

GROUT COLOR: WHY DOES IT LOOK DIFFERENT?

GROUT COLOR

Color comprises a large and important portion of our lives. The magic of color interaction is that our perception of a color changes when the color is viewed under different conditions. The way color appears is affected by the environment in which the color is seen.

Rarely do we see a single, isolated color. They are always seen next to other colors. Hue, value and intensity describe a color as we see it; however, these attributes can dramatically change when the color is placed in the context of surrounding colors and materials of different textures. Some combinations are naturally pleasing and some colors clash with each other based on their position in the color spectrum.

A grout color selected in a brightly lit show room can appear quite different after installation, depending on the colors in the room and the interior lighting conditions. It is frustrating (and expensive) to install a colored grout with the perfect tone for a particular scheme, only to discover that it appears to have a different shade when applied between the tiles.

Changes in color perception occur whether we want them to or not, so it is critical for project owners and designers to understand how colors interact and to anticipate those interactions.

CURING OF THE GROUT

Cement grouts cure by hydration of the cement in the grout. The color of the hydrated cement is generally lighter than that of the un-hydrated cement. If the grout is not fully cured, it may not yet have achieved the color that was selected from the color cards or sample grout channels. It is important to mix grout powder with the proper water ratio and follow manufacturer's directions for the installation of the grout to obtain the correct color. Higher performance cement grouts like Prism® will cure quickly, and in many cases, reach the desired color sooner than traditional cement grout. To assure the accuracy of the color in your project, and not be dependent on the cure state of the grout, use a Single Component® grout like Fusion Pro® or an epoxy grout like CEG-Lite™ in your tile project. These grouts do not rely on hydration of the

cement and the differing colors of the hydration states. The resins and pigments in these formulas will maintain the same color throughout their curing cycle. Fusion Pro will cure to the same color regardless of the tile type, substrate or environmental conditions.

GROUT TEXTURE

The texture and finish of installed grout are a result of the type of grout used and the installation and finishing techniques used by the installer. Surface texture and finish alter the way color is perceived. Rough, textured areas of raised sand in a sanded grout will appear darker in color. Smooth areas found with non-sanded grout and over-worked sanded grout will appear lighter in color.

Today, it is not uncommon to find different types of grout on the floor (e.g., epoxy grout) and the wall (e.g., cement grout) plus a silicone sealant used in the corners and movement joints. All of these materials have slightly different textures and can therefore appear as different colors, even though they were color matched to the same color standard. The source of lighting that a tile installation is exposed to can also accentuate surface irregularities by casting shadows on the tile surface and grout joints and affect the perceived color of each.

LIGHTING

Metamerism is the phenomenon of colors changing when viewed in different light sources. The grout color that looked great with the tile in the showroom is not even close when installed. The problem is the light source. You may have picked the grout color in the showroom under fluorescent lighting but the installation site may be in a mix of daylight and incandescent lighting. The perceived color of the different types of grout, printed samples, plastic channels and ceramic tile will change as the light source changes and most of the time the change is not in the same direction. It is important that you view the grout and tile combination in the lighting found on the project. Creating a test panel and evaluating it in the location of the intended installation is highly recommended for any tile installation.



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MAINTENANCE

Unfortunately, the color of many grouts will not remain the same over time. As the grout becomes contaminated with spills and even cleaning agents, the perceived color will drift. Sealing a cement grout with Aqua Mix® Sealers Choice® Gold or installing stain resistant grout like Fusion Pro or CEG-Lite will make it easier to clean and maintain the original color longer. Note that epoxy resin will yellow when exposed to the UV from sunlight and this can result in color shifts for epoxy grout. To keep the original, intended color as long as possible, it is important to install as well as maintain the grout based on the manufacturer's directions.

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