

THE CLEFTSTONE WORKS INSTALLATION, CARE & MAINTENANCE GUIDE

MATERIAL SELECTION

We encourage the use of natural stone tile surfaces for nearly any residential or light/medium-duty commercial interior application. Most stone surfaces perform very well with simple care in installation and maintenance. Take time to consider the requirements of the site and learn a bit about the suitability of the stone you have selected. Stone wears a certain amount under foot-traffic and can degrade over time when exposed to the elements, particularly freezing/thawing conditions. Use the requirements of the installation to dictate appropriate stone, thickness, installation, and maintenance specifications. Contact us anytime for assistance, particularly when specifying natural stone for commercial and exterior application.

INSTALLATION METHOD SELECTION

Generally speaking, proper ceramic tile substrates and thin-set methods and materials are minimally required for successful installation. Rely on the experts, use high-quality setting materials, and carefully follow instructions for proper substrate preparation, materials and techniques. Most failures are a result of improvisation.

Particularly helpful is the Tile Council of North America (www.tileusa.com) *Handbook of Ceramic Tile Installation*, which outlines appropriate methods for many applications according to the proper ANSI A108 installation standards. The Marble Institute of America (www.marble-institute.com) stone installation method specifies back-buttering tiles individually to achieve a flat surface and prevent stone cracking under load. We strongly encourage back buttering all natural stone tiles.

INSTALLATION TIPS

Thoughtful Preparation insures good bonding and a smooth, trouble-free installation. Plan to inspect, prepare and sort stone tiles as necessary before setting. Brush or rinse dust from the stone, remove loose scale or clefts with a stiff nylon brush or putty knife, and reserve cracked or unsound pieces for cutting. Lay out tiles and patterns before installing to assure desired color blending.

Note that stone tiles, particularly hand-cut slate tiles from China, Africa and India, may vary quite a bit in color, surface texture, square and thickness, while tiles from Brazil and Turkey are generally more uniform. Variation does not indicate low quality stone—it is the installer's responsibility to achieve a flat surface, nice color-blending, and pleasing grout lines.

Install slate and other cleft stones as you would handmade ceramics, such as terra-cotta tile. Specify latex-modified thin-set and thin-bed methods with a 3/8" trowel for most interior usage. Select and set thicker tiles first, back-butter each tile individually, and build-up thinner tiles by striking a notch of mortar on the back. Larger tiles in 16" and 24" sizes may require medium-bed materials and a larger trowel.

Cleft stones can be lightly sanded or worked after installation to soften sharp edges and clefts, and be aware that cleft surfaces may dust for a while after installation as loose scale is removed by traffic. This stops as the surface 'settles-in', usually in a few weeks or so.

GROUT JOINTS

Always grout stone tile floors to provide required support and to smooth lippage where tiles meet. A 1/4" to 3/8" grout joint is standard, providing enough room to compensate for variation in the size of the tiles. For tighter grout joints, a running-bond (brick) pattern can help keep grout lines straight. Very tight joints (1/8" to 3/16" or less) and the use of grout spacers are often not feasible with hand-cut tiles, but may be quite appropriate with Turkish Travertine or Brazilian Slate. Please contact us when tight grout joints are desired.

GROUTING TIPS

Natural gray or neutral color, latex-modified, sanded grouts are generally preferred for a natural look and ease of maintenance. Dramatic effects may be achieved using white or colored grouts.

Apply grout in manageably-sized areas, and clean thoroughly before moving on—if allowed to cure on the surface, grout will adhere to stone and can be difficult to remove. Generally, avoid grout removers that contain acids which may damage some types of stone—always test prior to use. A stone sealer may be applied before grouting to aid cleanup.

PENETRATING SEALERS

Penetrating Sealers are recommended for almost all stone surfaces and grout to help prevent staining and to reduce the normal darkening of stone surfaces over time. Use high-quality subsurface penetrating sealers formulated for stone. Modern stone sealers are helpful for repelling most water and oil stains on stone and grout. For best result, apply sealers in 2-3 applications over 2-3 days on a fully dry and untreated surface (at least a week or two after grouting) as sealing damp or treated surfaces may extremely limit effectiveness.

ONGOING MAINTENANCE OPTIONS

1. Use of Soaps as cleaners (the Patina method) requires almost no maintenance, and is strongly recommended for nearly all cleft, honed, and tumbled stones in most applications. The goal is to allow the surface to build a slight patina which will keep the stone conditioned and stain resistant, with a warm (slightly darker than new) color and sheen. You may buff a little liquid soap (such as Murphy's Oil Soap) onto freshly sealed surfaces as a conditioner. Nothing further is required to build a patina, it will occur naturally when soap is used for regular damp-mopping and cleaning. From time-to-time, scrub the stone surface and grout with pH neutral detergent cleaner and a stiff nylon brush, and rinse thoroughly, to remove built-up dirt, which will brighten the surface.
2. Use of Detergents as cleaners (the "Like New" method) can be difficult to maintain except for the most lightly used floors and walls. The goal is to keep the surface of the stone "like new," that is: very, very clean. This is required for highly-honed or polished surfaces (like marble) that may look smeary when maintained with a patina. Avoid damp-mopping. Instead, wash, rinse and buff using pH neutral detergent cleaner, (soaps build a patina.) Keep the floor well swept, and reapply sealers after a month or so and yearly thereafter for maximum stain resistance.

ALTERNATE SEALING OPTIONS

1. Topical Sealers. Occasionally, acrylic surface coatings may be appropriate to protect slate where the color is a thin layer on the surface (for instance to protect the vibrant color of African Rich Autumn), in high traffic or wet areas, or where high shine is required. Otherwise, avoid topical sealers as they appear unnatural, are difficult to apply, and require periodic repair, stripping and reapplication. Apply multiple thin layers rather than a single thick layer. Use only acrylic coatings designed for stone. Please avoid urethanes, varnishes, wood finishes and similar sealers as they may cause unpleasant results.
2. Commercial Color Enhancers. We almost always discourage the use of commercial color enhancers on our stone. We find that the nature of the color change is often undesirable, and find that color enhancers often build up on the surface, at times with permanent and unfortunate results. However, color enhancers or mineral oil may be substituted for penetrating sealers when dramatic color enhancement is desired, but by all means test first, as color enhancing is permanent.