



**CERAMIC TILE INSTITUTE OF AMERICA, INC.**  
12061 Jefferson Blvd., Culver City, CA 90230-6219

## **CTIOA REPORT 65-11-1**

### **SUBJECT: PROCEDURE FOR REMOVING CEMENT/ GROUT SCUM FOR CERAMIC MOSAIC, QUARRY AND PORCELAIN TILE SURFACES INTRODUCTION**

It is very important to thoroughly remove all grout/ cement residue from the tile surface during initial grout clean up procedure immediately after grouting. The more textured the tile surface, the more attention needs to be concentrated on proper removal of the light residual grout haze that remains even after a final light cheese cloth wipe-down. An excellent method to help insure that the grout/ cement haze is totally removed is to use cheesecloth for the final clean up.

If grout/ cement smears or film has been allowed to cure on tile surface, sulfamic or diluted phosphoric acid (22 % maximum strength) represents the safest acids that will remove this cementitious residue. Extreme caution should be used when applying any acid or harsh chemical to glazed tile.

It is important to use these above mentioned acids carefully, first testing solutions with higher water dilutions, and only increasing the acid concentration as needed to accomplish cleaning task.

Some understanding of what can be done with these acids should be established prior to use:

1. They will not readily dissolve heavy grout scum or chunks of thin set mortar. If properly cleaned at installation and grouting, this should never occur, however, if this problem exists, use a plastic or teflon scrapper that will not damage tile surface and scrape heavy buildup from surface in conjunction with acid washing any remaining light film.
2. Acids do not readily remove grease, glue, paint, sealers or acrylic coatings. In fact, they may cause a crystallization effect, making the bond of these contaminants/ coatings adhere more tenaciously to tile and grout.
3. Acids are to be used as temporary problem solvers. They attack and dissolve cement/ grout. After the problem is solved, they should never be used as regular cleaners as even weak acid solutions will eventually harm grout and tile.
4. New grout should be allowed to cure at least two weeks before sulfamic or diluted phosphoric acid is used. This is especially crucial for colored grouts.
5. Never use hydrochloric (muriatic) acids. Unfortunately, this acid is widely used in the masonry industry. Not only the acid itself, but even the fumes are capable of severe damage to humans, pets, tile, grout, and metal. Sulfamic or phosphoric acid should be tested, then used only by someone who has read the instructions carefully and understands the need for caution.

6. Remember to dilute acids according to product directions, testing with weaker solutions prior to determining need for a stronger solution.
7. Completely saturate tile and grout with water prior to applying acid solution. This accomplishes two purposes. It protects grout from acid burning and helps to keep acid solution on tile and grout surfaces where it is needed.
8. Allow acid solution to dwell momentarily on surface so that it may start to break down cement/ grout residue. Immediately begin scrubbing with natural bristle deck brush. Follow immediately with several clean water rinsing, scrubbing during rinsing with clean deck brush to prevent residue from clinging to tile and grout surfaces.
9. Protect metal in working area with petroleum jelly as some metals may be lightly etched by even a mild acid solution.
10. If glazed tile is involved, the phosphoric or sulfamic acid solution should be used only as the last resort. If acid is used, test to ensure that the glaze is not adversely affected with concentration used. Allow solution to dwell only momentarily and neutralize quickly with clean water.

### **CONCLUSION**

If properly used, sulfamic acid and diluted phosphoric acid can be very beneficial in solving cement/ grout scum problems. If proper care is not taken, however, further damage can occur.