



**A series of technical bulletins from SEK-Surebond...
“Achieving Installation Perfection”**

TB.1 How Gravity Affects Joint/Polymeric Sand

**Make Gravity
Your Friend...
Not Your Enemy**

Until the day comes where we are installing pavers in outer space where there is no such thing as gravity, it is imperative to recognize the impact gravity plays in stabilizing a paver joint. To date, no one has been able to dispute the findings of Sir Isaac Newton, gravity is a fact of life here on earth.

What are we talking about? Ok...here it is:

Gravity is in play when your goal is to stabilize a paver joint by using polymeric sand or a joint stabilizing sealer. Although it is important to follow the proper steps and technique to ensure perfection of the joint hardening process, this bulletin is specifically focused on the impact of gravity. Gravity comes into play in the following way.

- Let's start with focusing on the sand in the joint. It doesn't matter whether you are using polymeric sand or properly graded jointing sand (we require jointing sand that meets ASTM 144 for best results) that will be stabilized with a joint stabilizing sealer. The premise is the same for both. When you sweep the sand into the joint, there will be pockets of air and spacing throughout the sand matrix. This is where you can determine if gravity will be your friend or your enemy...it is critical to compact the sand using a vibrating plate compactor. For wet cast, thin pavers or natural stone products use a hand tamping device or other non-mechanical way to achieve a full secure joint.
- The compaction process will vibrate the sand particles and tighten up the sand to virtually eliminate spacing and pockets. As many installers know, if not all installers, when you compact there is a settling of the sand and ultimately more needs to be swept into the joints to fill it to the proper level. Imagine the problems you open up for the install if you allow this settling to happen after the polymer has been activated on the sand particles.
- So, once compaction has been done, you are giving the polymer the necessary conditions to work as it is intended to work. It will lock up the sand particles to provide a hardened joint. If you **fail** to compact, you are asking the polymer to bridge particles of sand in a way that is a challenge for any polymer to achieve long term success. Ultimately there will be movement, leading to sand shifting, leading to a break in the polymer bonded particles, leading to joint failure.

**Moral of the story:
Make Gravity Your Friend...
Not Your Enemy!**