

By Scott Bocketti

Grout Deterioration in Kitchens

Since the introduction of “no-rinse” enzymatic cleaners, an increasingly common issue reported by facilities departments and unit operators of restaurant chains is the deterioration of grout in the kitchen area. A simple internet search regarding enzymatic cleaners and grout problems yields a number of horror stories, and many grout manufacturers going on the defensive about what exactly causes the issues. In some cases, grout that was installed only a few months prior has completely deteriorated and needs to be replaced. A lack of grout as a result of deterioration creates various maintenance issues as well as potential slip/fall hazards should it cause any of the floor tiles to become loose. The potential direct hard costs associated with deteriorated grout range from a re-grouting of the floor to a total floor replacement; not to mention any indirect costs caused by shutting the kitchen down for these repairs.



Designers and end users in restaurant chains spend extensive time and energy finding and specifying the correct tile aesthetic for their brand. However, we have found that considerably less time is spent on choosing installation products best suited for a restaurant environment to prevent future failures, such as grout deterioration. If appropriate time had been spent upfront selecting the correct setting materials based on the environment and maintenance program of the restaurant chain, costly repairs and rip-outs could have been avoided.

Over my 15+ years working with national restaurant chains to develop customized tile supply programs, I have learned to ask any new prospective client, “What grout do you specify in your kitchens?” More often than not, the client’s architecture department has not specified a particular grout, or has generically specified epoxy grout. If epoxy grout has been specified, the next question I always ask is, “Which type of epoxy grout?” Often the response is, “There’s more than one type of epoxy grout?”

In fact, there are varying different types of epoxy grout which differ based on their respective technical performance characteristics. Regardless of which brand of setting materials you use, all of the setting material manufacturers state that non-industrial grade epoxies are not recommended for commercial kitchens; industrial grade epoxies should be used in these environments. The reason industrial grade epoxies should be used is due to certain environmental conditions typically present in a commercial kitchen environments - namely the presence of oleic acid.

Specifying the Correct Epoxy Grout

Oleic acid, a mono-unsaturated omega 9-fatty acid, is a by-product of animal and vegetable fats and oils. Oleic acid has been found to break down various types of tile grout when left to dwell in higher concentration. While oleic acid has always been present in commercial kitchens, the prevalence of grout deterioration prior to the emergence of “no-rinse” cleaners was less because previous cleaning methods required cleaning, mopping, and, most importantly, rinsing the floor, which would help remove the oleic acid before it had time to dwell and deteriorate the grout. With a change to “no-rinse” cleaners, we found that restaurant operators were no longer rinsing their kitchen floors after cleaning (as the name “no-rinse” cleaner would suggest). The lack of rinsing causes a build-up and concentration of oleic acid on the floor. In fact, the manufacturers of “no-rinse” cleaners state in their product literature that rinsing is still an important step in the maintenance process. However, upon conducting site visits for many of our restaurant chain clients, we found that in many cases the floors were not being rinsed when “no-rinse” cleaners were being used and at those units we often found grout deterioration in the kitchen.

Independent tests have been performed by cleaning chemical manufacturers in conjunction with grout manufacturers to test various grout products when exposed to oleic acid, enzymatic “no-rinse” cleaners, and the combination of the two. The result of those tests identified that when oleic acid was allowed to dwell on most types of grout, including non-industrial grade epoxy grout, the grout was found to have deteriorated. To combat this issue, grout manufacturers went back to their chemists to create even stronger epoxy grouts, namely industrial grade epoxy grouts. Upon additional testing, industrial grade epoxy grouts were able to withstand erosion when faced with high concentrations of oleic acid.

In summary, while it is important to use epoxy grout in a commercial kitchen, only products labeled as industrial grade or 100% solids epoxy grouts must be used. These grouts meet ANSI A118.3 standard and provide strong resistance to oleic acids left behind in back of house areas, especially in instances where oleic acid concentration is high due to the use of “no-rinse” cleaners. An equally important lesson for all restaurant chains to remember is that the architecture department of a chain needs to be in close communications with the facilities teams in order to ensure that the right products are specified in light of the maintenance products and procedures determined by the facilities team.

About the Author

Scott Bocketti joined Creative Materials in 2000 as a National Account Manager. Scott has overseen some of the largest accounts such as Five Guys, Panera Bread, Porsche, Dunkin Donuts and Starbucks. In his current role, Scott is responsible for all aspects of the National Accounts division. Scott may be reached at sbocketti@creativematerialscorp.com.