



Tile & Stone Installation Systems

Tiling near heat sources

Can tile, stone or marble be installed near a heat source?

Tile and stone can be successfully installed near heat sources; however, installers must consider the maximum temperature and the proximity of the heat source to the tile installation. More and more customers want to update the look of their fireplace surrounds and hearths from the traditional facing of river stone or brick to a more modern look that utilizes tile, stone or marble. Plus, many home and restaurant owners want to tile the backsplash area directly behind a heat source, such as an oven or stove.

What should be considered before tiling near a heat source?

- Remember that all tile installations around a heat source should be installed according to any state, provincial and local fire and building codes. Any approved tile substrates meeting these codes may be utilized. These substrates may include cement backer board, drywall, plaster and wire-reinforced mortar beds.
- If a tile installation near a fireplace bridges the metal surround and adjacent wall, movement of dissimilar substrates must be considered. Although there is no industry standard for this type of installation, many tile installers utilize fastened metal lath and mortar to successfully install tile in these areas. Refer to specific job specification, plans or jobsite design professional for further information.
- Verify with the fireplace manufacturer that tile installations can be done and, if so, whether specific precautions exist to avoid damaging the fireplace and/or voiding any warranty.
- Refer to the tile or stone manufacturer for recommendations to determine if the product is suitable to be installed near a heat source.
- Setting materials that contain calcium aluminate cement are best-suited for tile installations near a heat source. These mortars and grouts exhibit high performance at high temperatures, allowing rapid development of

strength over a relatively short period of time. However, even mortars and grouts with calcium aluminates cannot withstand the heat generated in the fireplace "firebox," and these products should not be used for this type of tile installation.

MAPEI products that meet the considerations listed above are:

- *Granirapid*® System
- *Ultraflex*™ RS
- *MAPEI Ultralite*™ S1 Quick
- *Ultraflex*™ LFT™ Rapid
- *Ultracolor*® Plus FA— only use for grout joints 1/16" to 3/4" (1,5 to 19 mm)
- *Mapesil*™ T

What about areas subjected to moderate temperatures?

- One area to consider is a nonmetal surface, near a heat source, that is not too hot to be touched. Generally, this type of area is where gypsum drywall and cement backer units (CBUs) have been placed according to local codes.
- Other nonmetal areas to consider are surface facades where border tile is used as a decorative tile around the exterior of the fireplace or hearth.

MAPEI products that meet the considerations listed above are:

- *Kerabond/Keralastic*™ System
- *Kerabond*® T / *Keralastic*® System
- *Ultraflex* 3
- *Keracolor*® S— only use for grout joints 1/8" to 5/8" (3 to 16 mm)
- *Keracolor* U— only use for grout joints 1/16" to 1/8" (1,5 to 3 mm)
- *Keracaulk*® S
- *Keracaulk* U

Note that the products listed for high temperatures may also be used for moderate temperatures if desired.

