Did You Choose the Grout You Wanted, Or the Grout You Needed?

Understanding the Differences Between Standard and High-Performance Grouts

Grout selection for tiling projects is often based on color, either to make a statement or to compliment the ceramic tile selection. Sometimes, even pros forget to ask themselves if they are choosing the best grout for the new tile installation's intended use.

In many cases, consumers do not know that they have a choice; they think that grout is grout. The selection of the grout should not end with the selection of a color. The designer, end user and installer should evaluate the tile project in order to determine the best type of grout to produce a long-lasting tile installation. All parties need to consider if it is a residential installation with light traffic, or a commercial installation with heavy traffic and exposure to a tough cleaning regimen. Is the tile project likely to be soiled with foods that can stain the grout, or will it be exposed to harsh cleaning chemicals that may damage the grout?

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CUSTOM's CEG-IG 100% Solids Epoxy Grout is a water-washable epoxy grout that meets the performance requirements of both ANSI A118.3 and the more demanding requirements of ANSI A118.5.

Consideration should also be given to the actual installation of the grout: will it be in an interior or exterior space? How soon will it be opened for service? Today, many choices exist for grout based on various chemical technologies that will address these concerns and help achieve a durable and beautiful tile installation.

Traditionally, grout was based on the same technology that the bonding mortar was made of: Portland cement and sand. Installers were accustomed to using sand and Portland cement blends for installing and filling the joints between tiles. Today, these cement-based grouts are divided into two categories: standard cement grout (meeting the requirements of ANSI A118.6) and high performance cement grout (meeting the performance of ANSI A118.7).

Custom® Building Products' Polyblend® Grout is a popular standard performance grout, and CUSTOM's Prism® SureColor® Grout meets the requirements of a high performance grout. These grouts have high strength and a hard finish like the surrounding tile.

When they are properly sealed and maintained, they will last for the life of the installation. However, if they are not cared for properly, acids from food and other contaminates will break down the Portland cement in these grouts and weaken their structure. Over time, the grout in the joints will degrade and have to be replaced. This problem with cement-based grouts led to the development of chemical-resistant grouts.

The first chemical-resistant grouts were based on epoxy resin, which was selected because it could be easily mixed at the job site and cures at the same rate as traditional, cement-based grout. Epoxy has excellent resistance to most chemicals and can be easily pigmented in the factory to produce an array of colors. The curing of the epoxy does not affect the color, so the color is very uniform throughout the installation.

Standards were developed to classify the epoxy resin-based grouts into two categories: ANSI A118.3 was established as a minimum performance requirement for water-washable 100% epoxy grout and mortar; ANSI A118.8, was established for Epoxy grout additives. Epoxy grout additives were developed to be mixed with traditional cement-based grout in place of water. While this improved the performance of the cement-based grout, it did not completely eliminate its chemical sensitivity. The original ANSI A118.3 100% solids epoxy grouts were difficult to spread, and even more difficult to clean up.

CUSTOM eliminated this deficiency with the development of CEG-Lite 100% Solids Epoxy Grout. Formulated for easy spreading and filling of the joints in the tile assembly, its non-sag and non-slump properties make it easy to fully fill joints on both horizontal and vertical surfaces. It is considered one of the easiest epoxy grouts to clean off the surface of the tile during installation. The finished tile installation has grout joints with even, consistent color and resists staining by most common spills. CEG-Lite 100% Solids Epoxy Grout has excellent chemical resistance and is suitable for both residential and commercial installation. While epoxy grout fills the need for chemical resistance in most installations, some industrial applications needed superior resistance to harsh chemicals.

The need for even more chemical and heat resistance in industrial applications resulted in the development of Furan-Based Grouts that meet the performance characteristics of ANSI A118.5. Furan grout is based on a thermosetting plastic that resists high temperatures and strong chemicals that can degrade typical epoxy grouts. Unfortunately, they are not water washable and require special installation techniques, including the coating of the tile with wax before installation. Custom Building Products' R&D noted the advantages and shortcomings of Furan Grout, developing the higher-performance CEG-IG 100% Solids Epoxy Grout to mimic the strengths of Furan grout.

CUSTOM's CEG-IG 100% Solids Epoxy Grout is a water-washable epoxy grout that meets the performance requirements of both ANSI A118.3 and the more demanding requirements of ANSI A118.5. CUSTOM included features that contribute towards improved installation performance in the formula, making the installation of CEG-IG Epoxy Grout as easy as installing CUSTOM's CEG-Lite Epoxy Grout.

CEG-IG Epoxy Grout has superior chemical resistance and is ideal for industrial applications in places like dairies, breweries and other food and chemical processing facilities. It also performs well in commercial kitchens, where harsh cleaning products are used to maintain the floors. Manufacturers of kitchen maintenance cleaners continue to improve their cleaning products, making them more effective and easier to use. The latest developments in cleaners include enzymes that help break down greases that are commonly found on the floors of commercial kitchens with deep fryers. When the enzyme breaks down the spilled grease, it converts it to an organic acid (fatty acid) that can be easily removed from the surface. These fatty acids are very aggressive on normal epoxy grouts, and if they are left in contact with the grout for extended time periods, the epoxy resin in the grout will begin to break down.

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CUSTOM has designed CEG-IG 100% Solids Epoxy Grout to resist fatty acids, allowing it to hold up well in commercial kitchens where enzyme-based cleaners are typically used. While one should rinse residual cleaner from floors immediately after cleaning, Custom's CEG-IG 100% Solids Epoxy Grout is one of the best at resisting degradation from the enzyme-based cleaners. As with CEG-Lite, CEG-IG can be installed in all ceramic and natural stone tile applications. It cures to a uniform color consistency that will last for years of service.

When it comes to choosing a grout for your next tile installation, it is important to look at all of the needs of the project to select the grout designed for your application. Custom Building Products has a grout to fit any need, in all the colors that a consumer or designer might want.

ABOUT THE AUTHOR

Steve Taylor is Director of Architecture and Technical Marketing for Custom Building Products and has more than 30 years of experience developing products for the construction industry. Steve is a member of the Tile Council of North America (TCNA) and Materials & Methods Standards Association (MMSA), helping to determine proper tile installation methods and standards; including the simplification of tile installation processes which enable tile professionals to save time and money.

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