

TILE USE

Tile: The Best Building Material

Ceramic tiles are a very versatile and a great building material. It is manufactured to be resilient and can be used in most any application with few exceptions. From the most delicate backsplash or artwork to the most corrosives chemicals and vehicle traffic. There is a tile for just about any application. They are used them on the outside of the space shuttle, which on re-entry can get up to 2,600 F. Yes, these tiles are special, but the base materials is like the tiles we use. They are used on the shuttle because of its heat resistance and in factories because of its chemical resistance.



FIRE & TILE

In these two picture you see how much fire damage there was done but the tile remains. The top picture does not even look like there was a fire. On the bottom picture the tile is still there but has a lot of smut on them. They both had some bond failure but this probably due to a substrate issue.

After a house fire you can often see the fireplaces remain. This is due to bricks high resistance to heat, and bricks are considered ceramics.

So why can't you use ceramic tile **INSIDE** a fireplace?

The tile will perform, but because of how it is installed my concerns lie in a system failure.

Does ceramic have a Fire Rating?

NO, because of the temperature that tile is made it is not susceptible to standard testing procedures. (see attached)

Submerged Applications

Ceramic and Glass tiles are perfect for a pool, steam room or sauna. These tiles are chemical resistant however there are couple of things that you should look out for when suggesting a tile for the interior and exterior of a pool.

Is the tile UV stable?

Some tiles can fade when exposed to sunlight over time

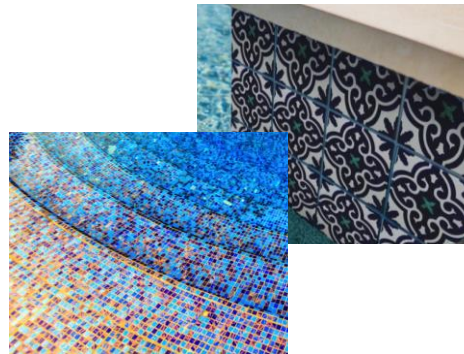
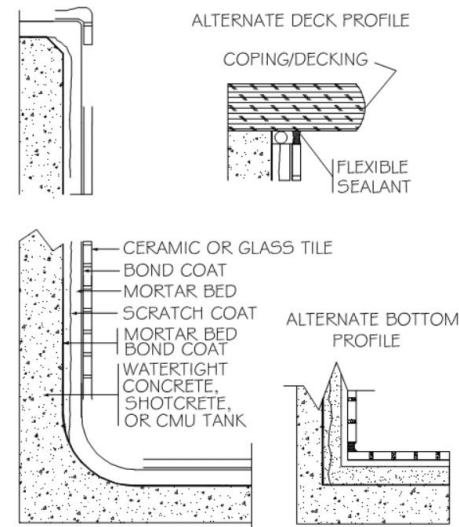
Is ANY porcelain or glass tile suitable for pool application?

Yes, sort of:

- I would stay away from any mosaic that is NOT face mounted or specifically is MADE for pool installations. Some backing materials, mesh or glue, may not stand up to the chemicals.
- I would stay away from any Non-Vitreous or Semi-Vitreous material, unless specially MADE for submerged applications.
- Consider the DCOF, it is still necessary on the steps and especially in the pool area (> .65).

Installation procedure and setting materials are critical and the number 1 reason pool tile installation fail

- Make sure all setting materials, thinset, grout and sealant are designed for submerged application.
- Waterproofing is critical and different from a shower.
- Movement joints are very important.
- Refer to TCNA recommendation for HOW to install.



STEAM ROOMS

STEAM ROOMS are different. Vapor is the issue in most failures because the proper waterproofing is not used and all the penetrations are NOT sealed. These failures lead to mold and bond failure.