

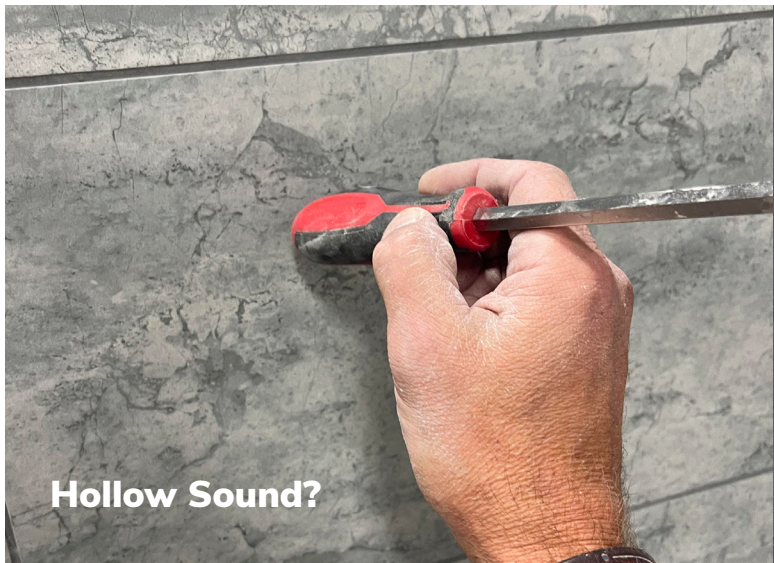
LOOSE, CRACKED TILE OR GROUT? WHY IS THIS HAPPENING?

Often when tile or grout is loose or cracked, the problem is the result of improper tile installation methods. While these symptoms can be caused by various tile installation errors, many times the culprit is known as “spot bonding.”

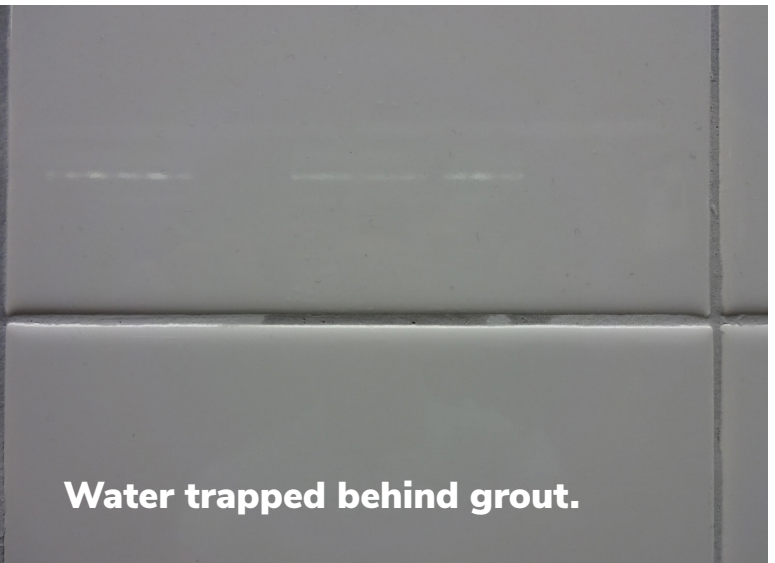


In addition to loose or cracked tile or grout, you might notice some other signs of an improper tile installation, such as:

- Hollow sound when you walk or tap on the tile.
- Tile that moves.
- Temporary splotchy discoloration or shading of tile and/or grout, especially in a shower.
- Unpleasant odor in a shower.



Hollow Sound?



Water trapped behind grout.

So just exactly what is spot bonding?

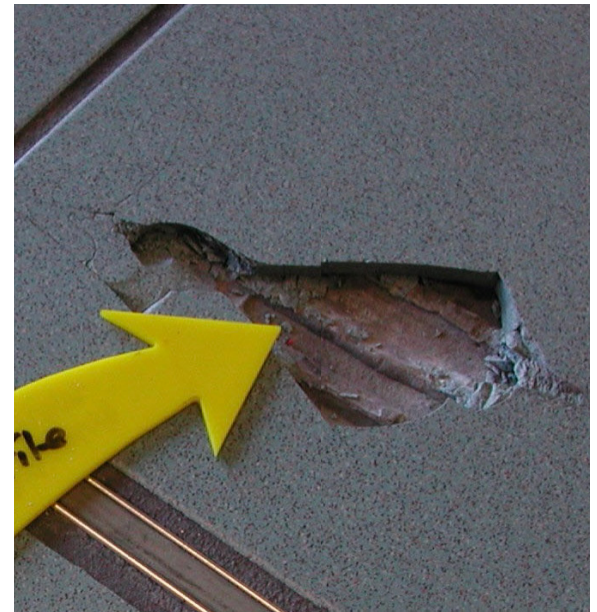
Spot bonding, sometimes called “5 Spot,” is an incorrect procedure used to “bond” or adhere the tile to the floor or wall surface. Typically, globs of mortar are placed in various “spots” on the back of the tile, often the four corners and the middle (5 spots) but they can be random as well. This is NOT an approved tile installation method, and issues stemming from this practice will result in failure, requiring a complete tear out and replacement.



Why is spot bonding a problem?

Dry set mortar, often referred to as “thinset” can only be used up to a maximum thickness of $\frac{1}{4}$ ” after the tile is embedded. Spot bonding will always require that the thinset thickness is far beyond the manufacturer’s recommendations, resulting in the mortar shrinking, and pulling away from the tile. This leaves an inadequate adhesive layer between the tile and the wall or floor, and forms voids under the tile where no thinset is present.

Spot bonding does not ensure adequate attachment of the tile to a properly-prepared surface. Per tile industry approved methods, 80% mortar coverage on the back of the tile is required in dry areas (floors and walls) and 95% mortar coverage is required in wet areas.



It’s also important to understand that tile is a surface covering. In actuality, the tile is often a thin layer of fired clay, which is not meant to be load-bearing, unless it is properly supported and bonded to a sound surface. That’s why spot bonding is a BIG problem.

These can be the results of spot bonding:

- Wall or floor tile have inadequate support and may crack.
- Voids under the tile create areas that are not adhered. Moisture in showers or wet areas can become trapped in these voids, causing discoloration and/or mold and mildew behind the tile.
- No impact resistance, shortening the life of your tile installation.
- Due to lack of support, the face of the tile may punch through to the subfloor beneath when point loads such as heavy appliances, pianos, or high heels are applied.
- Grout cracking or loose grout, creating an unsightly appearance.
- Tiles easily come loose and/or crack (even fall off the wall, potentially causing a serious hazard).
- Hollow sounds that at the very least can be annoying.

In other words, a failed tile installation!



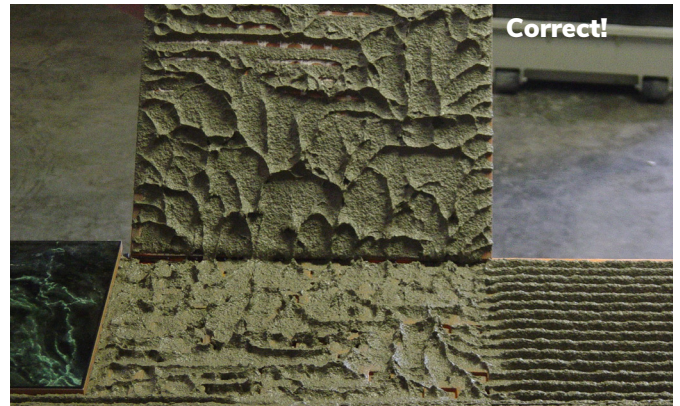


Why would a tile installer use this improper spot bonding trick to adhere the tiles?

- It's faster. There may be "production pressure" to get it done.
- The tiles can be maneuvered into place more easily. This is particularly true with larger tiles where "lippage" (one tile is lower than the one next to it) can be a problem, especially if the tiles are not perfectly flat or the surface was not properly prepared.
- The installer is not properly trained or familiar with the accepted tile industry standards and best practices.

What can I do to avoid the problems associated with spot bonding or to address an existing failure?

- Make sure a qualified tile installer is performing the work. He or she will use approved industry recommendations and follow product manufacturer specifications.
- A proper tile installation starts with a flat, even surface! Always require that proper surface preparation is performed.



Your tile installation should last for many decades, and the vast majority do! Your first line of defense against an improper installation is to make sure you have a qualified tile installer on your project.



How to find the right tile installer? See here: <https://bit.ly/3JOH1nA>



Another helpful resource for choosing a certified tile installer: <https://bit.ly/2Meqllld>

Quick search for certified tile installers: <https://bit.ly/3cex8Dg>



Your tile inspiration and education companion: <https://whytile.com>