

# **Epoxy grout + enzymatic no-rinse cleaners = grout disaster**



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*Combining epoxy grout with enzymatic cleaners in commercial kitchen settings can lead to erosion of the grout. The cleaner breaks down with sugars, fats, and proteins that collect on the grout, resulting in an acidic solution that deteriorates epoxy grout.*

Several years ago my MAPEI sales representative, Dennis Sandell, made me aware of a grout-failure phenomenon that was studied for a restaurant chain in Texas. At the time it seemed interesting but I really never thought much about it until I got a call from a restaurant manager. It seems that his kitchen grout was significantly degraded, and there were many areas in which the grout was virtually gone. This concerned me, since my company installed this floor just a few years ago, and it was grouted with a 100% solids epoxy grout. Luckily I did remember the conversation with Dennis.

The study involved the extreme rapid degeneration of epoxy grout. The results of the study concluded a

new type of cleaning chemical using enzymatic cleaners (also known as “no-rinse” cleaners) was used. These cleaners have become very popular in commercial kitchens.

Since this initial call I have been consulted on several other kitchen grout failures. Now, the first thing I do is find out what they have been cleaning with, and without any exceptions, they have all used no-rinse cleaners. Yet often before I can tell the operators the source of the problem, they strongly assert their belief that the original tile-installation company must have performed their work incorrectly. Many times the operators required them to come back and regrout, only to have the same failure occur.

Unfortunately for these tile-setting companies, their name is dragged down due to a failure not under their control. I remembered a friendly conversation I had with a competitor. He told me his company recently regouted a very large kitchen where grout had failed under his one-year contractual warranty. The original grout was a 100% solids epoxy, and the regout was again with the same 100% solids epoxy grout. He was very troubled to learn the regout was also failing. After I informed him about the destructive nature of no-rinse cleaners, he was relieved that the failure was not a result of improper workmanship or faulty grout. It was clear that he wished knew about this information many thousands of dollars ago.

### **The problem with enzymatic cleaners**

The problem with these cleaners and 100% solids epoxy grouts is this: although harmless to the epoxy grout alone, these enzymatic cleaners accelerate the breakdown of products such as sugars, fats and proteins, which commonly appear on commercial kitchen floors.

To break down these products, the cleaner is left on the floor overnight (thus the name “no rinse”). The byproduct of the breakdown of the fats (grease) is acidic, and cumulative. After days, weeks and months of cleaner use, a highly acidic solution develops that rap-

idly deteriorates grouts.

Since the above-mentioned study, several manufacturers have developed an epoxy grout that can be subjected to these cleaners. We have had great success at regrouting failed original installations using these epoxies. These 100% solids epoxies are listed to comply with ANSI 118.5.

A word of caution: use of these 100% solids epoxies is still limited. When used with *newly-developed accelerated enzymatic cleaners*, to my knowledge, no grout manufacturer will offer a warranty on their 100% solids epoxy products – even the new ones that meet the ANSI 118.5 standards.

With new installations, my company has taken the approach to educate the end user. If these no-rinse cleaners are used, the only grout which can be used is the above 100% solids epoxy grout meeting ANSI 118.5. We educate the end user about the lack of manufacturer warranty on these ANSI 118.5 grouts if they are using an *accelerated enzymatic no-rinse cleaner*. These ANSI 118.5 grouts are more expensive than other epoxy grouts and typically are more difficult to use. Yet if traditional cleaners are used, many other grouts can be used successfully. We always give the advice under consultation of a trusted grout manufacturer representative.

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