

# **TILE AND GROUT REPAIRS**

**By**

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**Your tile is cracked! Or perhaps both your tile and grout are cracked? What to do?**

**If the tile is glazed, either ceramic or porcelain, there probably isn't much that you can do for a long-term permanent fix! The glaze is essentially melted glass and just as you can't fix a cracked window pane, you really can't repair the glaze and make it whole again. On a short term basis, you might get by with using some enamel paint or appliance or automobile "touch up" paint to paint over the crack. Eventually this will fail as the tile will continue to move and will no doubt re-crack again in the future. In a heavy traffic area the enamel will eventually wear away.**

**If the cracked tile is a quarry tile (the red clay tiles that you see in McDonalds or service stations) or a mosaic tile there really isn't anything that you can do to repair the cracks. The tile is a solid "brick" of clay that has been pressed under extreme pressure and then baked under very high heat to make the tile. If it cracks there isn't anything that you can do to force it back together! Mosaic tile are so small and hard that it is rare that they will**

**exhibit cracks. What usually happens is the grout around the mosaic cracks and crumbles.**

**Generally cracks develop on floors from two sources:**

**(a) Someone drops a hard object on the tile and chips or cracks the surface or an inexpensive tile with a thin glaze is scratched by heavy object. If extra tile is on hand, simply scrape out the old grout, break out the broken tile and glue and replace the tile (see below). This is the reason why you should always insist that extra tile be purchased and left behind when tile is installed. The tile will not fade over time and can then be used for future repairs. Since tile is a cooked, manufactured product it will vary in size and shade from batch to batch, So years later, even if you know the brand, line and size of the tile, it will be virtually impossible to match new tile with old!**

**(b) If cracks appear in a series of tiles, or a combination of tile and grout, almost always it is the result of a crack in the substrate under the tile. Tile isn't smart enough to crack in unison, so something below the tile in the substrate must be moving and causing the tiles and or grout to crack!**

**Some common causes of cracks in substrate are : (1) shifting upward or downward of the cement slab away from the cement foundation. Often this will happen many years after the home is built due to an extreme cold snap or draught. As the surrounding ground shrinks the foundation and or slab moves and will cause any grout or tile over the slab/foundation joint to crack. On occasion the slab drops or the foundation moves upward due to poor construction practices and can show up in a few**

years after the construction is complete.(2) If the tile has been applied directly to wood without proper preparation, the movement of the wood due to expansion and contraction due to heat, cold and humidity can cause the tile or grout to crack. (3) If improper glue (often mastic, wall tile or vinyl flooring glue) is used on a floor then any heavy weight on the tile can cause the tile or grout to crack as the glue's flexibility will compress and not adequately support the tile and or grout. (4) If the supporting cement board or other substrate is applied so that the cracks between boards line up with cracks on the wood subfloor, normal movement in the floor can "telegraph" up to the tile and cause cracks.

Some solutions to cracked tile and grout that we can suggest are as follows:

1. If extra tile is available from the original batch (the best of all worlds!) simply scrape out the old grout around the cracked tile to isolate it from adjacent tile, cover it with a cloth and break it apart with a hammer. After the tile pieces and glue are cleaned up, get some thinset glue and grout from your tile or building supply store and glue the tile back in the newly cleaned up space. The only thing that you can do wrong is put the tile in upside down!
2. If you do not have extra matching old tile but the floor is stable and not showing signs of coming loose you can tile over the old tile with new tile and latex modified thinset glue. Test the floor by tapping with a metal object and if it doesn't sound



**hollow you are OK. The cracked tiles can be removed and the area filled in with thinset glue or Portland cement to make it level with the old tile. Then a crack suppression membrane is glued down over the area of the old cracked tile or substrate. The membrane will allow lateral movement under the tile without re-cracking the new tile. By tiling over the old tile you will save money and the mess of removing the old tile and glue. Transition to adjacent surfaces are easily handled with rounded or sloped metal edging or wood transition pieces.**

- 3. This same “tiling over” procedure can be used on shower walls and ceilings and countertops to renovate a bathroom and kitchen and bring it to the 21<sup>st</sup> century without the mess and expense of tear out efforts.**

**BEFORE WITH 4X4 TILE**



**AFTER WITH 20X20 TILE**



**This renovation technique can also prevent or put off for a very long time, problems that will occur when tile in wet areas of showers and tub surrounds have been installed directly over drywall, plaster or “greenboard”. (“Greenboard” is no longer an acceptable backing for tile in wet areas.) Water will eventually work it’s way through grout and attack the backing. If the backing is gypsum based on not water resistant eventually the wall will fail and the tile will fall off the wall. Before it fails, almost always black mold is developed in the wet backing and works its way into the shower from the back of the tile! Cleaning the front of the tile and grout with chemicals etc. will be useless as the mold is in the wall behind the tile. By installing large tile (at least 16x16 and up) over the old small tile, the problem can be slowed down for a long time and even eliminated. The new large body tiles will have much less grout joints and the moisture will have to work**

it's way through two levels of grout and tile to get to the backerboard and cause problems. This solution can be made with very little fuss, no tear out mess and less expense.

**BEFORE WITH 4X4 TILE**



**AFTER WITH 18x18 TILE**



4. If the wrong glue or wrong substrate (luan as an example) is used to install the tile floor **NOTHING** can be done to save the floor! All of the tile needs to be removed and new tile and glue and if necessary substrate has to be applied to the floor. Any attempt to make a partial repair is a waste of time and money as any portion that is not replaced will eventually need to be replaced. When you try

**to sell the home real estate laws will often require that you disclose deficiencies. A deficiency due to wrong glue or substrate will mean that you will pay for the floor repairs upon sale! You might as well make the repairs now and have something positive to talk about rather than something to explain during the selling process!**

**The most important message again is to make sure that you buy sufficient tile so that you have some left over for future use when the tile work is complete! The attribute that makes tile the least expensive floor and wall covering, in the long run, is that it is reparable, if you have extra tile! If you try to make repairs without replacement tiles you are doomed to just make the problem more noticeable and you will pay for the problem when you try to sell your home. If you do not have extra tile unfortunately there are no easy, inexpensive repairs, period!**

**Carlo Americo Odella has owned Europamerican Tile since 1987. Prior to that time he was a Fortune 500 Vice President and a CPA with an International CPA Firm. He has authored numerous articles on tile and grout and their application and spoken on the subject on numerous occasions. Europamerican Tile and Marble has a showroom with over 1500 samples to be checked out and offers installation services and assistance to do it your selfers or those with their own installation arrangements. They have sold tile via the internet to clients throughout the US and from Hawaii to Puerto Rico More information can be obtained by calling 937 439 1485 or at their website at [www.Europamericantile.com](http://www.Europamericantile.com).**