Sanitizing Slabs ◄ ► My Opinion

Have a technical question? Check MIA's Dimension Stone Design Manual 7.2 first. If you can't find the answer there, contact MIA's Technical Director, Chuck Muehlbauer, at technical@marble-institute.com. This FREE service is for MIA members only! (Non-member charge: $85/hour) As a courtesy to other members, please limit phone conversations to ten minutes per call. *All opinions and advice provided by Chuck Muehlbauer or anyone else from MIA are provided as general information only. MIA assumes no responsibility and shall not be liable for any damages resulting from your use of this information. Any information provided by the MIA is the exclusive property of MIA and shall not be disseminated, republished, or reproduced in any manner without the prior written consent of MIA.*

Q: We have granite slabs stored in outdoor yards in the Minot, ND area that were flooded. Once life returns to normal here, we'd like to recover this material and clean it up so it can safely be used as a countertop surface. How do we go about sanitizing these slabs?

A: The devastation brought by the Souris, Missouri, Red, and Mississippi Rivers have affected so many this year. I suspect there exists a lot of slab inventory out there with a similar problem as yours. Fortunately, this particular problem should prove to be one of your smallest problems created by the flood. These slabs can be readily sanitized. We fielded this same question in 2005, when the New Orleans region was dealing with the Katrina floods. Since I didn't know the answer myself, I consulted with the microbiologists at Hospitality Institute of Technology and Management. I'll paraphrase their response below:

This question can be answered with absolute confidence as a result of the study that we performed in countertop surface cleanability in 1999 (Reprinted with permission in the Marble Institute's Technical Bulletin on Countertop Sanitation in June, 2004). If you recall, we tested six countertop substrate surfaces by intentionally inoculating them with E. coli bacteria. We then washed the surfaces with common detergent and rinsed them. After taking readings of the residual bacteria, we then cleaned the countertop surfaces with a dilute solution of household vinegar. The bacteria reductions in the granite surfaces were very impressive, and proved to us that the bacteria produced a surface contamination only, without significant penetration into the stone. The murky flood waters hold nothing more dangerous, and in fact a lower level of bacteria concentration, than would be found by placing a raw cut of chicken meat on one's countertop surface. Using the same cleansing method as in our 1999 studies, these countertop surfaces can definitely be sanitized to once again become safe food preparation surfaces.

First, wash the surface thoroughly with water and detergent. Then prepare a dilute vinegar solution. You need only an acidic concentration of 200 ppm (parts per million) or greater to be effective. Since common household vinegar is approximately 5% acidic, you need a vinegar to water ratio of about 1:250, or about one tablespoon of vinegar to one gallon of water. Wipe the surface thoroughly with this solution in alternating directions, rinse with clean water, and allow to dry. An alternative to the vinegar would be bleach, in approximately the same concentration. If using bleach, one should be mindful of the fact that bleach in itself is toxic, so the rinsing process becomes much more critical.

(Note that the MIA does not normally recommend vinegar as a countertop cleaner, but in this case, and with the low concentration required, it seems to be the prudent choice.)

Q: We are starting to remove panels from a 1920's era historically significant façade, after which we will build new structural backup walls, and then replace the historical stone panels over the new walls. The granite panels are 4" thick and are held in place with heavy straps. To remove them, we have simply been cutting the straps. When we reinstall them, can we simply cut new anchor slots, or must we remove the embedded portion of the existing straps and use the same anchor slots?

A: A ±90 year service life from these panels, and then reinstalled for perhaps another 90 years? Sounds to me like natural stone is indeed a very "green" building product! Unfortunately, 1920's era would be barely after the invention of stainless steel, so without asking, I'm quite certain that the existing straps are not stainless steel. Because of that, I wouldn't risk relying on measures to protect them from corroding; I would remove them. Likely they are grouted in, and after this length of service life, the grout is not likely to be holding them in tenaciously. A single plunge cut with a diamond blade along the anchor tab face and I suspect you'll be able to pull them out. Once removed, you can recut the anchor slot at the same location, making sure to remove all of the existing grout and expose solid granite. When reinstalling, make sure you take advantage of advancements made in the past century and use stainless steel anchorage components.

Did you know that your MIA membership provides you access to the best technical advice in the natural stone industry?

Contact the MIA technical department for help with any and all things natural stone.