

# Grout Choices for Designers

Today, design professionals have more grout choices than ever for tile and natural stone. Color palettes are broad and regularly updated to reflect trends, plus they can now include color-matched silicone sealant for the required flexible movement joints. The only downside to all of these choices is matching the needs of the project and specifying the right grout for the service conditions. Color is an important component of the specification but performance is still the key to a tile assembly that is both beautiful and durable.

This article provides a simple guideline to the types of readily available grouts for commercial and residential applications.

The four main categories of grout are:

- Standard Cement Grout — ANSI A118.6
- High Performance Cement Grout — ANSI A118.7
- Single Component Grout — ANSI A118.19
- Chemical Resistant, Water Cleanable Epoxy — ANSI A118.3

	A118.3 Epoxy Grout	A118.19 Single Component Grout	A118.19 Prism® SCG	A118.7 High Performance Cement Grout	A118.6 Standard Performance Cement Grout
Stain Resistance	★★★★	★★★★★	★★★★★	★★	★
Color Performance	★★★★★	★★★★★	★★★★★	★★★★	★★
Chemical Resistance	★★★★★	★★★★	★★★★	★★★	★★★
Ease of Use	★	★★	★★★★★	★★★★	★★★★★
Cost	\$\$\$\$\$	\$\$\$	\$\$\$	\$\$	\$



**CUSTOM**<sup>®</sup>  
TILE INSTALLATION SYSTEMS



**Cement-based grout can be used almost everywhere in interior or exterior, commercial or residential, wet or dry areas.**

## Standard Cement Grout

Standard cement grout has been the most commonly used, most economical grout on the market. It is time-tested and contractors are usually very familiar with this grout, which is easy to install and clean up.

There are three basic types of cement grout: sanded, non-sanded and coarse.

- Sanded grout can be used in joints from 1/8" to 1/2". Sand adds compressive strength and reduces shrinkage in wide joints.
- Non-sanded grout is for use with grout joints 1/8" or smaller, and/or for highly polished or soft-surfaced tile glass and stone tiles. Non-sanded is similar to the traditional pure cement grout used for tight joints.
- There is also a subcategory used with pavers or thin brick that contains additional coarse sand for joints 1/2" to 1-1/4" wide.

Standard cement grouts are the least expensive grout and very easy to install. So, if your client is looking for an economical product, then standard cement grout is the most economical. Since it is also the most porous, standard cement grout should be sealed with a high quality sealer. The best sealers are specially formulated to ensure lasting protection to the grout. However, these sealers will add additional labor and material cost to the installation. Sealer life will vary depending on the products used to clean the tile. Harsh or heavy-duty cleaners remove sealers quicker than neutral PH cleaners. Keep in mind that sealers will need to be reapplied after two to three years depending on the quality of the sealer, amount of cleaning (daily, weekly, monthly) and the type of cleaners used.

With standard cement grout, you may get some minor color variation (shading). This is due to the hydration or curing characteristics of portland cement. If these grouts lose water too quickly, they can dry with areas that look splotchy and dark. When the grout is allowed to cure at a moderate rate, it will dry to an even, consistent color. Areas that receive a lot of sunlight or air movement across the top of the grout joints while they are curing will dry faster and dry darker than an area in the back of the room or in a bathroom that receives no sunlight and no air movement.

For this reason, the tile installation industry has steadily migrated away from this low performance grout. This is the true cost of an inexpensive, standard performance grout: discoloration of grout from color/shade variation during curing and stains incurred during regular use.

Cement-based grout can be used almost everywhere in interior or exterior, commercial or residential, wet or dry areas. Areas such as commercial kitchens or in high heat conditions such as a firebox, require specialized grouts. Custom Building Products has discontinued the original formula Polyblend® Sanded Grout and Polyblend® Non-Sanded Grout in the ANSI A118.6 Standard Cement Grout category. New in this product class is Polyblend® Plus Non-Sanded Grout with formula enhancements that improve both the performance and color consistency.



**Polyblend® Plus Non-Sanded Grout with formula enhancements that improve both the performance and color consistency.**

## High Performance Cement Grout

The next step up is still a portland cement-based grout, but it meets the High Performance Cement Grout requirements of ANSI A118.7 with higher strengths and lower porosity. CUSTOM's new Polyblend® Plus Sanded grout is formulated for specification on commercial installations that are economically oriented while requiring a high performance grout for the project conditions. On the top cement podium step, Prism® Ultimate Performance Cement Grout contains higher performance Calcium Aluminate cements with exothermic qualities that control curing. This consistency in hydration creates more consistent color even with varying tile porosities in most environmental conditions. This grout is harder, and denser than the standard grout and therefore more stain resistant. These high performance cements have little or no lime and will not contribute to efflorescence. This is a costly and bothersome maintenance problem where white, powdery mineral deposits appear on the surface of the grout and affect the look of the entire tile assembly. Along with the high performance comes a small up-charge compared to standard cement grout. This equals approximately 5 cents per square foot, depending on tile size and grout joint width and depth. Most owners agree it is a small cost for such drastic improvement in performance, including better color consistency and stain resistance. Products in this category do not require sealing, although end users will benefit from protecting the grout with a sealer. Prism is formulated with lightweight recycled content, meets Greenguard Gold standards and contributes to LEED® certification.

This high performance grout meeting ANSI A118.7 can be used almost everywhere in interior or exterior, commercial or residential, wet or dry including challenging areas like submerged pools and steam rooms.

Note that some areas, such as commercial kitchens or in high-heat conditions like a firebox, require specialized grouts – more on this below.



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## Single Component Grout

Single Component Grout meets the performance criteria of ANSI A118.19 and is ideally suited for commercial and residential applications, for bathrooms and heavy traffic areas. Single Component Grout provides excellent stain resistance and perfect color. It can be specified for high visibility projects where appearance is critical. This product category requires no mixing or guesswork during installation. There is no efflorescence due to mineralogy, the color is completely consistent and the grout is crack resistant due to its inherent flexibility. Single Component Grout develops excellent hardness, does not need to be sealed, and is easy to spread right from the bucket. The first generation of products in this category have faced resistance from installers as the installation process is very challenging and costly.

Prism® SCG completely resolves the installation challenges of Single Component Grouts, while delivering the perfect color and stain resistance designers and owners expect. It is the easiest grout to install...Period. Prism® SCG is the ideal selection for perfect color and unsurpassed stain resistance at a moderate price point.



Single Component Grout provides excellent stain resistance and perfect color.



## Chemical Resistant, Water Cleanable Epoxy

ANSI A118.3 is unique in describing products that can be used as both grouts and tile adhesives. This product category is the most chemical resistant grout you can buy over the counter. It encompasses two- to four-part product systems that require mixing color and catalysts together for a chemical reaction. Epoxy grouts are designed for projects that require high chemical resistance to food and other biological contaminants sources such as dairies, hospitals or anywhere you are looking for the maximum chemical resistance and good stain resistance. Some Epoxy grout colors are not UV stable and should be used on interiors only. CEG-Lite™ 100% Solids Commercial Epoxy Grout provides chemical and stain resistance with a fast cure time for a quick return to service. Its lightweight formula makes it easier to spread and clean than typical epoxy grouts and also contributes to LEED® certification. CEG-Lite™ exceeds ANSI A118.3 performance requirements, is suitable for use on vertical joints without an additive, and can also be used as a mortar. Its two-component formula combines a Part A pigmented hardener with a Part B consisting of resins and lightweight aggregates. For industrial areas with harsh environments such as high use commercial kitchens or food processing facilities that need both high chemical and high temperature resistance, specify CEG-IG™ 100% Solids Industrial Grade Epoxy Grout. CEG-IG™ has improved resistance to stronger cleaners that may be used in these environments. While, all of these grouts can be used either residentially or commercially, they all offer unique benefits.



Epoxy grouts are designed for projects that require high chemical resistance to food and other biological contaminants sources such as dairies, hospitals or anywhere you are looking for the maximum chemical resistance and good stain resistance.

For the most chemically resistant product, select an epoxy grout and make the owner aware of the extra costs for the product and labor with the long lasting advantages of longevity under harsh conditions. For the most economical clients or valued engineered projects, recommend an entry-level High Performance Cement grout, Polyblend Plus. For a small incremental cost increase, you can move them to a highest performance cement grout that meets ANSI 118.7, such as Prism, which offers the best of both worlds for stain resistance and cost effectiveness. Prism SCG delivers the greatest value with perfect color and unsurpassed stain resistance at a moderate price.

If you have any questions about grout selection, please contact a member of our Architectural or Technical Services Teams at 800-282-8786.

## For the right grout — In the right color — Count on CUSTOM.

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