



## Flooring Installation Instructions

This instruction manual defines the process to properly install RealStone Thin Veneer flooring based on standard stone installation practices. Like all construction processes there are many variables that should be taken into consideration. As a general rule, RealStone products should be installed by an experienced tile or masonry professional.

### **Floor Base:**

A properly installed stone floor starts with the base layer. It is very important that the floor base be strong enough to carry the weight and rigid enough to prevent flexing of the grouted joints. The two most common floor bases are concrete and wood.

- Concrete floor: Concrete is an excellent base for RealStone Thin Veneer. Typically, all you need to do is to clean the floor with a concrete cleaner (available in most tile and flooring stores) and then install the Thin Veneer as instructed within. In other instances, it may be necessary to level the concrete floor base before moving forward with installation.
- Wood floor: For best results, a layer of cement board should be applied over the subfloor prior to the installation of RealStone Thin Veneer on a wood floor base. Please consult a building professional to see if your floor design is adequate.

## Step 1 – Stone Layout

Start by laying out a stone pattern on the floor base before attempting to set any stone. You can arrange the entire floor or start with smaller portions, but it is important to have at least a few square feet set out and fit nicely ahead of whomever is doing the setting. This is the stage where you pick and choose between different shaped stones and colors to achieve a preferred look. We recommend a range of  $\frac{1}{2}$ " –  $1\frac{1}{2}$ " of spacing between stones. For best results, the spacing between stones should be consistent.



In most cases, it will be necessary to trim the stone edges in order to make clean transitions to adjacent floors. The easiest way to make a clean line next to a wall or a dividing floor is to trim an edge on the Thin Veneer. We recommend that the stone is trimmed and set  $\frac{1}{4}$ " from the floor adjacent to it. Then fill the  $\frac{1}{4}$ " space with flexible caulking prior to grouting which will accommodate movement from the adjoining floor.



RealStone Thin Veneers are commonly cut and/or trimmed using a wet tile saw as shown to the right. This process is efficient with most cuts taking less than 25 seconds. A wet tile saw can be rented from most full service tile and flooring stores.



### Stone Finishing Option:

It is not unusual for a small percentage of stones to have a ridge where the saw blade finishes a cut at the factory. These marks are most often subtle and can be overcome by simply flipping the stone over. If the preferred side of the stone has cut marks that you'd like to remove, you can easily remove them with a wet/dry sander and a 30 grit diamond blade. We recommend this be done before the stone is set but it can be done after installation as well.



### Step 2 – Prepare Thin Set Mortar Mix

There are numerous products on the market to properly set RealStone Thin Veneer. The generic name is referred to as "thin set mortar" and your local professional flooring store will carry a variety of brand name products. It is advised to mix the mortar in a 5 gallon pail using a drill and attachment (as shown to the right). Be sure to mix thoroughly until you reach the consistency of peanut butter. It must be thick enough so it does not flow, but thin enough to stick and adhere easily.



### Step 3 – Apply Mortar to the Stone

Apply a properly mixed thin set mortar directly to the side of the stone that will be placed on the floor. This is typically 1/2" thick or more. It must be thick enough to completely squish out and support the entire under surface of the stone.





#### Step 4 – Setting the Stone

Carefully set the stone into its predetermined position. Push down and allow excess thin set to squish out the sides of the stone. We recommend you apply at least 1/2" of thin set mortar for a complete squish out all around the stone during the leveling process. This means no air gaps beneath the stone which can be verified when you see the squish out coming from all sides of the stone.



#### Step 5 – Leveling the Stone

It is important to obtain a level stone surface before the mortar sets up. If you push a stone too low when setting you must remove it and add additional thin set mortar before re-applying. Similarly, if the stone is sitting too high simply remove some of the mortar and reapply. The goal is to have a full bed of thin set under the stone when all adjacent stones are level. Note: The squish out must stay below the top of the stone surface to allow room for grout.



#### Step 6 – Allow Set Stones to Fully Cure

You can see the stones are properly set with squish out and leveling completed. The set stones will have to fully cure per the thin set mortar instructions (usually 12 hours) before continuing on with step 7.



### Step 7 – Wash the Stone

Carefully inspect the stone surfaces and remove any extra thin set mortar material. This can be achieved by rubbing the surface with a wire hand brush. Then wipe the surface with a clean damp sponge to remove dust in preparation for the sealer/enhancer application.



### Step 8 – Apply Sealer

It works well to apply the first coat of stone sealer/enhancer before grouting. A typical application method is to wipe sealer on with a clean rag and wipe up any excess. Try to apply only to the stone surface as any leakage down the side into grout area may decrease the bond of the grout to the stone. Make sure to apply the stone sealer according to manufacturer directions.

### Step 9 – Prepare Grout Mix

The grout mix must be a premium grade sanded portland cement type. Note: This is a specially formulated grout, not concrete. Your local flooring store will carry an equivalent product. The grout should be mixed according to manufacturer specifications and it works best to mix using an attachment on an electric drill. The grout is designed to flow into and around the stone spacing and fill all of remaining voids. The grout mix should be similar to the consistency of honey.



### Step 10 – Pour Grout over the Stones

After the grout is properly mixed it can be poured directly from the mixing bucket to the area being grouted. Important: When beginning the grouting process it is advised to work in manageable areas. If you are not a professional, it is recommended to focus on no more than 36 square feet at a time. As you gain experience or if you have additional assistance you can manage larger areas. Because the floor is typically grouted in sections, it may take more than one day to complete.



### Step 11 – Spread/Trowel the Grout Mix

Spread the grout over the face of the stone and work the mix into the spacing between the set stones. Use a special grout trowel that has a semi-flexible soft face. This will allow it to follow slight changes in surface while leveling off the grout area so it is even with all adjacent stones. Grout trowels can be purchased from any tile retailer.



### Step 12 – Initial Cleanup

As the grout starts to dry the initial cleanup begins. Temperature and humidity will affect the drying time but you can expect to wait about 15-20 minutes before cleanup begins. This process requires a special grout sponge and a bucket of clean water. Apply a damp sponge to stone face and rub lightly to soften and remove excess grout mix from the surface of the stone.





### Step 12 – Continued

Finishing the grout can be time consuming and will take practice. Rinse your sponge often so it will continue to pick up excess grout from the stone face. **Be careful not to remove any grout from the seams between the stones by smoothing it very lightly with consistent pressure.**



### Step 13 – Final Cleanup/Grout Smoothing

This process requires repeated cleaning of the stone and smoothing of grout areas as the grout hardens. The final cleaning and grout smoothing usually begins about 1-2 hours after the initial pour depending on temperature. Pay close attention as the grout can be easy to work with and then harden quickly. The goal is to have a smooth grout line that is at the same level or just slightly lower than the surrounding stone.



### Step 14 – Final Sealer Application

The final look is up to you. There are many different sealers available at your local flooring store. Apply the sealer over the entire floor surface. This protect the grout and stone. Reapply sealer over time as needed.

NOTE: For the best look, RealStone recommends applying a penetrating and enhancing sealer. Non-enhancing sealers will provide adequate sealing qualities, but will not bring out the beauty of the stone.

