

## Leak-Proof Showers

Tile shower installations are beautiful, but it's important to use the proper installation techniques and materials to ensure water stays inside the shower where it belongs. BobVila.com looks at the latest technologies for long-lasting success.

There once was a time, about 50 years ago, when builders and homeowners steered clear of installing showers on the second or third story of homes for fear of water leaking to the floors below. Anyone who has dealt with dripping water from a leaking shower and has seen firsthand the damage water can do to drywall, insulation and electrical components can understand why. Thankfully, there are new products and tried-and-true installation techniques that can help make your shower remodel beautiful—and leak-free.

Contrary to popular belief, tile and grout joints—including sealed grout joints—are not waterproof. Moisture can penetrate the grout joints in a shower floor and create a pond of water below the shower installation where mold and mildew breeds. In order to create a tiled shower that will last a lifetime, a waterproofing system is needed beneath the tile covering.

Tiled showers have always represented a challenge for installers. Typically, an installer creates a good drainage plane on the floor by building a mortar bed, sloped to weep holes in the sub-drain, prior to installing a waterproof pan liner. The pan liner is installed, seamed and carefully fitted to curbs and corners using a solvent-based bonding agent. Each of these steps must be completed and the weep holes protected from being clogged with mortar before the surface is ready to be covered in tile.

According to most city codes, shower membrane material must be tested before tile installation can begin. To perform this test, the homeowner or contractor plugs the drain and fills the shower base with water and lets it stand for 24 hours to make sure that there is no water leaking before the tile is installed. Unfortunately, some installers or homeowners don't perform this test because it takes additional time.

"The biggest failure we see is that there is not pitch underneath the waterproof membrane," says Scott Carothers, executive director of the [Ceramic Tile Educational Foundation](#) in Pendleton, S.C. He teaches professional tile installers the proper way to do shower installations. "If you have a weak spot between the basin joint and the wall, most likely the



The proper underlayments and waterproofing products help make this shower leak-free. Photo courtesy of Tile Redi.

pan liner was not installed improperly, which would allow moisture to work its way through and into the ceiling downstairs.”

The [Tile Council of North America \(TCNA\) Handbook for Ceramic Tile Installation](#) and the [American National Standards Institute \(ANSI\)](#) provide specifications and detailed guidelines for all basic tile installations. The TCNA handbook is a must-read for any installer or do-it-yourselfer that wants to do his or her own tile installations properly.

There are some new technologies that can make shower installations easier. Today’s professional installers often use shower kits and prefab shower bases to create a water-tight seal. Here’s a look at both.

### **A DIY Shower Kit**

Prefabricated shower systems, like those commonly used in commercial applications, are a great way to get a leak-proof tiled shower. [Schluter Systems](#),

a tile and stone installation products company in Plattsburgh, N.Y., created its Schluter-Shower System for professional installers and do-it-yourselfers who want to install ceramic tiles on shower walls or tub surrounds made of standard drywall instead of cement board or other specialized tile backers. The system consists of four primary components: a prefabricated tray, a shower curb, a waterproofing membrane and a drain. When used together, these pieces make a watertight seal, says Andy Acker, director of training for Schluter Systems.

The shower tray and curb are used without a mortar bed. Comprised of expanded polystyrene, they are lightweight and easy to install. The tray has a pre-sloped base that can be cut to size and affixed using a thin-set mortar. Schluter-KERDI is a sheet-applied waterproofing membrane made of pliable polyethylene that is covered on both sides with fleece webbing. The sheet is applied to the walls, corners and floor of the shower using thin-set mortar in much the same way wallpaper is installed—without the challenge of matching patterns. KERDI must be overlapped by a minimum of two inches at all seams in order to create a totally watertight system. Tiles are then set directly onto the membrane using thin-set mortar.

Andrew White, a homeowner in Rochester, N.Y., used the Schluter system for a custom tile shower he built to replace a fiberglass shower that was leaking in his master bath. “I knew I wanted a custom tile, glass block shower that would last me for years to come, so I started educating myself on the basics of traditional shower pan building,” he says. He chose Schluter’s system because, as a do-it-yourselfer, it went in easily and the drywall was less expensive than using cement backerboard on the walls.

### **A Prefab Shower Base**

Joe Cook, president and CEO of [Tile Redi](#) in Coral Springs, Fla., wanted to find a way to get around having to build a custom shower base from scratch every time a contractor installed a tile shower. His innovation was Tile Redi shower pans—pre-formed, one-piece molded shower modules that come with fully integrated drains, curbs and splash walls. Each unit comes pre-pitched ¼-inch per foot to the drains. These shower pans are 100 percent leak-proof when manufactured and no additional waterproofing is required on the job site.

“Ceramic tile, marble or other natural stone is set directly on the surface of the pan, using specifically formulated and tested epoxy installation materials,” explains Farrell Gerber, Tile Redi’s executive vice president of sales.

The company recently introduced “barrier-free” shower pan products that are produced so that there is no raised “wall” as you enter the shower. Rather, the one-piece unit is slightly pitched so that all water, upon hitting the shower’s floor, instantly runs downward to the drain. This eliminates water running over onto the bathroom floor, minimizes ponding in the shower. It also creates a safer bath environment for the elderly and disabled as they get in and out of the shower.



Farrell Gerber and Joe Cook of [Tile Redi](#) show their one-piece shower pan. Photo courtesy of [Tile Redi](#).

“It’s tough enough for anyone to step over a bathtub wall when getting into the shower,” Gerber says. “Imagine how difficult it is for a disabled person to do that? And accidents can even happen with people walking into a non-bathtub shower and tripping over the raised entryway “lip,” which is positioned to keep water from leaving the shower’s base and wafting over onto the bathroom floor.”

### **Where to Get Help**

Overall, there are a large number of waterproofing membranes on the market today, and what you use relies on your budget and the product you’re most comfortable using. If you’re not up for the task of installing a tile shower yourself, there are plenty of skilled installers who can do it for you. “There may be some individuals who could handle this project, but a seasoned professional is always a good choice,” Carothers says. He suggests getting a recommendation from a local tile retailer, a tile distributor or the Better Business Bureau. “Get references and call them,” he says, “I can’t stress that enough. Make sure that the work they are proposing is work they can complete properly.”

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