

BONDING NATURAL STONE WHEN IT IS SOAKED WET



An important point of attention is moisture or water. If the slab is soaked with water the adhesive will not adhere to the surface.

Due to the occurring stress on the surface at the moment of application of the glue bead, a water film will occur between the natural stone slab and the glue bead which ultimately will block the adhesion of the adhesive bead on the natural stone.

The degree of density of a solid (the substrates to be bonded) allows water to penetrate between the solids of the material. In a porous material, as the word says, the water easily can find a way in the pores of the material.

Each material increases moisture to a greater or lesser extent. Tension due to its own weight and wind load is partly absorbed by the grain tension in the material of the panel. The remainder of this tension is absorbed by the water tension.

Normally this causes a slight change in shape, but in porous material it reacts different. Then the grains will slide over and even roll.

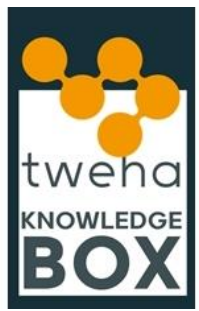
But that can only happen if they dodge, which results in an increase of the pore volume between the grains. This process gives water the opportunity to fill the available spaces. This process continues to repeat.

The adhesive mass applied to the porous material does not provide this opportunity which ultimately will result in the development of a water film between the adhesive mass and the porous material until the adhesion of the glue joint collapses.

To support the imagery compare it with a slide. You'll be on a dry slide and the friction of your rough skin or clothing on the slide's slide will not let you slip. Once a water film can form between your skin or clothing and the slide, the friction reduces and you will slide down.

The advice is therefore to store the natural stone on a dry place (not in the rain) in order to make it possible to dry the natural stone slabs and thus to achieve a problem-free glued connection.

Of course this item is not applicable on natural stone only! It matters on all cladding material!



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