



Product Guide and Specifics

Stone-Veneer [®] , What Is It and Where Does It Come From?	1
How Does The Slate Become Veneer?	2
What Is Sandstone and Where Does It Come From?.....	2
And The Award Is Presented To.....	3
What Are The Available Sizes	4
What Are The Different Backings and What Adhesives Do You Use?	6
Is Anything Available For Wall and Floor Applications?.....	8
Who Installs Stone Veneer?	12
Overview.....	12

Technical Aspects, Data and Specifications

1. Raw Material Slate	14
2. Raw Material Sandstone Sahara.....	14
3. Processing / fabrication	15
4. Tooling requirements	17
5. Surface protection and cleaning.....	17
6. Transportation and storage	18

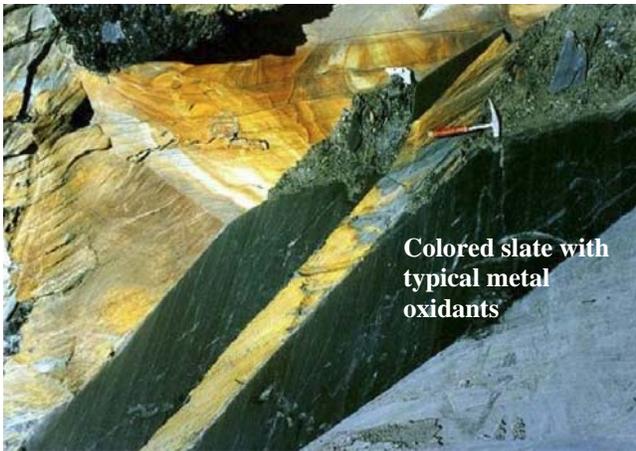
Stone-Veneer® Product Guide

Slate Quartzite Slate NanoStone Sandstone

Stone-Veneer®. What Is It and Where Does It Come From?

Stone-Veneer® is a natural stone surface obtained from quarries around the world and is split from real slate. Different geographical locations result in different the colors.

The raw split surface of the slate and the interchanging colors of each stone layer are absolutely unique and a stimulation for the senses. Color and surface variations are quite normal and do not constitute a fault.

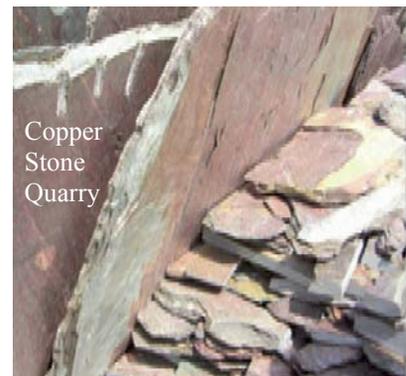


Natural slate has a content of minerals and metal oxidants which are not visible underneath the surface. Pressure can cause fractures. These fractures are also quite normal and do not constitute a fault.

Some quarries contain a high degree of quartz combined with the slate bedrock. We use the soft rock from various quarries and from these quarries we derive our Stone-Veneer® Quartzite



With different quarries having this quartz content with layers of silicate there are different color hues as seen in the Quartzite products, all with a natural glimmer and shine. Currently the available size of



Quartzite is limited to a maximum size 24" x 48" +/- 0.2" due to geological conditions in nature. It also requires a high degree of skill and additional "hands-on" labor to split. The natural structure of the Quartzite slate also gives it a rougher surface than slate.

All of these slate products are as natural as nature created millions of years ago. Richter does not create or add to any of the texture, coloration, pigmentations. This is why every piece is different in stratus, three dimensional accentuation and feel, graining and variances of color hues. Do not expect to "sequence" or match any two pieces for applications. Just as nature grows no two flowers alike there is no duplication of slate. Each piece has its own natural and individual beauty.

How Does The Slate Become Stone-Veneer®?

We actually split the slate into very thin layers while applying a glass fiber reinforced polyester resin (GRP) for a strong bond producing the backing for the Stone-Veneer® sheets. Due to the high degree of adhesion accomplished between the slate and the GRP, the product now becomes stable and somewhat flexible. With the application of different backers the range of applications for Stone-Veneer® increase.

We have refined this process to such a high level that we also produce a product we call **NanoStone**. The thinnest stone in the world. Despite its super-thin slate thickness of 50 – 100 μ, the surface structure is still intact and is astonishing with its unsurpassed visual look and feel. The fleece backer reinforced from water-jet hardened fabric without any chemical binding agents is the actual thickness of the material. It is suitable for post-forming applications with no problems. It will conform to a radius as small as 0.0757" (2 millimeters). The raw stone surface is protected against dust and damage by a silicon emulsion. NanoStone extends the capabilities of the product line to further horizons.



What Is Sandstone and Where Does It Come From?

Sandstone is a sedimentary rock consisting of grains of sand which mainly contain quartz. It is mined from sand pits in Northern Germany. Once mined the sand is bonded vertically with thermoplastic binders onto large sheets. The color variances of the sand are from white quartz to dark brown. We do not "place" the colors, it just occurs naturally. Sandstone is approximately 90% pure quartz and a versatile product. It is applied to a fabric mesh-structure allowing for great flexibility.

Sandstone is approximately 90% pure quartz and a versatile product. It is applied to a fabric mesh-structure allowing for great flexibility.



This natural product is the classic in our stone product portfolio. Produced with great efforts and only from selected and suitable sand pits. The relief-like progressions of the sediment layers make each sheet a very unique piece.



And The Award Is Presented To...

During the ZOW show in Verona, Italy (October 21 – 25) the M TECHNOLOGY AWARD for 2009 was presented to Richter Furniertechnik GmbH & Co. KG. NanoStone was recognized with GOLD for special design and innovative performance.



The German Design Council has awarded the prize "Design Plus" to Richter Furniertechnik GmbH & Co. KG for its innovative product "NanoStone". Richter developed a special technology to split stone layers in a few hundredths of a millimeter in thickness. Thus NanoStone was born - extremely thin and flexible.

DESIGN PLUS

The official award from June 26, 2009 to the 100 most innovative mid-sized companies shows that Richter Furniertechnik GmbH & Co. KG is one of the TOP 100 innovators in Germany. Lothar Späth, mentor of this initiative, presented this award to those mid-sized who have established themselves in the market with new ideas and innovations during this economic crisis.



Left: Eberhard Richter Right: Lothar Späth

What Are The Available Sizes?

Stone-Veneer® is limited in its available sizes because of geographical and physical constraints and not all colors are available in all sizes.

The *Raw Sizes* category is just as the blocks of slate come from the quarries. It can vary in dimension by up to 0.4" overall and is not precisely square. Raw sizes are the standard for all Stone-Veneer and NanoStone.

Below is a chart showing the slate types and the available raw sizes.

Stone-Veneer®		raw sizes									
		mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
Slate		1220	(48.03")	2100	(82.68")	2400	(94.49")	2500	(98.43")	2650	(104.33")
Item No. Stone Type		x		x		x		x		x	
		610	(24.02")	1050	(41.34")	900	(35.43")	610	(24.02")	1250	(49.21")
100	Autumn		■		■				■		
170	Autumn Rustic		■								
140	Autumn White		■								
400	Multi Color		■		■		■		■		
700	Terra Red		■								
800	Black Slate		■		■						
880	Black Line		■		■						
Quartzite											
500	Ocean Green		■								
600	Silver Shine		■								
200	Copper		■								
300	Jeera Green		■								
Sandstone											
900	Sahara		■								■
Nano Stone											
100	Autumn		■								
170	Autumn Rustic		■								
140	Autumn White		■								
400	Multi Color		■								
800	Black Slate		■								
880	Black Line		■								

The optional *Trimmed Sizes* are cut square and to exact dimensions. This allows for accurate positioning of multiple pieces butting together such as a wall application, inlays, flooring, etc.

Below is a chart showing the slate types and the available trimmed sizes.

Stone-Veneer®		trimmed sizes							
		mm	inches	mm	inches	mm	inches	mm	inches
		1200	(47.24")	600	(23.62")	2400	(94.49")	2650	(104.33")
		x		x		x		x	
Item No.	Stone Type	600	(23.62")	600	(23.62")	900	(35.43")	1250	(49.21")
100	Autumn	■		■		■			
170	Autumn Rustic	■		■		■			
140	Autumn White	■		■		■			
400	Multi Color	■		■		■			
700	Terra Red	■		■		■			
800	Black Slate	■		■		■			
880	Black Line	■		■		■			
	Quartzite								
500	Ocean Green	■		■		■			
600	Silver Shine	■		■		■			
200	Copper	■		■		■			
300	Jeera Green	■		■		■			
	Sandstone								
900	Sahara	■		■		■		■	

Thickness also varies for the Slate from 1mm to 2.5mm +/- because of the three dimensional surface texture. Nano Stone and Sandstone are pretty consistent in thickness.

What Are The Different Backings and What Adhesives Do They Use?

- **GRP** (Glass fiber Reinforced Polyester resin)

This is the **standard backing for all Slate and Quartzite products**. It is durable and recommended for exterior as well as interior use.

One type of adhesive used with this backing is PUR (short for PolyUrethane). PUR adhesives are found in most woodworking businesses commonly known



as PUR Hot Melt adhesives. This adhesive is typically applied from a heated cartridge or roller coater. It is applied hot (about 250°F is typical) and sets quickly as it cools. PUR Hot Melts are used for general assembly and lamination of panels.

PU adhesive (short for PolyUrethane) is a liquid Polyurethane and is applied at room temperature. They normally offer excellent water resistance. Franklin's Polyurethane Wood Glue and "Gorilla Glue" are some examples of liquid polyurethane.

Most people are familiar with the cartridge dispensing applications of PU commonly called construction adhesive such as Liquid Nails™. Ceramic tile adhesive is another form of PU.

- **Fleece**

This is the **standard backing for NanoStone** and an **optional backing for Slate and Quartzite**. Although durable, it is not recommended for exterior use, only interior use.

The fleece backing is perfect for contact cement as used in about every woodworking and cabinet business. Also good for any typical wood glue. When using with any hot or cold hydraulic veneer press it is best to place some kind of rubber between the Stone-Veneer and the metal plate. This way the pressure will distribute evenly compensating for the three dimensional surface.



Any PUR adhesive will work as well.

- **Peel and Stick**

This is ***an optional backing*** and is exactly what the name implies. Peel it and stick it. It is ***not available on NanoStone***. A note of caution... it sticks fast and hard so accurate placement "the first time" is required because it will not come off easily and damage may occur to the surface it was applied to while trying to remove the Stone-Veneer. Not recommended for exterior use.



- **Natural Fiber (NaFa)**

This is ***an option only available on NanoStone***. It is 100% recycled leather fibers. Not recommended for exterior use. It can be sewn/stitched together or onto a fabric substrate. Contact cement will work as well.



Is Anything Available For Wall and Floor Applications?

Stone-Veneer® comes "pre-mounted" and sized for floor and wall applications. All of the exposed surfaces are "sealed" to prevent dirt intrusion.

Wall applications can be done with any of the standard backings. But for pronounced applications there are some options to select from.

- **Tongue and Groove**

This allows for concealed attachment to wall surfaces. The actual panel sizes are precise for ease and continuity of application. The backing is a 12mm MDF board in an Anthracite color that closely resembles grout. On the back there is 180 gram paper applied to balance the product and prevents any warping or cupping. With the slate surface, total thickness averages 14mm, or a little less than 9/16" (0.55118"). Sizes available are as listed:

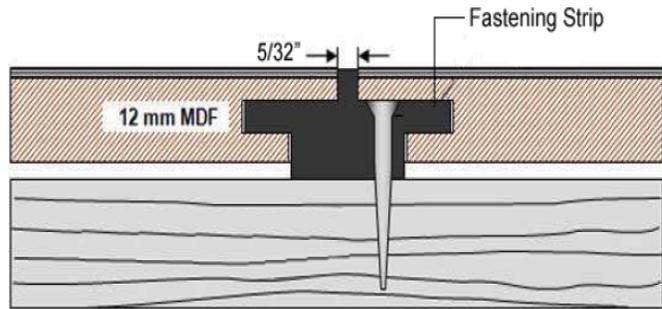


Stone-Veneer®		tongue and groove					
		mm	inches	mm	inches	mm	inches
		1200	(47.24")	1200	(47.24")	600	(23.62")
		x		x		x	
Slate		600	(23.62")	300	(11.81")	300	(11.81")
Item No.	Stone Type						
100	Autumn		□		■		□
170	Autumn Rustic		□		■		□
140	Autumn White		□		■		□
400	Multi Color		□		■		□
700	Terra Red		□		■		□
800	Black Slate		□		■		□
880	Black Line		□		■		□
Quartzite							
500	Ocean Green		□		■		□
600	Silver Shine		□		■		□
200	Copper		□		■		□
300	Jeera Green		□		■		□
Sandstone							
900	Sahara		□		■		□

Standard Size ■
 Available upon request □

- **Wall Panel System**

Just like the tongue and groove option, the panel sizes are precise for ease and continuity of application. The backing is a 12mm MDF board. On the back there is 180 gram paper applied to balance the product and prevents any warping or cupping. With the slate surface, total thickness averages 13.5mm, or a little less than 17/32" (0.5314").



The difference between the Tongue and Groove and the Panel System is that the panels are grooved all the way around on all four edges to accept a fastening strip. The exposed edge of the fastening strip can be ordered in either an Anthracite color or a Grey color. The fastening strip can also be painted. The sizes available are shown in the table below.



Stone-Veneer®

wall panel with spline

		mm	inches	mm	inches	mm	inches
		1200	(47.24")	1200	(47.24")	600	(23.62")
		x		x		x	
		600	(23.62")	300	(11.81")	300	(11.81")
Slate							
Item No.	Stone Type						
100	Autumn	□		■		□	
170	Autumn Rustic	□		■		□	
140	Autumn White	□		■		□	
400	Multi Color	□		■		□	
700	Terra Red	□		■		□	
800	Black Slate	□		■		□	
880	Black Line	□		■		□	
Quartzite							
500	Ocean Green	□		■		□	
600	Silver Shine	□		■		□	
200	Copper	□		■		□	
300	Jeera Green	□		■		□	
Sandstone							
900	Sahara	□		■		□	



Standard Size ■
Available upon request □

- **Stone-Veneer® for flooring**

The flooring comes with a standard backing of 100% recycled rubber. The total thickness is 6.5mm or slightly thicker than 1/4" (0.2559"). The surface of the slate and Sandstone used for flooring applications has been sealed with our Nanoppearl finish. Durable and resistant to dirt. The sub construction consists of an HDF panel with a rubber granular mixture pressed onto it as a support backer. This floor not only reduces the noise level, but also delivers a pleasant walking experience. The flexibility of this surface is an absolute "treat for the feet". All pieces of this sandwich-like element are fire retardant (B1 acc. DIN 4102).

Not all colors and sizes are available for the flooring. The table below shows the selections currently available and the pictures show the product in use.



Stone-Veneer® floor

		mm	inches	mm	inches	mm	inches
Slate		1200	(47.24")	600	(23.62")	600	(23.62")
		x		x		x	
Item No.	Stone Type	300	(11.81")	600	(23.62")	300	(11.81")
100	Autumn		■		■		■
170	Autumn Rustic		■		■		■
140	Autumn White		■		■		■
400	Multi Color		■		■		■
700	Terra Red		■		■		■
800	Black Slate		■		■		■
880	Black Line		■		■		■
Quartzite							
500	Ocean Green		■		■		■
600	Silver Shine		□		□		□
200	Copper		□		□		□
300	Jeera Green		□		□		□
Sandstone							
900	Sahara		■		■		■



Standard Size ■
Available upon request □

- **Furniture Panels**

As an additional option to the furniture industries we offer MDF panels with Stone-Veneer adhered to the front surface. The back surface and the four edges are finished with a black colored 2-part epoxy lacquer. The total thickness is approximately 20mm (0.79"). The thickness variations are due to the 3-dimensional surface of the stone veneer. The chart below shows the available slate types and sizes available.

Stone-Veneer® finished furniture panels

Item No.	Stone Type	mm	inches	mm	inches	mm	inches
		1200	(47.24")	2050	(80.71")	2380	(93.70")
	Slate	x		x		x	
		600	(23.62")	1000	(39.37")	880	(34.65")
100	Autumn						
170	Autumn Rustic						
140	Autumn White						
400	Multi Color	■		■		■	
700	Terra Red						
800	Black Slate	■		■			
880	Black Line	■		■			
	Quartzite						
500	Ocean Green						
600	Silver Shine						
200	Copper	■		■		■	
300	Jeera Green						
	Sandstone						
900	Sahara						



Designs by Giorgio Armani



What Else...

Air Craft Interior...

Automotive Interior Accents...

Cabinets and cabinet highlights...

Yacht Interiors...

Corporate Walls, Furnishings, Reception Desks...

Ceilings...

Contract Furniture...

Who Installs Stone-Veneer®?

The equipment required for cutting and trimming Stone-Veneer®, Sandstone is common carpenter and home-owner tools. A circular saw with a carbide tipped blade. Any hand held router with a carbide tipped cutting tool. A little bench-top table saw and a portable miter saw with carbide tipped saw blades. All of these tools are available at any home improvement store, hardware store and lumber store.

The answer to the question is anyone can install it. A professional carpenter would be the first choice. A painter with wall paper experience can also install it. Mr. and Mrs. Homeowner can do it as well as their D.I.Y. friends. That tells you it can be used anywhere for anything by anybody. This is a very, very broad based market.

Overview

- There are enough colors, styles, backings to apply to about any idea.
- The market segment is expansive...
 - Architects, Architectural Firms.
 - Designers, Design Firms.
 - Specialty Design Firms
 - Hospital and Medical Centers.
 - Building Maintenance.
 - Aerospace Industry.
 - Yacht Manufactures and Designers.
 - Cabinet and woodworking manufactures.
 - Wall covering specialty stores and distributors.
 - Custom Automotive Industry, Limousine manufacturers.
 - Charter Yacht Industry.
 - Store Fixtures and Displays.
 - Restaurants.
 - Theaters.

Facts to ponder...

The actual weight for a 24" x 48" GRP Backed Black Slate with Fleece is 2.5lb. This breaks down to 5 ounces per square foot. This is substantially less than a 12" x 12" slate tile that weighs an average of 8 to 10 pounds each. A lobby wall at 21' across by 12' high measures 252 square feet. The weight for natural slate tiles is an average of 2,268 pounds. Do the same wall in natural slate Stone-Veneer® and the weight is 70.31 pounds. This is a weight reduction of 2,197.69 pounds for the same slate covered wall.

Recently we have combined our Acoustic-Lightboard ceiling panels with a micro perforated Stone-Veneer. Imagine, There is now a slate ceiling with acoustical properties that weighs about 1.4 pounds per square foot.

Pretty soon you start to look at things in a different way.



Technical Aspects, Data and Specifications

1. Raw material slate

Surface front side:	Natural stone - relief-like surface structure
Surface back side ¹ :	Glass fiber polyester resin mix
Edge appearance:	Blunt
Length x width:	48.03" x 24" (standard dimension see table)
Square feet per sheet:	8
Weight per sq.ft. :	approx. 2.5 lbs.. (depending on the surface structure)
Thickness:	approx. 0.0196" – 0.118" (depending on the surface structure)
Fire rating:	B 2 standard flammable
Glue application:	Evenly and area covering glue film

Abrasion: The abrasion and wear and tear resistance depends at a high degree on the mineralogical build-up and the structure of the stone. The moisture content plays an important role as well. The purpose of the wear and test is to determine the surface resistance regarding walk and step stress. Stone-Veneer Floor contains a surface protection for high stress areas especially developed with several partner companies. Because of the rough split surface (grainy surface with sandstone) final results are not conclusive through the "normal" testing. The abrasion information solely refers to the surface finish. Varnish is applied onto a neutral carrier panel (glass or stainless steel) in order to determine exact abrasion results. The finish represents the outer protection of the total system and must meet all the requirements. Wood flooring and similar products are tested the same way like the Stone-Veneer, where the finish and not the material must perform.

2. Raw material Sahara Sandstone

Surface front side:	Natural stone - relief like surface structure
Surface backside ² :	PP fabric grid structure
Edge appearance:	Blunt
Length x width:	48.03" x 24" (standard dimension see table)
Square feet per sheet:	8
Weight per sq.ft. :	approx. 3.3 to 4.5 lbs. (depending on the surface structure)
Thickness:	approx. 0.0196" – 0.118" (depending on the surface structure)
Fire rating:	B 2 standard flammable
Glue application:	Evenly and area covering glue film
Abrasion:	See 1. Raw material slate.

¹ Backside can be varnished with different materials depending to your needs and the existing subsurface. For certain applications non-woven, HPL, HDF/MDF, NaFa and PU foam had been established.

² Backside can be varnished with different materials depending to your needs and the existing subsurface. For certain applications non-woven, HPL, HDF/MDF, NaFa and PU foam had been established.

- 3. Processing / fabrication
- 3.1 Core material / balance backer

The carrier material must meet the intended applications. All panel and light-weight panel products are suitable. If the Stone-Veneer is only applied on one side of a panel, a backside balancing material is necessary. Mechanically fastened panels with Stone-Veneer on one side, require a foil or craft paper of at least 5.65 ounce.

If installed as floor or wall panel, possible climate differences must be taken into consideration. HPL, particle boards, PU foam panels, HDF and MDF carrier panels have shown good results. Wet area applications require suitable core panels.

3.2 Gluing

A backside polyester-resin mix / glass fiber sheeting ensures a tight bond of the Stone-Veneer panels. Not all adhesives / glues are suitable for this backer type. Due to the countless possible applications, the backer has to meet and match the intended purpose. Richter Furniertechnik recommends a specific system solution for the effective adhesion of Stone-Veneer. For proper application, please refer to the technical data sheets of the adhesive manufacturers. The Stone-Veneer polyester matrix backer with a factory applied 90 g special fleece is an available optional. Thus it is possible to press and adhere the Stone-Veneer onto wood based, fiber cement or plaster panels with dispersion, hot melts and PUR adhesives. It is recommended to use a 1 or 2 component PUR adhesive for a water resistant application, whereas the Stone-Veneer backside is raw, meaning without fleece backer. If applied directly on to walls, please make sure, that the surface is dry, clean and oil free. A water resistant adhesion does not guarantee a protection of the carrier/core material. Therefore the carrier material should also be water resistant.

To avoid transitions and openings in which water can accumulate, the joints must be tight and professionally sealed so that no moisture can penetrate behind the Stone-Veneer. A very simple Stone-Veneer solution is the application with "Peel & Stick". The backside of the Stone-Veneer has a PSA (pressure sensitive adhesive) film, which is suitable for most wall and ceiling applications. The PSA film has a good resistance against condensation and has a long shelf life.

3.3 Gluing methods / types for various core materials

Polyester resin matrix / glass fiber (raw material Slate) Solely with PU-adhesives (PUR) or special adhesives (contact cement / 2-component adhesive) for wall, ceiling, back lid objects etc. D3 with PU (PUR) adhesive wet area suitable.

Backside with HDF/ rubber granular mixture (Stone-Veneer Floor) For the temporary application at trade shows, conferences, events of any kind. Depending on the purpose Stone-Veneer can be laid down with or without adhesive. If adhesive is used, we recommend a removable double sided carpet adhesive tape.

Backside with fleece (slate, NanoStone) All commercial grade adhesives (PVAc-glues) used for pressing onto MDF, HDF, plywood and particle board for furniture fronts, doors etc.

Backside with NaFa (natural fabric, leather) Can be adhered onto all materials. For core materials made of wood and wood materials to be glued with PVAc glue. Also for decorative areas such as promotional articles, product presentations, interior woodwork, automotive, marine and aero plane interiors.

Backside with "Peel & Stick" PSA (slate) Fast and easy direct application on all flat, clean, oil and dust free surfaces. For decorative designs of all kinds, ideal for walls, ceilings, displays or for "DIY". If used for direct application it is recommended to use exact cut-to-size sheets.

Cutting: Peel & Stick" sheets can be cut with a regular circular table saw with the stone surface facing top or a circular saw with the stone surface facing down. To improve the quality of the cut, it is recommended to place a thin piece of plywood or MDF panel on top. To protect against flying debris we highly recommend wearing eye protection.

Application: Before applying Stone-Veneer "Peel & Stick" it is recommended to acclimate the Stone-Veneer sheet and the work object for at least 24 hours to avoid potential damage due to tension and/or warping. Stone-Veneer "Peel & Stick" can be applied horizontally and vertically. As soon as the Stone-Veneer "Peel & Stick" is applied, it is almost impossible to remove or re-adjust the sheet from the object without damage. To apply the panels it is recommended to start at the top corner and work your way down. It is a must to follow a straight line and even line. To press the sheets onto the surface it is recommended to use a felt or rubber roller.

3.4 Pressing

Stone-Veneer has a natural, raw split stone surface with a tolerance of up to .08". This natural "unevenness" would damage any flat veneer press surface. To eliminate these thickness variances and to protect the Stone-Veneer surface it is recommended to use a rubber sheet. Practice has proven the use of .275" rubber sheets with a hardness grade of 50 shore and a temperature resistance of 176° F (80° C) minimum. Rubber mats also have an insulating feature, which extends the press time accordingly. Therefore, the rubber mats should be pre-heated in the closed press with the according pressure. If multiple Stone-Veneer sheets are pressed simultaneously (i.e. butt joining), they should be affixed with a painting / masking tape (not packaging tape) to avoid slipping. Tests have shown that, depending on the adhesive type, a press temperature of approx. 176° F (80° C) and a press time of approx. 6 minutes is best. However please refer to the adhesive manufacturers technical data sheets. The pressure depends on the make, model and layout of the press.

As with all commercial surface panels it is common that some veneer applications tend to "bubble" if too much moisture is present in the adhesive. Therefore a timely and fast application and pressing process is important. We recommend to match the measurements of the panel, including the waste, with the veneer. This way it is easier to trim the veneer panel with a table or panel saw.

Conditioning: Just like many other materials it is possible that when Stone-Veneer is exposed to various climate conditions dimensional changes can occur which in turn can affect the gluing process. Therefore it is recommended to condition the Stone-Veneer with its intended carrier material.

4. Tooling requirements

Stone-Veneer is a thin stone layer and can be cut with standard carbide tipped saw blades. The thin stone layers and the backer material will reduce the life time of the saw blades and tools. If the Stone-Veneer sheets are applied onto both sides of a panel, it is recommended to pre-score the stone surface. Otherwise it is possible that the opposing side might splinter. Cutting panel products applied with Stone-Veneer can be done with standard carbide tipped saw blades of any teeth count. Replaceable saw blades with a thickness of 4,5 mm are recommended. Thin saw blades are recommended to only cut the Stone-Veneer sheets. For better cutting results it is advisable to top the Stone-Veneer with a thin plywood or MDF sheet. Milling with standard carbide tools also shortens the life time of the tools. For larger production runs it is advisable to use diamond tools. During the milling and cutting process all the standard machine specifications should be observed and not be exceeded. Dull tools with too high revolutions, too slow feed speed generate friction heat can lead to plasticization and destruction of the backer material.

For the attachment of hinges and other objects on the surface of the Stone-Veneer it is important to pre-drill holes with the same diameter as the screw diameter to prevent possible panel tension. If used in wet areas, all openings and drill holes need to be sealed to avoid moisture and water penetration.

Caution: With all slate veneer products, especially with Sahara Sandstone, flying sparks are quite common. Without a properly equipped dust collection system rapid ignition and fire could easily result. A solution is to disconnect the saw from the dust collection system.

Always wear eye protection and the appropriate personal safety equipment.

5. Surface protection and cleaning

Surface Protection: In general the stone surface can remain naturally untreated. Just like with any untreated stone surface it is possible that liquid can penetrate the stone and stain the surface. To protect and prolong the stone surface, special surface protections were developed. Depending on the application amount they can build a very protective layer. Please refer to the manufactures specifications of the product you are going to use. All Stone-Veneer products, except the sheets, are factory pre-applied with a minimum impregnation against contamination. With regular application as wall or ceiling elements a basic primer is sufficient. For use in high stress areas such as kitchens and bath rooms more resistant finishes are recommended to avoid staining from the minerals and compounds found in the current water sources. Stone-Veneer is not recommended in areas with close cooking, baking, frying etc. This might lead to permanent staining and damage of the surface.

The raw stone surface can also be treated against contamination with standard industrial wood finishes. These wood varnishes (i.e. DD-finishes) will change the color of the stone surface and diminish the otherwise vivid appearance. The product Stone-Veneer Floor is exposed to maximum stress and therefore needs maximum protection and is factory side applied with a 1K-Hydro-Acrylate finish system. This varnish is also used for parquet flooring and kitchen cabinet fronts and meets the most stringiest criteria.

Cleaning : The applied impregnations represent a sufficient protection of the Stone-Veneer, but any contaminations should still be immediately removed. A soft and wet towel (with warm water) without any household cleaners should be used. Cleaners with scrubbing and acid ingredients should be avoided since they might cause scratches or changes in surface sheen. After cleaning, the surface should be dried with dry towel. The Stone-Veneer Floor substrate consists of a HDF panel as well as a rubber granular mixture. These are just wiped moist clean, not wet. Spilled liquids should be removed immediately. Penetration of moisture in between the joints might lead to so called “swelling” of the HDF material.

Before any application please refer to the manufacturer's technical data sheets for the product you are going to use!

6. Transportation and storage

Transportation: A sufficient size panel is recommended for transporting Stone-Veneer sheets. Because of the rough and natural stone surface it is necessary to secure a stack of several sheets against shifting and to avoid any damage to the rough split surface. All personnel involved in the transportation and processing of the Stone-Veneer should wear the required and appropriate personal protection equipment. While cutting or milling the Stone-Veneer always wear eye protection to guard against flying splinter particles.

Storage: Stone-Veneer must be stored in enclosed and dry rooms with temperatures of approximately 65° F (18° C) to 68° F (80° C). If removed from the original packaging it must be stored flat, the edges flush, on an even surface. The Stone-Veneer top layer in the stack should be protected with a foam sheet and protective panel of at least the same size. The stone layers should not be pulled against or above each other. This can cause splintering of stone layers. The sheets should always be lifted and if necessary pulled backer against backer.

Tips for everyday use

Even though Stone-Veneer consists of real stone and a highly resistance impregnation, high heat impact i.e. from dishes, can cause changes or damage to the stone surface. A heat resistant padding should be used. Cutting can also lead to damage to the material.

The information presented herein is supplied as a guide to those who handle, install or use this product. Only experienced and qualified persons should install these products. It is important that the end user determine appropriate safety procedures utilized during installation and use of this product and insure they are adequate. Our application of written or spoken technical recommendations that we use to support the buyer / processor is based on our experience, according to our current state of knowledge and practice. These recommendations are intended to supplement the experience and knowledge of handlers and installers, and in no way extend or expand any representations or warranties given with the products, or change any contractual terms.



1300 Tech Court
Westminster, MD 21157

Phone: 888-872-4780
Fax: 410-581-0683

info@richter-veneertechnology.com

- ❖ Acoustic-Lightboard[®]
- ❖ Sordino Acoustic Ceiling Panels
- ❖ Stone-Veneer[®]
- ❖ Akustipan[®] Linear Acoustic Products

Continual Innovations, Leading Technology, Relentless Curiosity, Practical Applications... What will we create next?

