



# Slate Flooring Installation

Your Guide to an Amazing Floor

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**Sample Chapter 8 only**

## Chapter Eight:

# Grouting Slate - Skills and Magic

The slate is all down, you've let it set for at least 24 hours, preferably 48 hours, and it's time to grout. You've really worked hard so far, but I'm afraid to tell you now is when the real work starts. Make a mistake at this stage, and you will ruin all you've worked so hard for. Grouting the slate takes skill and patience. I can teach you the skill aspect in these next pages, but the patience part is all you.

Slate is much harder to grout than ceramic tile because of the cleft nature of the surface of the slate. Of course this texture, along with the colors of slate, are what make it so beautiful. The cleft texture was actually created when the silt was deposited millions of years ago. The layers resemble those you sometimes see in fine pastries or dinner rolls.

These stepped layers trap the grout. If you don't remove all the grout from the face of the slate as you work, you ruin the texture of the slate making it appear featureless and dull. This task is especially challenging if you're working with a dark grout on a dark slate.

### **Salvation Tip:**

If you're a rookie grouter, then you must make up a test panel of slate. Take some of your scrap slate at the end of the job and thinset them to a scrap piece of underlayment. I suggest a piece about 2 feet by 2 feet, maybe slightly larger. You are going to grout half of this at first and allow it to dry. If the results are great, move on to the floor. But if your grout job is poor, continue to refine your skills on this and other test panels.

## **Type of Grout**

The joints between the slate are almost always  $\frac{3}{8}$  of an inch wide or maybe slightly smaller. Joints this large mandate that you must use sanded grout to fill the joints.

Sanded grout is simply regular wall grout with fine silica sand blended into the grout. The grains of sand are very fine, but highly necessary.

The sand performs two tasks. It prevents cracks in the grout as it dries and cures. If you were to use regular wall grout with no sand, you would see all sorts of cracks in the grout once it dried and cured.

The sand also makes the grout incredibly strong and durable. The silica sand is basically pure quartz, one of the most durable minerals you can find. Quartz is very hard, and wears like iron. The quartz sand in the grout basically creates a miniature concrete mix in between each piece of slate. This is often overlooked as many people forget that concrete is just a mixture of rock, sand, Portland cement and water. Sanded grout is the exact same thing except the rock in the mixture is the quartz sand. We all know how durable concrete is that's mixed correctly and allowed to cure. This is why sanded grout will hold up to every bit of abuse you and your family can dish out.

## Grout-Release Agents

Before you start mixing grout, you have a job to do. **I beg you to apply a grout-release agent.** These are clear liquids that block the bonding of the grout to the top surface of the slate. Because slate doesn't have a glazed surface, grout will stick to the micro-texture of the slate readily. If this happens, you will have a nightmare on your hands.



In this photo you can see me applying the clear liquid release agent to the top surface of the slate. Remember, before you do this you **MUST** allow the thinset to cure 24 to 48 hours. If you walk, kneel or twist your feet/knees on an individual piece of slate, you can

break the bond with the thinset. Once the slate is grouted, it is much stronger and resistant to this damage as the grout interlocks all the pieces of slate into one giant slab.

The grout-release agent is easy to work with and dries pretty quickly. You can almost always grout within an hour or two of applying it.

**WARNING:**

Proceed to Grout at **Your Own Peril** if you Fail to Apply this Necessary Liquid.

### Mixing the Sanded Grout

I've never had a problem mixing sanded grout by hand. It's not nearly as sticky as the thinset, so swishing it around in an older five-gallon bucket with a stiff 3-inch putty knife is not a chore.

**CAUTION:**

I urge you **NOT** to use any bonding agents with your grout. They aren't necessary and can create huge issues with colored grout. Every time I've used a bonding agent, the colored grout dried mottled with uneven coloration.

In this photo you can see a small amount of grout mixed. I did this so you can get an idea of its consistency once it's mixed. You can see the lump of wet grout in the center of the bucket. It's fairly stiff and has little slump. If you mix the grout to where its pourable or will flow slowly from the bucket,



you added too much water. **Water is a vital ingredient when mixing grout, but too much water when mixing, finishing or cleaning the grout will ruin it.**

I frequently get distress emails from people who wonder why the grout they or a professional installed crumbles and turns to dust weeks after the job is finished. The most common reason is **too much water** was introduced to the grout as it was being finished. Remember that the Portland cement in the grout is what gives it its strength. Adding too much water dilutes the cement in the grout. It's no wonder the grout is weak when this happens. Only mix about one gallon of grout at a time.

## **Applying and Spreading the Grout**

Once the grout is mixed, you can start to spread it. This is indeed a messy job, but somewhat fun. You will be sore at the end of the process, as you're bending over on your knees. Be sure to use kneepads or a kneeling cushion or pad that's commonly used by gardeners.



In this photo you can see I scooped out a glob of grout from the bucket. A 4-inch drywall taping knife is a great tool to use for this purpose. The grout you see in this photo is just about enough to fill the grout lines that are visible in the photo. You only want to apply as much grout as you can spread in an area about 2 feet by 2 feet square. You can

always scoop more grout from the bucket, so there's no need to make a huge pile in one spot and move it around.

The next step is to use the rubber float to distribute the grout to the joints. Dip the float in some water to get the rubber blade wet. This simple trick will help the float glide over the rough slate.

In this photo you can see the approximate angle you hold the rubber float to the face of the grout. It's between a 45 and 30-degree angle. Note that the long edge of the float blade is also at a 45-degree angle to the grout joints between the pieces of slate.



This is very important. Make sure that you scrape the float across the joints at this angle. Doing this prevents the edge of the float from dropping down into a grout joint and thus removing grout from the joint.

You want the top of the grout at each joint to be flush with the top of the slate on either side of the joint. This will not always be easy as some slate can be thicker than others. You'll see how the rubber float controls this fairly well as you glide it across the slate.

Note in the photo how almost all of the excess grout has been removed from the slate. **There is grout residue in the texture of the slate**, but this will be removed with a sponge. The rubber float isn't capable of removing any more grout than this from slate. When working with glazed ceramic tile, the float will get virtually all of the grout from the surface of the tile so long as you apply moderate to heavy pressure as you scrape the float along the surface of the slate.

## How Much to Grout at Once

One danger area is putting too much grout onto the slate at once. In other words, filling a large area of the slate without cleaning off the residue from the face of the slate. There is no magic number here. It depends on the humidity of the air, the temperature in the room and how quickly your grout is setting up or getting hard. If you put on too much grout and haven't cleaned the slate perfectly, the grout can and will harden on the face of the slate. **This is death on a jagged stick - your worst nightmare.**



You can see in this photo that about 10 - 12 square feet has been grouted. Of that, about 4 square feet has been cleaned of the grout residue. The finished slate that's been grouted and cleaned is in the left side of the photo.

What's really important is to grout only what you can comfortably reach as you clean the joints. Avoid

stretching way out where you're off balance. You can see that I've only grouted a space about 2-feet wide from where the wall is to where the grout ends. This is a comfortable reaching distance for many.

And now for the **most critical** aspect of grouting and installing slate:

**Removing the Grout Residue** from the Slate. If you **make a mistake** here, you **will ruin the grout** and all of your hard work. It's time to go to Chapter Nine.

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