MOVEMENT JOINTS

Why do our tile systems need soft joints?

All substrates move, how much depends on the material type and where it is installed. Temperature, structural settling, and force are some of the factors that create material movement. When these forces are put on an installed system the different materials react at different rates. For Example, when you have a lobby with a lot of windows sun heats up the room, the concrete and tile heat up at a different rate therefore creating stress. This stress, if not relieved, will create a failure. There are a few ways to battle movement, but none more important than movement joints. The Tile Council of North America (TCNA) describes this topic in depth in EJ171. This detail gives specific guidelines. Bullets to remember.

- Every system needs movement joints, they can be:
  - Leaving the perimeter of a room or hallway un-grouted and free to move
  - Failure does not just mean a crack in the tile. Most likely the bond to the substrate has failed also. This can create a hollow sounding tile and sometimes the tile come loose.
  - Cutting a relief joint through the tile system at predetermined layout
  - Use a manufactured expansion joint or sealant at predetermined layout.
  - Use Crack Isolation membrane and move the joint to better fit the design.
    - NOTE USING A CRACK ISOLATION MEMBRANE DOES NOT ALLEVIATE THE NEED FOR A MOVEMENT JOINT.

How to know where to put these joints?

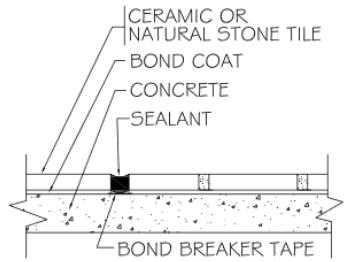
There are limitless condition and structural systems that are used as substrates for tile, so the design professional or structural engineer should show specific locations of all movement joints. Any predetermined joint should be transferred through the tile system.

See me install a sealant in a backsplash here.

TCNA DETAILS

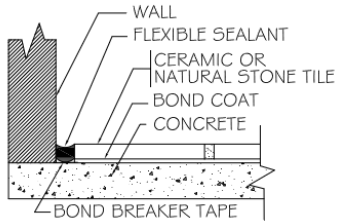
EJ171F-20

• Generic Movement Joint



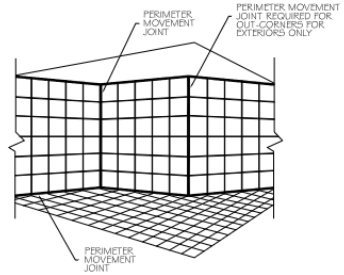
EJ171G-20

• Perimeter Joint



EJ171J-20

• Perimeter Movement Joint



TECHNICAL DEFINITIONS

Contraction/control joint – Formed, sawed, or tooled groove in a concrete structure to create a weakened plane and regulate the location of cracking resulting from the dimensional change of different parts of the structure. Also referred to as "saw-cut joint."

Construction/cold joint – The surface where two successive placements of concrete meet, across which it may be desirable to achieve bond and through which reinforcement may be continuous. A cold joint becomes a weakened joint that, upon movement, will crack, permitting leakage or buckling and cracking of a tile floor set over the slab. Such joints should be shown on architectural drawings.

Expansion joint – A separation provided between adjoining parts of a structure to allow movement where expansion is likely to exceed contraction: (2) a separation between pavement slabs on grade, filled with a compressible filler material; (3) an isolation joint intended to allow independent movement between adjoining forces

Isolation joint – A separation between adjoining parts of a concrete structure, usually a vertical plane, at a designated location such as to interfere least with

How do we protect out tile installations?

- Be the expert! Ask the client if they have planned for their movement joints. Sell them the matching sealant, we stock Laticrete Acrylic Caulk and Latasil.
- No matter how small the installation you will need sealant somewhere – Transition in materials, In corners and out corners. For larger installations you will need to note that you will need joints in the same plane at a predetermined distance.
- Tell you client not to accept poor substrates and not to tile over substrate joints.

EXAMPLES UNTREATED CRACKS AND BOND FAILURES