain and practical installation methods, Marseille meets the demands of any design project, whether residential or commercial, indoors or outdoors.

## MULTIPLE SIZES

The versatility of Marseille spans from the classic 12"x24" size to the brand-new 24"x48" XL size, enabling both horizontal and vertical installations for maximum creativity and seamless designs in any environment.

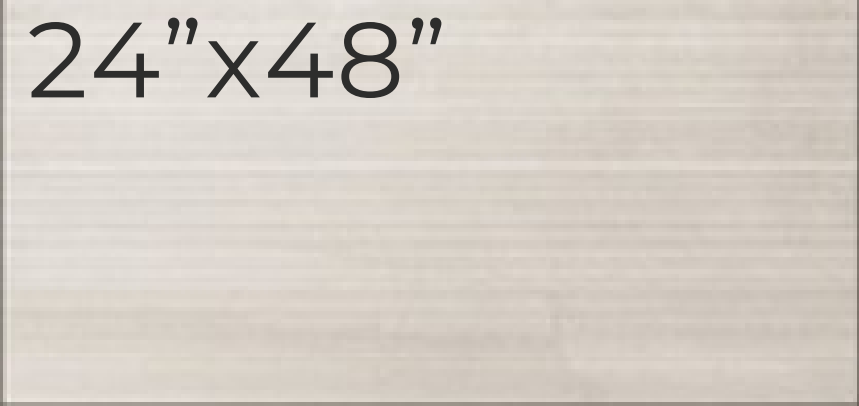
## WIDE CHOICE

A broad and flexible selection of decorative wall solutions, featuring elegant 3D textures in a varied palette of porcelain looks and colors, allowing endless combinations to suit any design vision.

## MATCHING BEAUTY

Marseille and Marseille XL surfaces are crafted in looks and colors selected from Elm Surfaces's extensive range, allowing perfect coordination with Elm Surfaces's porcelain tiles, pavers, and mosaics for endless combinations or unique total-look style.






24"x48"

# Marseille

## LARGE-SCALE ELEGANCE

**PROJECT**  
WALL DESIGN

Veneer World MarseilleXL Line Journey Natural Ivory -  
24"x48"



Elm Surfaces's three-dimensional surfaces are available in the large 24"x48" format, featuring a variety of textures, looks, and colors.

Thanks to its generous size, Marseille XL are ideal for wall covering of large contemporary spaces, whether in residential or commercial settings.

# HIGHLY PERFORMING TECHNICAL SURFACES

Marseille is crafted from the finest porcelain, delivering exceptional resistance, durability, and easy maintenance, while offering a refined aesthetic and superior performance.



## FIRE RESISTANT

Marseille doesn't burn, melt or give off toxic fumes when exposed to fire.



## WATERPROOF

Marseille is very compact and impervious therefore doesn't absorb. With tile you'll never have to worry about water.



## STAIN RESISTANT

Marseille is a very reliable, hygienic, and easy-to-clean material that will never be affected by any permanent type of stain.



## ZERO FORMALDEHYDE

Formaldehyde is known to lead to an increased incidence of asthma. Tile has zero formaldehyde.



## MOLD RESISTANT

Because it is fired at very high temperatures, Marseille is nearly impenetrable. This keeps fine dirt particles from being lodged in its surface, making it resistant to mold and moss growth.



## FROST RESISTANT

No need to worry during the worst winter conditions of snow, ice and salt. Marseille in fact is made by high density and homogeneous materials, making it resistant to frost, snow, salt and ice.



## UV RESISTANT

Marseille is fired at 2500 degrees which allows it to resist to sun light and UV rays without being effected in any way, even when exposed to the worst solar heat conditions.



## ACID RESISTANT

Marseille is inert, hard and because of its imperviousness, it withstands even the most aggressive chemical detergents and acid substances.



## PLASTIC FREE

Being composed of natural ingredients such as clays, quartz and feldspars and then fired up to 2500 F, Marseille is 100% plastic free. This means a healthier living environment.



## ECO FRIENDLY & RECYCLABLE

Marseille is one of the most eco-friendly wall covering options available. From the production process to the installed materials, Marseille can in fact be reused generation after generation. In addition, packaging and boxing are both 100% recyclable for a full respect of the environment.



## COST SAVING OVER TIME

Thanks to its long service life and easy maintenance, Marseille is very cost effective over time when compared to flooring products that need to be replaced more frequently.



## LIGHT WEIGHT APPROX 4 LBS/FT<sup>2</sup>

Marseille is a thin and therefore light weight material of approximately 4lbs/sqft. This means both less unnecessary pounds onto walls and cost saving in transportation and installation.



## ZERO ALLERGENES

Marseille is both hard and impervious therefore inhospitable to dust mites, bacteria, fungi, mold and other irritants.



## ZERO VOC & PVC

Marseille is completely PVC and VOC (volatile organic compound) free that means a healthier home for you.



## VERY LONG SERVICE LIFE

Marseille when properly installed and maintained can last for decades.



## ZERO SMOKE DEVELOPMENT

Marseille never gives off toxic fumes, even when exposed to fire.



## SCRATCH RESISTANT

Marseille is strong, hard and resistant to most type of scratches.



## ENERGY EFFICIENT

Tile's inherent thermal mass reduces peak heating and cooling, which helps to moderate temperature swings in your home.



## DOESN'T BEND

Marseille is solid, hard and compact.



### PROJECT

#### WALL DESIGN

Veneer World Marseille Groove L Indiana Salem Buff Select -

#### 12"x24" OUTDOOR FLOOR DESIGN

Frontier 20 International White - 24"x24"

# COMPLETE DESIGN HARMONY

**PROJECT**

WALL DESIGN

Veneer World Marseille Groove S Indiana Salem Grey Select -  
12"x24" Veneer World Marseille Groove L Indiana Salem Buff  
Select - 12"x24" OUTDOOR FLOOR DESIGN  
Frontier20 Artistic Beige - 24"x24"

Create cohesive, total-look projects by pairing Marseille with Elm Surfaces's extensive porcelain collections. Its decorative style harmonizes beautifully with complementary textures and tones, providing endless possibilities for innovative interior design.

# STUNNING OUTDOOR ENVIRONMENTS

WALLS

PORCHES

SWIMMING POOLS

FIRE-PITS

OUTDOOR KITCHENS

RETAINING WALLS

OUTDOOR FACADES



PROJECT

WALL DESIGN

Veneer World Marseille Dynamic Indiana Salem Buff Select -

12"x24"



- ▬ LIVING SPACES
- ▬ PARTITIONS
- ▬ FIREPLACES
- ▬ BACKSPLASHES
- ▬ DECORATIVE
- ▬ WALLS SPAS

# ELEGANT INDOOR SETTINGS

**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Groove S Indiana Salem Grey Select -  
 12"x24" FLOOR DESIGN  
 Spirit Old Maple - 12"x48"



Marseille transforms residential spaces into stylish havens. From living rooms to kitchens, its decorative 3D textures bring a touch of artistry and elegance to any home environment, enhancing comfort and visual appeal.

# PERFECT IN RESIDENTIAL

**PROJECT**  
WALL DESIGN  
Veneer World Marseille Bamboo Trail Vein Cut Pearl - 12"x24"



# PUBLIC SPACE ELEGANCE

**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove L Indiana Salem Buff Select - 12"x24" Veneer World Marseille Groove S Indiana Salem Grey Select - 12"x24" FLOOR DESIGN  
Frontier20 Explore Everest Dark - 24"x24"

Bring sophistication to commercial interiors with Marseille's dynamic contemporary surfaces. Perfect for hotels, retail, spas or public spaces, it combines the versatility and durability of the best porcelain with aesthetic excellence to create memorable design statements.

STRIPE

LINE

FLUTE

CHISEL

BAMBOO

22

28

36

42

48

COMBED

DYNAMIC

WAVE

GROOVE S

GROOVE L

54

64

68

74

80

# STRIPE

Essential, geometric,  
and flawless straight  
lines, perfect for a bold  
and contemporary look.





**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Stripe Infinity Absolute -  
 24"x48"



**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Stripe Infinity Desert -  
 24"x48"



**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Stripe Elite Diamond White -  
 24"x48"



**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Stripe Infinity Sky -  
24"x48"

# STRIPE

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

INFINITY SKY



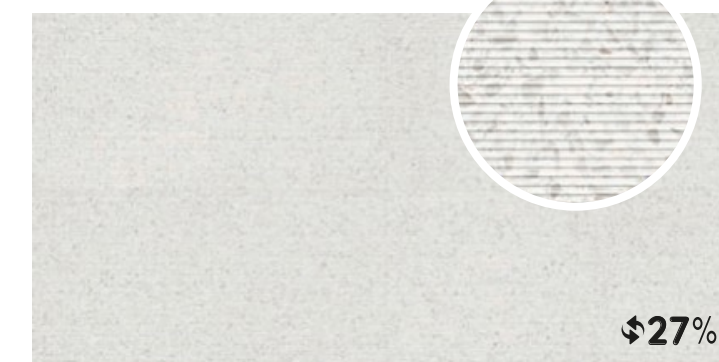
INFINITY DESERT



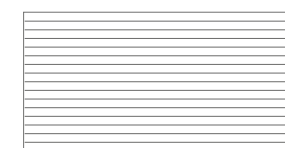
INFINITY ABSOLUTE



ELITE DIAMOND WHITE



**Available size**

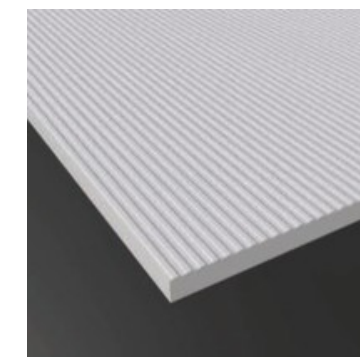


24"x48"

VENEER  
Marseille XL

STRIPE  
0.35" / 9 mm

**Color shading**



# LINE

||| A subtle vibration of straight lines in varying thickness and spacing, offering a discreet, elegant design.





**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Line Journey Natural Ivory -  
 24"x48"



welcome desk

**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Line Frame International White -  
 24"x48"

**PROJECT**

WALL DESIGN

Veneer World MarseilleXL Line Frame Neoclassical Beige -  
24"x48"





**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Line Journey Modern Grey -  
24"x48"

# LINE

**COLORED BODY PORCELAIN VENEERS** - Rectified Monocaliber

**MATT**

JOURNEY MODERN GREY



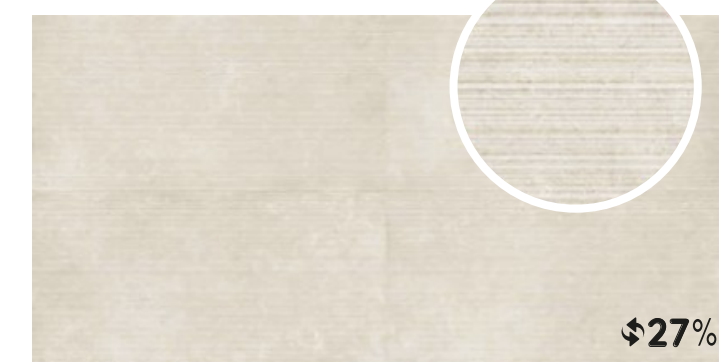
JOURNEY NATURAL IVORY



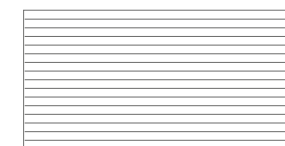
FRAME INTERNATIONAL WHITE



FRAME NEOCLASSICAL BEIGE



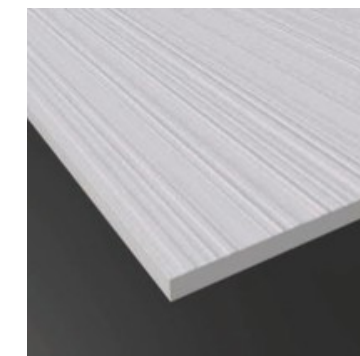
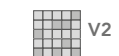
Available size



24" x 48"  
VENEER  
Marseille XL LINE

± 0.35" / 9 mm

Color shading



# FLUTE

Delicate, steady undulations create harmonious and dynamic movement on walls.





**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Flute Charme Evo Renoir Plus -  
24"x48"



**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Flute Charme Evo Pearl Grey -  
24"x48"



**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Flute Spirit Elegant Oak -  
24"x48"



**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Flute Spirit Old Maple -  
24"x48"

# FLUTE

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

CHARME EVO PEARL GREY



CHARME EVO RENOIR PLUS



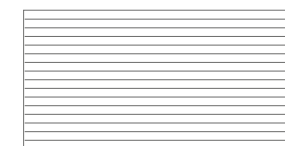
SPIRIT ELEGANT OAK



SPIRIT OLD MAPLE

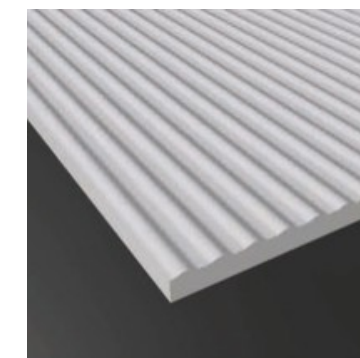
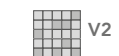


**Available size**



24"x48"  
VENEER  
Micro XL FLUTE  
0.35" / 9 mm

**Color shading**



# CHISEL

Thin lines with chiseled details reminiscent of the finest artisanal stonework, for an authentic effect.



WORLD'S FINEST HOMES



**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Chisel Trail Vein Cut Ivory -  
 24"x48"



**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Chisel Trail Vein Cut Pearl -  
 24"x48"



**PROJECT**  
 WALL DESIGN  
 Veneer World MarseilleXL Chisel Charme Calacatta Gold -  
 24"x48"



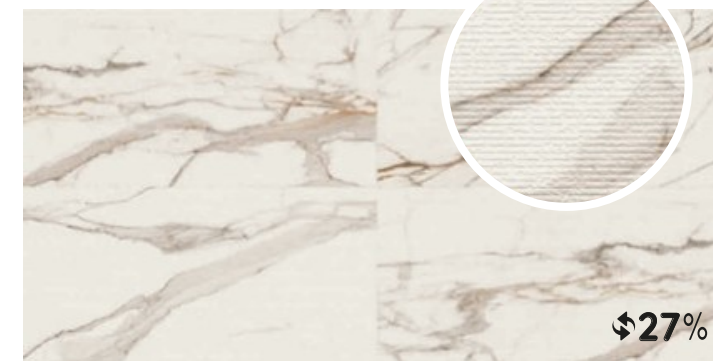
**PROJECT**  
WALL DESIGN  
Veneer World MarseilleXL Chisel Charme Veined Statuario -  
24"x48"

# CHISEL

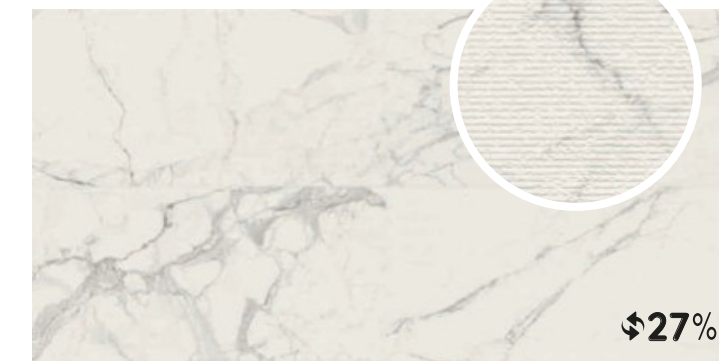
COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

CHARME CALACATTA GOLD



CHARME VEINED STATUARIO



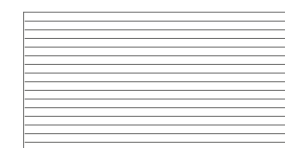
TRAIL VEIN CUT IVORY



TRAIL VEIN CUT PEARL



Available size

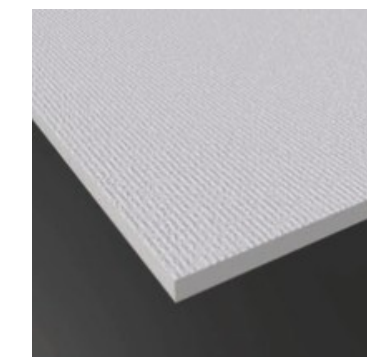


24" x 48"  
VENEER  
Microbolle XL PLATE

0.35" / 9 mm



Color shading



# BAMBOO

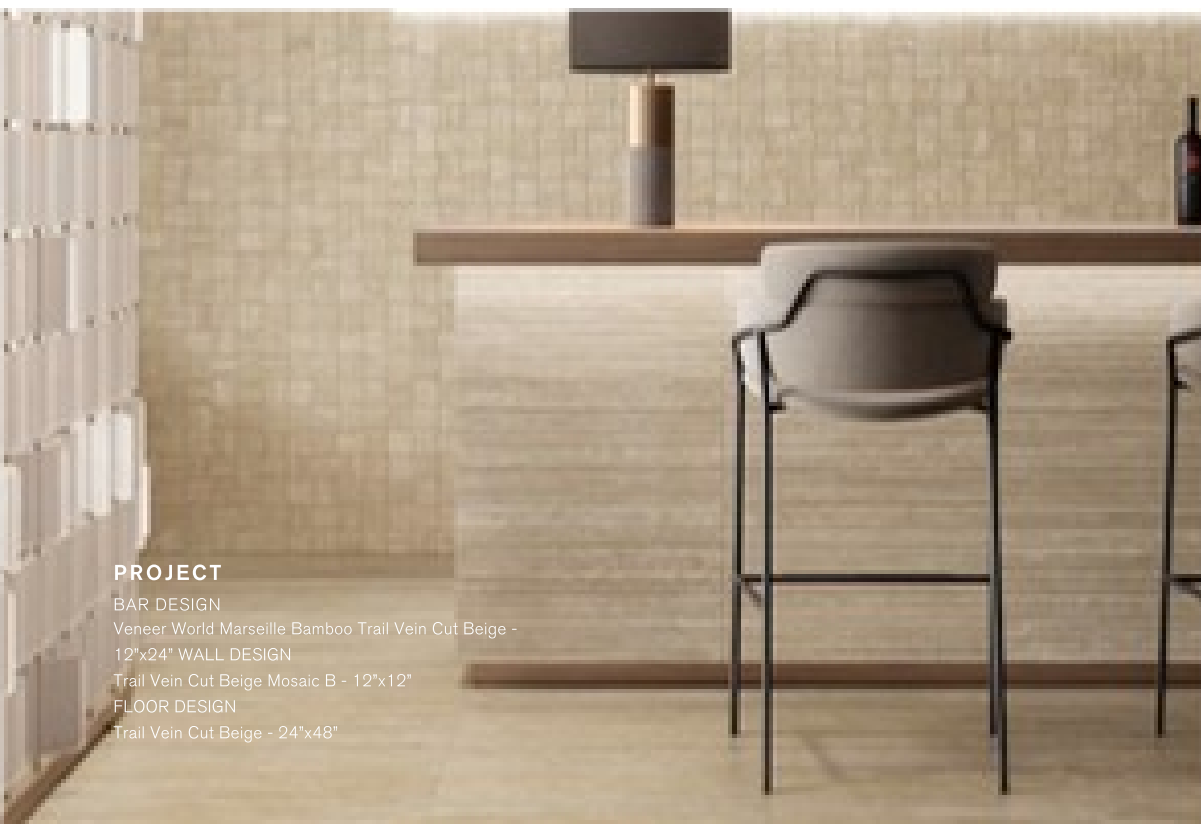
Smooth, slightly rounded lines flow in an irregular rhythm, creating a contemporary decorative effect.



**The Interior Design H**



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Bamboo Trail Vein Cut Grey -  
 12"x24" Trail Cross Cut Grey - 24"x48"  
 FLOOR DESIGN  
 Trail Vein Cut Grey - 24"x48"



**PROJECT**  
 BAR DESIGN  
 Veneer World Marseille Bamboo Trail Vein Cut Beige -  
 12"x24" WALL DESIGN  
 Trail Vein Cut Beige Mosaic B - 12"x12"  
 FLOOR DESIGN  
 Trail Vein Cut Beige - 24"x48"



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Bamboo Trail Vein Cut Beige -  
 12"x24" FLOOR DESIGN  
 Trail Cross Cut Beige Grip - 24"x48"



**PROJECT**  
OUTDOOR WALL DESIGN  
Veneer World Marseille Bamboo Trail Vein Cut Pearl - 12"x24"  
OUTDOOR FLOOR DESIGN  
Frontier 20 Travertine Select Cross Cut Pearl - 24"x24"

# BAMBOO

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

TRAIL VEIN CUT PEARL



TRAIL VEIN CUT BEIGE



TRAIL VEIN CUT GREY

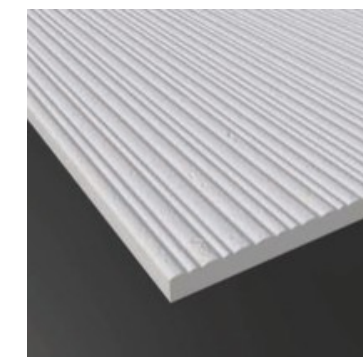
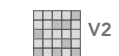


**Available size**



12"x24"  
VENEER  
Marseille  
BAMBOO 9 mm

**Color shading**





Sophisticated, irregular lines interrupted by handcrafted details. The imperfection of the strokes adds authenticity to the wall effect.

# COMBED





**PROJECT**  
WALL DESIGN  
Veneer World Marseille Combed Essence Montauk Grey -  
12"x24" COUNTER DESIGN  
Essence Refined Montauk Grey - 24"x48"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Combed Essence Montauk White -  
12"x24" Veneer World Pro Ledgestone Ridge Beige - 6"x24"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Combed Essence Montauk Black -  
12"x24" OUTDOOR FLOOR DESIGN  
Frontier20 Montauk Black - 24"x48" - 12"x24"  
FIREPIT  
Veneer World Pro Ledgestone Ridge Grey - 6"x24"



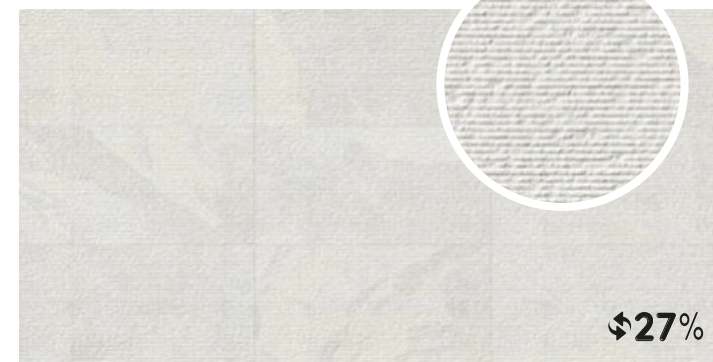
**PROJECT**  
WALL DESIGN  
Veneer World Marseille Combed Essence Montauk White -  
12"x24"

# COMBED

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

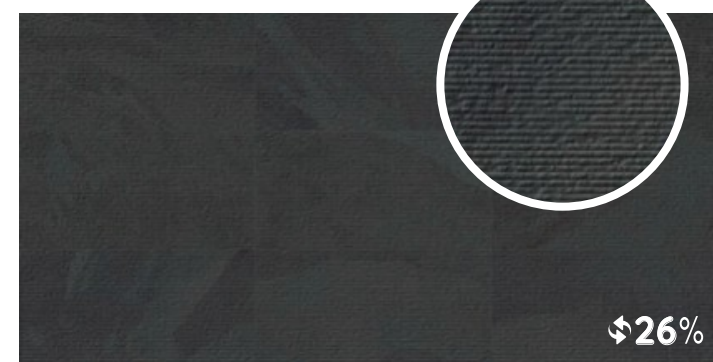
ESSENCE MONTAUK WHITE



ESSENCE MONTAUK GREY



ESSENCE MONTAUK BLACK



Available size



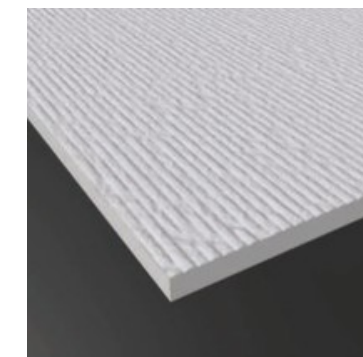
12" x 24"  
VENEER  
Marseille COMBED  
0.35" / 9 mm



Color shading



V2





**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Combed Mood Sand -  
 12"x24"



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Combed Mood Dune -  
 12"x24"



**PROJECT**  
 WALL DESIGN  
 Mood Smoke - 12"x24"  
 Veneer World Marseille Combed Mood Limestone -  
 12"x24"



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Combed Mood Limestone -  
 12"x24"  
 COUNTER  
 Mood Greige Mosaic J - 12"x12"

# COMBED

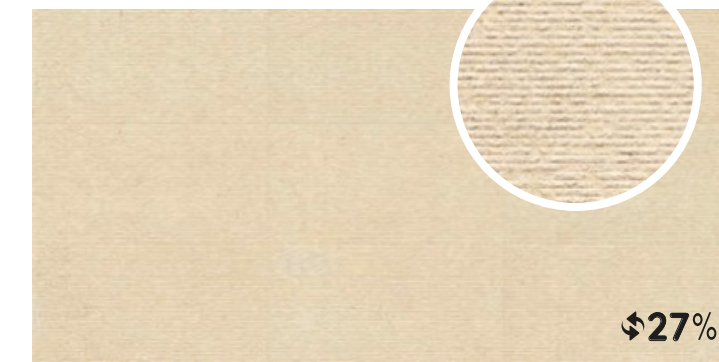
COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

MATT

MOOD LIMESTONE



MOOD DUNE



MOOD SAND

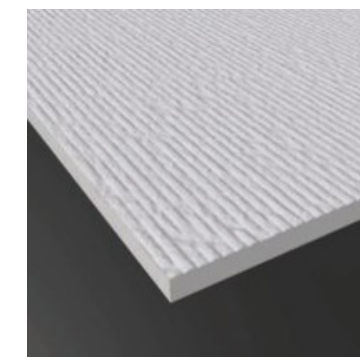
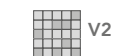


Available size



12" x 24"  
 VENEER  
 Marseille COMBED  
 0.35" / 9 mm

Color shading



# DYNAMIC

Wide, irregular undulations with a smooth surface give walls a distinctive character.





**PROJECT**  
WALL DESIGN  
Veneer World Marseille Dynamic Indiana Salem Buff Select -  
12"x24"

# DYNAMIC

**COLORED BODY PORCELAIN VENEERS** - Rectified Monocaliber  
INDIANA SALEM BUFF SELECT

**MATT**



INDIANA SALEM GREY SELECT



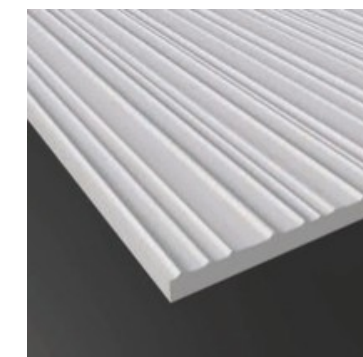
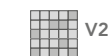
Available size




12" x 24"  
VENEER  
Marseille COMBED  
0.35" / 9 mm



Color shading



# WAVE



Reliefs of lines follow an irregular rhythm created by the alternation of smooth and textured surfaces, delivering a unique look.





**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Wave Infinity Desert -  
 12"x24" Spirit Walnut - 8"x40"  
 INDOOR FLOOR DESIGN  
 Infinity Space - 12"x24"



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Wave Infinity Desert -  
 12"x24" FLOOR DESIGN  
 Infinity Space - 12"x24"



**PROJECT**  
 WALL DESIGN  
 Veneer World Marseille Wave Infinity Absolute -  
 12"x24"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Wave Infinity Sky -  
12"x24" FLOOR DESIGN  
Infinity Desert - 12"x24" - 24"x48"

# WAVE

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

**MATT**

INFINITY SKY



INFINITY DESERT



INFINITY ABSOLUTE

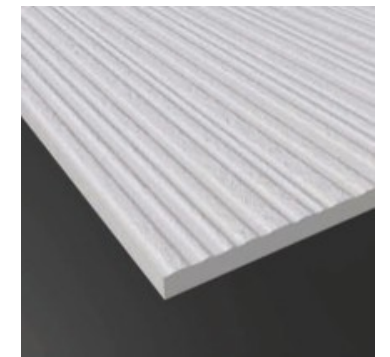


Available size



12"x24"  
VENEER  
Marseille COMBED  
0.35" / 9 mm

Color shading



# GROOVES

Thin, straight lines with a subtly irregular surface, adding a tactile, textured effect.





**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove S Indiana Salem Grey Select -  
12"x24"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove S Indiana Salem Buff Select -  
12"x24"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove S Indiana Salem Grey Select -  
12"x24" FLOOR DESIGN  
Spirit Old Maple - 12"x48"



**PROJECT**

WALL DESIGN

Veneer World Marseille Groove S Indiana Salem Grey Select -  
12"x24"

# GROOVE S

COLORED BODY PORCELAIN VENEERS - Rectified Monocaliber

INDIANA SALEM BUFF SELECT



INDIANA SALEM GREY SELECT



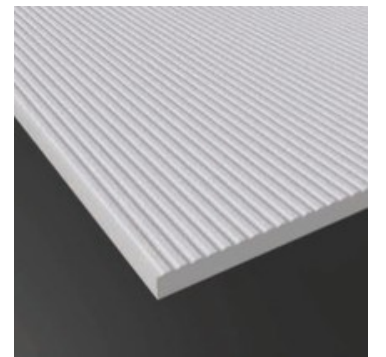
Available size



12" x 24"  
VENEER  
Marseille COMBED  
0.35" / 9 mm



Color shading



# GROOVE L

||| Bold, straight lines  
||| with a consistent rhythm,  
||| enriched by micro  
||| irregular details  
||| that enhance the  
||| surface's authenticity.





**PROJECT**

WALL DESIGN  
Veneer World Marseille Groove L Indiana Salem Buff Select -  
12"x24" OUTDOOR FLOOR DESIGN  
Frontier20 International White - 24"x24"



**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove L Indiana Salem Buff Select -  
12"x24" Veneer World Marseille Groove S Indiana Salem Grey  
Select - 12"x24" FLOOR DESIGN  
Frontier20 Explore Everest Dark - 24"x24"

# GROOVE L

**COLORED BODY PORCELAIN VENEERS** - Rectified Monocaliber  
INDIANA SALEM BUFF SELECT

**MATT**



INDIANA SALEM GREY SELECT



**Available size**



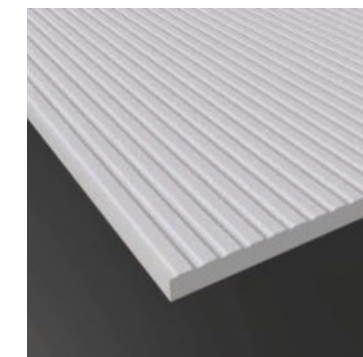
12"x24"  
VENEER  
Marseille COMBED  
0.35" / 9 mm



**Color shading**



V2





**PROJECT**  
WALL DESIGN  
Veneer World Marseille Groove S Indiana Salem Buff Select -  
12"x24"

# INSTALLATION INSTRUCTIONS

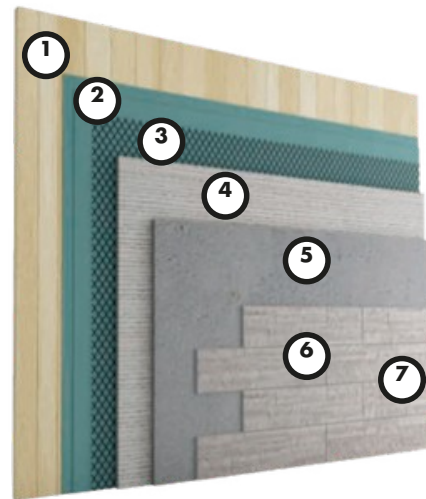
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## INSTALLATION SYSTEMS

Elm Surfaces's porcelain veneers can be installed on the most utilized backup systems, such as wood and steel framing, cement or concrete masonry unit (CMU) and rigid insulation foam. Although this guide focuses on the installation of Elm Surfaces's porcelain veneers on these most traditional backup systems, any properly designed and prepared backup system could be used to receive Elm Surfaces's porcelain veneers. Please verify with your architect, structural and civil engineer that the backup system and installation methods comply with Federal, State and Local building codes as well as other rules and regulations that might apply to the project by the law and common sense.

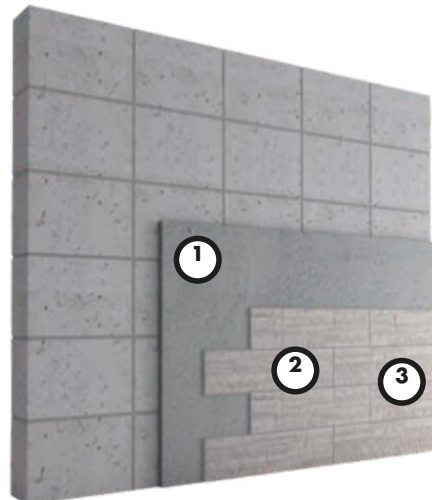
The most traditional backup systems are:

### WOOD FRAME



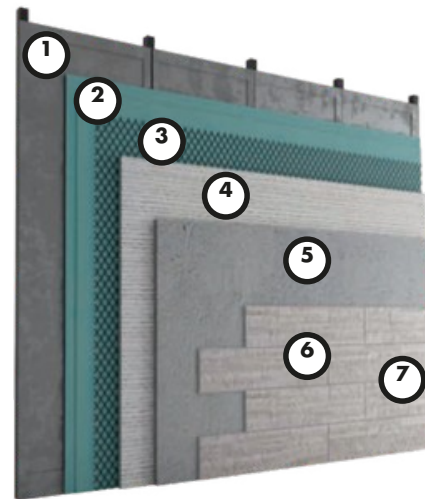
1. Sheathing
2. Two layers of Water Resistant Barrier (WRB)
3. Metal lath
4. Scratch coat
5. Mortar setting bed
6. Elm Surfaces's porcelain veneers
7. Grout joint

### CONCRETE MASONRY UNIT



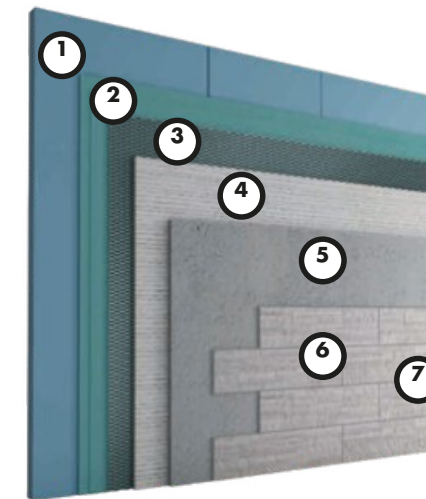
1. Mortar applied directly to untreated unpainted masonry, concrete or stucco
  2. Elm Surfaces's porcelain veneers
  3. Grout joints
- Note  
Concrete Masonry Unit must be free from paint, sealer and dirt. Dirty, painted, sealed and smooth surfaces/walls will require additional preparation to address these conditions.

### METAL FRAME



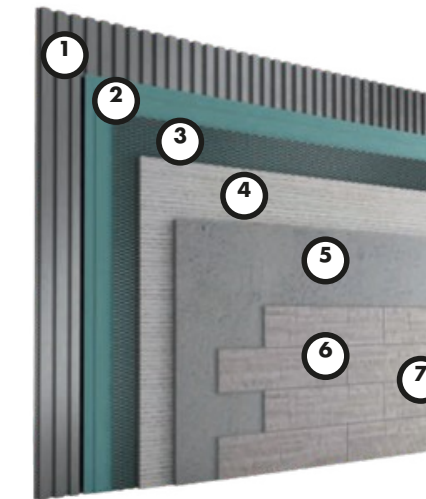
1. Sheathing
2. Two layers of water resistant barrier (WRB)
3. Metal lath
4. Scratch coat
5. Mortar setting bed
6. Elm Surfaces's porcelain veneers
7. Grout joint

### RIGID FOAM INSULATION



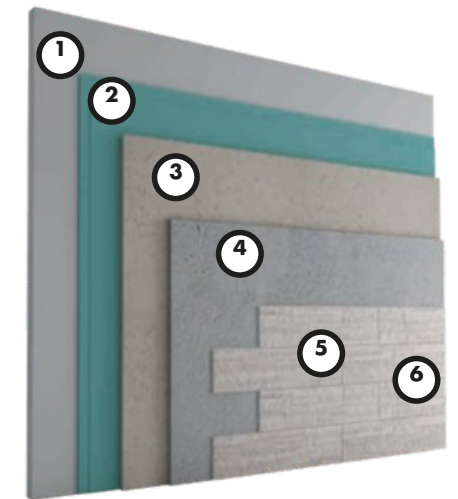
1. Rigid foam insulation
2. Two layers of water resistant barrier (WRB)
3. Galvanized metal lath
4. Scratch coat
5. Mortar setting bed
6. Elm Surfaces's porcelain veneers
7. Grout joint

### METAL BUILDING



1. Sheathing
2. Two layers of water resistant barrier (WRB)
3. Galvanized metal lath
4. Scratch coat
5. Mortar setting bed
6. Elm Surfaces's porcelain veneers
7. Grout joint

### CEMENT BOARD



1. Sheathing
2. Two layers of water resistant barrier (WRB)
3. Cement board
4. Mortar setting bed
5. Elm Surfaces's porcelain veneers
6. Grout joint

## STEP 1

### PREPARING THE SURFACE

Verify that the surface on which Elm Surfaces's porcelain veneers will be installed is solid and free of any materials that would prevent the porcelain veneer from bonding. Check also that the backup system is capable of supporting the weight of Elm Surfaces's porcelain veneers.

The surfaces on which Elm Surfaces's porcelain veneer will be applied must have a rough texture to ensure a good mortar bond. If necessary, attaching a lath and applying a scratch coat can bring the surface to a desirable level of roughness. Please note that, whenever a lath is utilized, a scratch coat is needed.

A scratch coat may not be needed over Cement Masonry Unit (CMU) and cement board. If the lath is installed, apply a 1/2 inch thick layer of mortar ensuring that the mortar completely covers the lath. Scratch the mortar horizontally to create a scratch coat that will help the porcelain veneer to adhere, not only chemically but also mechanically, to the surface.

Before starting the installation, ensure that the Water-Resistant Barrier (WRB) and ashing are correctly installed.

It is worth noting that different elements and materials within a structure can react differently in response to temperature and moisture fluctuations or to different loads pressure. In cases where differential movements are expected, such as at the transition between a framed backup system to a concrete masonry unit system, movement joints (control joints and expansion joints) may be needed.

Movement joints must be specified by the architect or the engineer according to ASTM C 1063 control joints requirements. Do not cover the movement joints with Elm Surfaces's porcelain veneers as this might lead to cracking.



## STEP 2

### ESTIMATING THE PORCELAIN VENEERS REQUIRED

Determine the amount of Elm Surfaces's porcelain veneer products needed by calculating the area to be covered. Multiply the length by the height, the result will be the area of the surface to be covered. Subtract square footage for any space that will not be covered such as windows and doors. Measure the height of the corner walls and compute the linear feet of corners to determine the amount of corner pieces needed. One linear foot of corner pieces covers approximately 2 square feet of surface. Subtract the area covered by the linear feet of corner pieces from the area required. It is suggested to order extra porcelain veneers to allow cutting, trimming and waste.

#### FORMULAS

Wall Area = Length × Height

Windows and doors areas = Windows and doors Width × Windows and doors Height

Wall Area Covered by Corners = Lineal Feet of Corners Required × 2

Square feet required = Wall Area – Windows and doors Area – Wall Area Covered by Corners

*It is recommended to request extra square feet.*

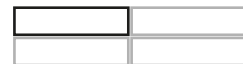


## STEP 3 PLANNING THE LAYOUT

It is recommended, in order to maintain a natural look, to follow a stack bond pattern or a 1/4 offset bond pattern or a 1/3 offset bond pattern when installing Elm Surfaces's porcelain veneers and keep the joints as small as possible.

Before starting the installation, layout several pieces of sizes, shapes and colors.

STACK BOND PATTERN



1/4 OFFSET BOND PATTERN

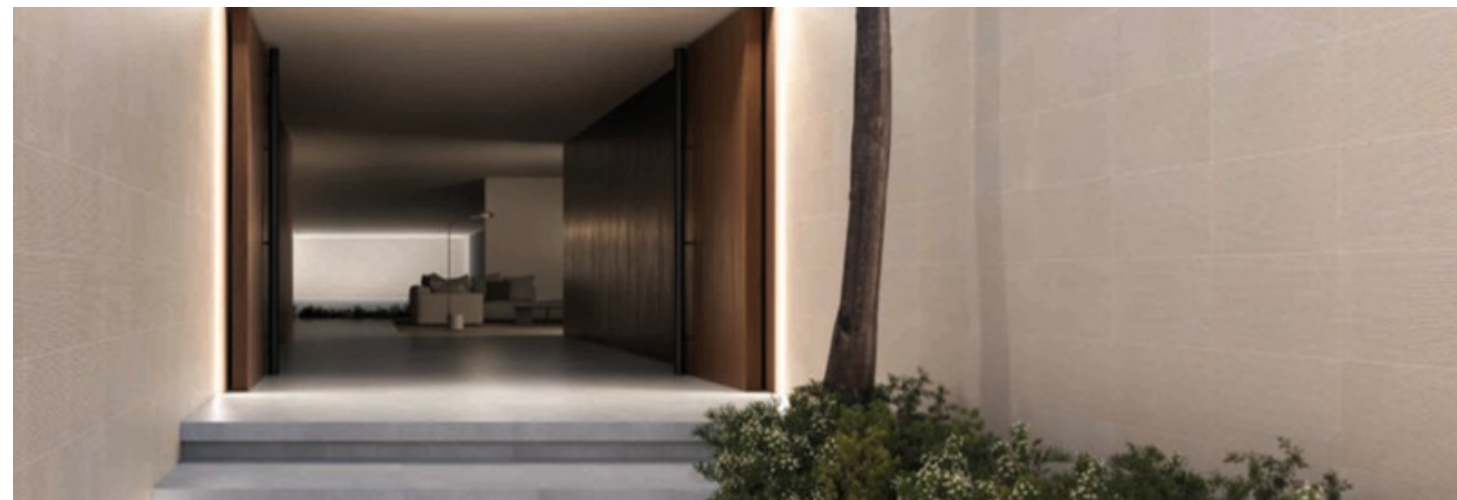


1/3 OFFSET BOND PATTERN



In case of a dry stacked installation, it is recommended that all interstice gaps between Elm Surfaces's porcelain veneers are properly sealed with a specific grout for porcelain (please always refer to the grout manufacturer for further information). Also, it is recommended to comply with the building codes and federal and regional rules and regulations.

The sealing for interstice gaps is fundamental to prevent or reduce water intrusion that may lead to the cracking and falling of the unit. Failing to do this may lead to major injuries.



## STEP 4 ENSURING A LEVELLED INSTALLATION

The first line of porcelain veneers will determine the levelness of each line above or underneath. To ensure that the porcelain veneers are installed straight use a chalk line: position the chalk line from side to side of the wall at a distance equal to the height of the porcelain veneer plus the desired grout spaces.

It is recommended to start the installation from a corner or from the edge of the wall.

Check with the level that you have a straight horizontal line and snap the chalk line. Decide in advance whether you prefer to end up with partial porcelain veneers at the top or at the bottom of the wall.



## STEP 5

### CHOOSING THE CORRECT MORTAR

Choosing the proper mortar is critical to ensure that Elm Surfaces's porcelain veneers do not come off and that the bonding agent will not compromise the other essential functions for an exterior coating system (soundproofing, steam barrier, resistance to water, etc.).

For this reason, it is crucial to contact one of the mortar manufacturing companies (Laticrete or Mapei to mention a couple) to find out what solutions they might have available (and consequently guarantee).

Between all the products suggested from the mortar manufacturers for the bonding of the material, it is critical to choose a product that is suited for porcelain tiles for exterior application.

In some cases, the construction norms provide constraints, mandatory precautions and/or limitations on the bonding of construction materials (whether they are tiles, natural stones, manufactured stones, thin brick or other masonry product). Moreover, it is important to remember that the Building Code in the United States poses, for commercial use, a limit on the maximum dimension and weight for the glue bonding (without the assistance of mechanical hooks) of tiles, stone slabs or other materials used for exterior wall covering.

Because of this, it is important that the contractor verifies upfront these constraints keeping in consideration the characteristics of the building and its location.

In any case it is very important to contact the representative of the company manufacturing the mortar up-front to verify that the solution identified by reading the literature is correct, keeping in mind:

- The type of wall that the user is trying to cover (how it is made and what characteristics it presents)
- The type of material that the user wants to utilize (porcelain in this particular case)

#### ATTENTION

When contacting the representative of the company manufacturing the mortar, it is important to communicate him or her the thickness, dimension and weight of every piece of porcelain material to be installed (the information is available in the Elm Surfaces Ceramic's price list or can be requested directly to Elm Surfaces). This way, the glue representative can suggest the best bonding material to the contractor/customer keeping in consideration the characteristics of the material to be installed.

## STEP 6

### APPLYING Elm Surfaces'S PORCELAIN VENEER TO THE SURFACE

After the scratch coat mortar, if present, has cured sufficiently, dampen the wall before starting with the application. No residue of standing water should be left.

Note: Elm Surfaces's porcelain veneer applications should be protected from temperature below 40°F during and immediately following the installation. The use of anti-freeze admixtures to lower the freezing point of the mortar is not recommended.

Spread a layer of mortar (above the scratch coat if present) on an area about 3 square feet to create the thinset. Use the notched trowel at a 45-degree angle to create an even ridged bed. Then, the porcelain veneer should be

firmly pushed into the setting bed mortar, wiggling it a bit as you push to help it adhere.

Mortar should be slightly weeping out from the entire perimeter of each piece after they are installed. Clean excess mortar off of surrounding joints during the installation process.

With the right mortar mix, moisture content and scratch coat preparation, the porcelain veneer will be stable within a few seconds of the setting movement process.

Continue to spread mortar and lay the porcelain veneers onto the rest of the wall in sections, checking with a level that each line of porcelain veneers is leveled. Place spacers between porcelain veneers to ensure even spacing. Tap each porcelain veneer with the mallet to firmly set them.

In exterior application, to guarantee even a more bonding of the unit to the surface, it is possible to back-butter the Elm Surfaces's porcelain veneer. The back-buttering process consists of covering the entire back, not only the perimeter, of the porcelain veneer with mortar using the flat end of the trowel. This will ensure a proper adhesion of the porcelain veneer to the surface. Note that, since Elm Surfaces' porcelain veneers are non-absorbent material, it is not necessary to wet the piece before the back-buttering process.

It is critical to verify, when creating the mortar bed and back-buttering the unit that the mortar is spread evenly on the surfaces to prevent the creation of air bubbles and water infiltration that may lead to cracking.

Once all the porcelain veneers are laid down and the wall is covered let dry the wall for 24 hours.

## STEP 7 GROUTING THE JOINTS

Once the wall is cured, grout the joints. It is critical to use an exterior-grade grout and mix it according to the manufacturer instruction.

Use a grout float at a 45-degree angle to spread the grout over the wall. After the grout is dried, wipe the excess grout off the porcelain veneer and the scratch coat should be moistened with the surfaces appearing damp but free of standing water. The back of each porcelain veneer should be entirely buttered with mortar to a nominal thickness of 1/2 in. (13 mm). Cover the entire back of the porcelain veneer, not just the perimeter. Buttered porcelain veneers should be firmly worked onto the scratch coat and slid slightly back and forth to set the porcelain veneers. Achieve mortar squeeze out in a volume that results in a full setting bed which covers the scratch coat completely. As an alternative to the back-butter only method, mortar may be troweled onto the scratch coat, completely covering the scratch coat. Or, both mortar application techniques may be combined. The resulting thickness of the scratch coat and setting bed should be nominally 1 in. (25 mm) measured from the outer surface of the WRB (Water Resistive Barrier) to the back surface of the unit. With the proper mortar mix, moisture content and scratch coat preparation, the installer will feel the mortar start to grab within a few seconds of the setting movement process. At this point, no further movement of that porcelain veneer should be made as the bond will be broken. If the porcelain veneer is inadvertently moved after initial set has begun, it should be removed, mortar scraped off the back of the porcelain veneer and scratch coat, and then reinstalled following the application process. Tight fitted porcelain veneers should be applied from the corners toward the middle of a wall, and from the bottom toward the top of the wall.



### FOCUS ON: STACKED STONE INSTALLATION (TIGHT FITTED ADHERED PORCELAIN VENEER APPLICATION)

In case of tight fitted adhered porcelain veneers application, always remember to Refer to recommendation included in Step 5 for guidance regarding mortar selection. The back of the porcelain veneer and the scratch coat should be moistened with the surfaces appearing damp but free of standing water. The back of each porcelain veneer should be entirely buttered with mortar to a nominal thickness of 1/2 in. (13 mm). Cover the entire back of the porcelain veneer, not just the perimeter. Buttered porcelain veneers should be firmly worked onto the scratch coat and slid slightly back and forth to set the porcelain veneers. Achieve mortar squeeze out in a volume that results in a full setting bed which covers the scratch coat completely. As an alternative to the back-butter only method, mortar may be troweled onto the scratch coat, completely covering the scratch coat. Or, both mortar application techniques may be combined. The resulting thickness of the scratch coat and setting bed should be nominally 1 in. (25 mm) measured from the outer surface of the WRB (Water Resistive Barrier) to the back surface of the unit. With the proper mortar mix, moisture content and scratch coat preparation, the installer will feel the mortar start to grab within a few seconds of the setting movement process. At this point, no further movement of that porcelain veneer should be made as the bond will be broken. If the porcelain veneer is inadvertently moved after initial set has begun, it should be removed, mortar scraped off the back of the porcelain veneer and scratch coat, and then reinstalled following the application process. Tight fitted porcelain veneers should be applied from the corners toward the middle of a wall, and from the bottom toward the top of the wall.

## CLEANING AFTER INSTALLATION

After grouting the joints, it is important to remove the excess grout with a sponge and clear water. After 12/48 hours, the grout in the joints will have "set up"/hardened significantly. There will be a noticeable residual "haze". Typically, a diluted acid cleaner ideal for removing "Grout Haze", combined with a soft scrubbing pad will remove the majority if not all the "Haze".

Change your acid/water solution frequently for best results. It is also recommended to keep a bucket of clean water to remove the acid/water solution. It is recommended to keep and use clean dry towels to help remove as much residual water and keep the wall as dry as possible.

Please refer to the cleaning chemical company's suggested methods and dilution rates. For areas with excess grout or grout that becomes adhered to the face of the porcelain veneer, further cleaning with an Acid/ Water Solution may be necessary.

Please refer to the Cleaning Chemical Company's instructions as not all acids or chemicals are the same. The excess grout residue must be removed so that it does not dry and stick on the surface. It is necessary to change the cleaning water frequently and rinse well. If such cleaning procedure is not carried out, or if such cleaning is carried out too late, the grout residue could create an absorbent

film, which holds dirt, making the surface difficult to clean: in this case, Elm Surfaces Ceramics will not be liable for any damage caused to the surface.

## ORDINARY CLEANING

Ordinary maintenance must be carried out using specialized detergents to remove stains but these detergents must not leave a wax, film or membrane residue. Rinsing well with plenty of clean water is a fundamental part of the cleaning procedure, therefore we advise against the use of products which state that they "do not need rinsing".

**RECOMMENDED USE**

Porcelain Veneers is recommended for indoor and outdoor walls, in commercial and residential application. Elm Surfaces recommends an offset no greater than 30%, if a staggered pattern is required for tiles of 20" inches or longer. Elm Surfaces recommends the use of leveler for a proper installation.

**CARE AND MAINTENANCE**

Do not apply any wax or sealer to the product after installation. Regular cleaning is the best way to keep Porcelain Veneers tiles looking good. Use clean, hot water (add household cleaner for more aggressive cleaning). Rinse thoroughly and dry with a soft cloth to prevent water spots. Please visit [outdoor.Elm Surfacesceramics.com](https://www.outdoor.elmsurfacesceramics.com). For further information regarding the care and maintenance of Elm Surfaces products.

**WARRANTY**

Elm Surfaces guarantees that its products will meet or exceed the performance specifications set out in ANSI A137.1- 2012 and in the performance specifications section of the Elm Surfaces general catalog. For more information, please visit our website at [outdoor.Elm Surfacesceramics.com](https://www.outdoor.elmsurfacesceramics.com).












**Elm Surfaces SURFACES****MATT**

A refined matte surface with a contemporary appearance that enhances the natural character of porcelain.

**GRIP**

The ultimate anti-slip solution able to combine a DCOF  $\geq 0.70$  and DIN R11 C classification with a low sheen, easy to clean and pleasant to the touch surface. Ideal for outdoor areas and indoor wet spaces such as pools, patios, and SPAs.

**PORCELAIN VENEER PERFORMANCE DATA**

PHYSICAL PROPERTIES	TEST ASTM	NORTH AMERICAN STANDARD A137.1*	RESULTS
 Water absorption *	C373	≤ 0.5%	COMPLY WITH ANSI A137.1
 DCOF Average dynamic coefficient of friction **	ANSI A.326.3	As reported	NOT APPLICABLE
 Resistance to freeze/thaw cycling *	C1026	As reported	RESISTANT
 Resistance to thermal shock	C484	As reported	RESISTANT
 Warpage (edge)	C485	Warpage ± 0.4% or ± 0.05 in	COMPLY WITH ANSI A137.1
 Warpage (diagonal)	C485	Warpage ± 0.4% or ± 0.07 in	COMPLY WITH ANSI A137.1
 Wedging	C502	± 0.25% or ± 0.03 in	COMPLY WITH ANSI A137.1
 Chemical resistance	C650	As reported	UNAFFECTED
 Resistance to stain	C1378	As reported	UNAFFECTED
 Thickness	C499	Range: 0.04 in	COMPLY WITH ANSI A137.1
 Breaking strength	C648	250 lbf or greater	COMPLY WITH ANSI A137.1

- \* Average values referred to our production and related to the matt finish of the product.
- Be sure to use tiles belonging to the same caliber.
- Test results are available on request.
- The information provided can be subject to change. Please refer to one of our websites ([lusa.com](http://lusa.com) or [outdoor.Elm Surfacesceramics.com](http://outdoor.Elm Surfacesceramics.com)) for the latest, most accurate and up-to-date information.





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