

# TECHNICAL BULLETIN

011105-TB

## Flooring Issues After Flooding

### Frequently Asked Questions

#### What will happen if my floor is flooded?

The various installation components in a tile or stone floor system can react differently when subjected to water damage from such events as hurricanes, floods and plumbing failures.

MAPEI products that could be affected are cement-based mortars; mastic adhesives; waterproofing, sound-reduction and crack-isolation membranes; and cement-and epoxy-based grouts. Some issues that can arise:

- Installation components, including ceramic or porcelain tiles and stone, can suffer excessive expansion or shrinkage.

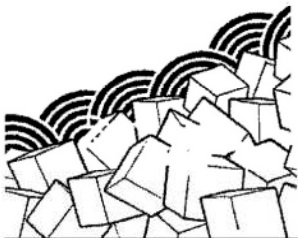
Excessive pressures to the installation could cause the tile or stone to delaminate from the substrate.

This situation can be exacerbated by improper placement of expansion joints or the lack of enough expansion joints.

- Flooding of Portland-based cements (used in various mortars and grouts) can cause a phenomenon commonly known as "efflorescence." Efflorescence occurs when the salts in Portland cements are so saturated with moisture that they rise to the surface and crystallize.

The continued presence of excess moisture can result in ongoing problems with efflorescence.

- Structural movement or damage from displaced objects as well as building damage can cause the tile or stone to delaminate. The entire floor system should be inspected by an engineer or architect to determine the extent of damage to the subfloor and whether the damage can be repaired at all.



#### MAPEI Technical Services

1144 E. Newport Center Drive  
Deerfield Beach, FL 33442  
1-800-992-6273 (US., Puerto Rico)  
1-800-361-9309 (Canada)

For the most current data, visit [www.mapei.com](http://www.mapei.com).



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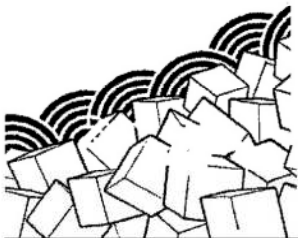
#### How can excessive moisture affect tile and stone?

The potential effects of exposure to excess moisture include:

- Disintegration of porous tiles.
- Delamination of impervious glass tiles.
- Efflorescence of Saltillo tiles, which are more sensitive to moisture.
- A compromise of "organic adhesives" due to moisture and alkalinity.
- Bond failure and/or warping of agglomerate marble tiles due to temperature extremes and/or moisture.
- Curling of verde green, Mexican black and Spanish red marble tiles.
- Highly polished marble surfaces becoming dull and powdery, as well as discoloration of light-colored marble, due to moisture and alkalinity.
- Iron staining to marble due to oxidation.

#### Are there other moisture-related issues?

In cases where mold has become visible on tile or grout surfaces due to prolonged contact with moisture, a licensed remediation professional should be consulted for safe removal of the affected products. Mold by itself might not permanently damage the bond or hardness of the mortar, membrane or grout. However, every project with water damage should be evaluated on a case-by-case basis.



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