

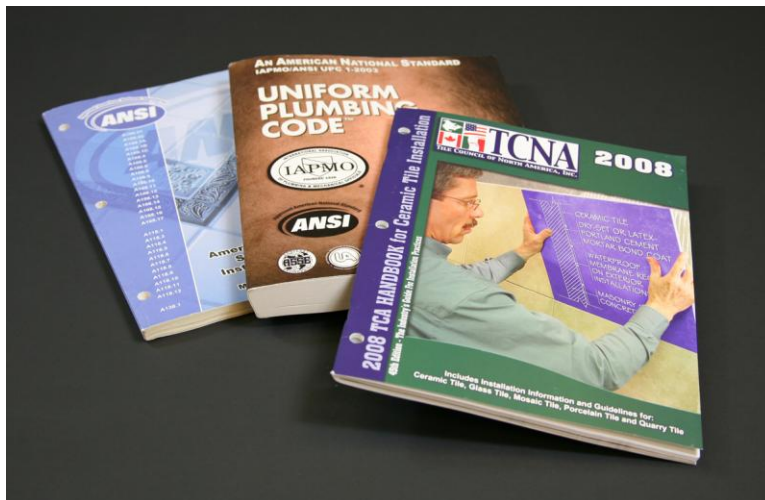
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Waterproofing Custom Tiled Showers. More Important and Complex Than Ever.

As awareness about mold grows, people have become increasingly concerned and more informed about how to prevent mold and fungus. In order to grow, mold needs moisture, a food source and a place to live (preferably in a warm, dark environment). The purpose of this article is to identify a few things that can be done to help prevent mold. Preventing moisture is one, very important thing that plumbers can be charged with doing.

Creating a slope under a waterproofing membrane is required by plumbing codes. It's also logical; water that reaches the membrane should be channeled to weep holes in a clamping ring drain. Conversely, water that reaches a flat shower pan can lay stagnant and produce odor and discoloration.

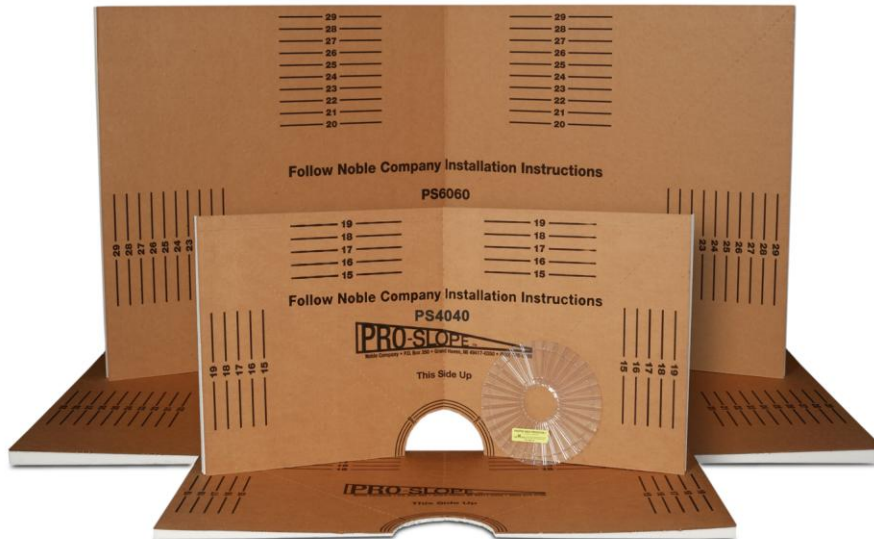


Most municipalities in America utilize either the International Plumbing Code (IPC), which is the plumbing portion of the International Code Council (ICC), or the Uniform Plumbing Code (UPC). Both plumbing codes indicate that a shower waterproofing membrane should be pitched at least $\frac{1}{4}$ " per foot from the perimeter to weep holes in a clamping ring drain. However, for a variety of reasons, many plumbing inspectors have not enforced this requirement.

The traditional method of sloping is to create a sloped, dry pack (mortar bed). Generally a mixture of 1 part Portland cement to 4-5 parts sand is used with water to create a suitable mortar mix. Installers with a background in carpentry have used plywood wedges to create slopes. The verbiage in the standard indicates that the slope should be made from “a smooth and solidly formed sub-base”. One thing is clear-- the materials and techniques used in this process are not a normal part of a plumber’s trade.

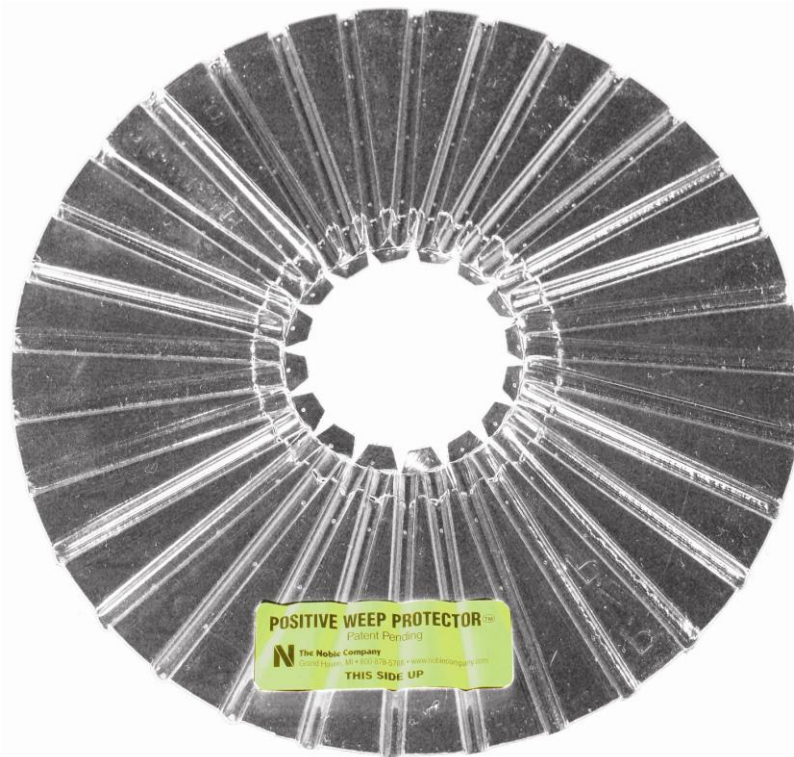
However, sloping the shower pan is essential to waterproofing a shower receptor. And sloping the tile on top of the mortar bed will not suffice. A tile system including tile, grout and mortar is not waterproof, so water can penetrate and get to the pan. Without a pre-sloped liner, water that reaches the pan will stay and stagnate. The result can be discoloration, odor and an ideal environment for mold growth.

As states and municipalities increase enforcement of plumbing codes, shower pans are required to be pre-sloped. Noble Company produces PRO-SLOPE™, a product that creates a slope under a shower pan. PRO-SLOPE is a patented product (U.S. Patent #5,140,789) that can be installed in minutes. It’s a preformed composite made from expanded polystyrene (EPS) with a fiber liner on the top side. It is sloped ¼” per foot in all directions to the center and is intended to be used with sheet membranes (primarily Chloraloy® or PVC liners).



PRO-SLOPE is packaged in kits and comes in 2 sizes (40” X 40” and 60” X 60”). Choose the size closest to your shower. If the shower is too small, cut the PRO-SLOPE to size. If it is too large, PRO-SLOPE Extensions are available. Mortar can also be used to extend a slope in lieu of Extensions.

Water that reaches a sloped membrane should be channeled to weep holes in a drain. The weep holes are located at the edges of the clamping ring, and they must be kept free of mortar. While this is not typically part of a plumber's job, it is essential for proper performance of the waterproofing. Traditionally, pea gravel or broken tile is laid around the perimeter of the clamping ring to keep mortar from clogging the weep holes.



Noble Company produces the Positive Weep Protector (PWP). The patented product (U.S. Patent No. 5,022,430) is included with PRO-SLOPE kits. The PWP is a plastic disc that is laid over the clamping ring to keep mortar from plugging weep holes. Installing a PWP is an easy way to help ensure proper function of your shower pan.

As a construction or design professional, it is also important that you are cognizant of the code authority used by plumbing inspectors in your area. There are differences in the UPC and IPC. For example, the UPC has a registered trademark symbol that can be printed on a product indicating that it has passed the appropriate tests and is therefore, suitable for a particular application (i.e. shower waterproofing).

The IPC delineates acceptable shower waterproofing products and states that they must meet the appropriate standards. The key point here is to know what is acceptable to inspectors that will check your project. If you are not certain, check with your building officials before you begin.

Using the proper products and installation procedures should result in a watertight shower that will last as long as the tile installation. Using products and methods that simplify your task and provide the requisite quality should result in satisfied customers

and growth in demand for your services. It should also keep you from having to spend time fixing problems.

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