



### **PEAKING AND CURLING OF SOLID VINYL TILE AND PLANK**

Throughout the flooring industry, peaking and curling can be an issue when installing solid vinyl tile and plank. In our line of work, it is important that we understand the nature of these issues not only when resolving claims, but also when making adhesive recommendations prior to installation. To assist, the information below is geared at providing information on the principal causes and considerations for these installations.

First, it is important to understand the terms “peaking” and “curling”. Both terms are used to describe the edges (joints) in a vinyl tile or plank installation where the joints are raised (typically raised to about ¼”) while the rest of the tile or plank remains securely bonded. Joints **peak** when the tile or plank has grown, which means they will no longer fit together when pushed back into place. The adhesive in this case has not been able to restrain the movement that has occurred due to the peaking of the tile or plank. **Curled** joints will fit together when pushed back into place. However, while it may appear that the tile or plank may not have grown or shrunk, movement of the flooring has occurred, and the adhesive was unable able to restrain the movement.

Next, it is important to understand why these flooring structures peak and curl. Contrary to popular belief, peaking and curling is not caused by adhesives, but is a function of the flooring and the environment in which it is installed. The most common culprit is the failure to properly acclimate the tiles, planks and/or the area in which they are installed, where peaking and curling can occur due to the resulting temperature fluctuations.

The structure of the tile or plank itself can also play a part in peaking and curling. For example, some vinyl flooring has fiberglass reinforcement to enhance dimensional stability, while others do not. In other cases, the way in which the flooring layers are manufactured and assembled can play a part. Finally, some flooring is produced with strict quality control standards, while others are not. It is worth noting that some structures are highly prone to dimensional instability.

As a manufacturer of adhesives for these flooring structures, it is important to understand how this information impacts our adhesive recommendations. First and foremost, we should always stress the installation of a test area on site, and should include information regarding proper acclimation before, during and after the installation.

In addition, when recommending an adhesive, it is important to know that while the pressure sensitive application affords an easy installation option with extended working time for solid vinyl plank and tile, this is not the best choice for a situation where the dimensional stability of the tile or plank could be affected by any of the factors above. On the other hand, a wet set application offers a more tenacious bond than a pressure sensitive application, and can better attempt to combat these conditions. However, keep in mind that even a wet set application does not negate the need to install a test area in real jobsite conditions, nor to properly acclimate the flooring and the environment. It is merely a way to minimize the risk in any given installation.

In summary, peaking and curling is not caused by the adhesive, but is a function of the flooring and the environment in which the tile or plank are installed. Additionally, it cannot be expected that the adhesive used to bond the tile or plank to the substrate be able to totally restrain any and all tiles or planks from moving regardless of what the cause may be. However, with these types of considerations in mind, The W.W. Henry Company now offers three different types of vinyl flooring adhesives for addressing different installation needs:

**HENRY 640 VinylLock™ Pressure Sensitive Vinyl Flooring Adhesive**

Use as Pressure Sensitive or Wet-Set Adhesive

Large Format Vinyl Tile (> 16" x 16") Must Be Installed using the Wet Set Method.

Moisture Resistant up to 90% RH

Excellent Plasticizer Migration Resistance

**HENRY 422 Premium Vinyl Flooring Adhesive**

Use as a Wet-Set Adhesive

Ideal for the Installation of all Solid Vinyl Flooring

Excellent Dimensional Stability

Excellent Plasticizer Migration Resistance

**HENRY 622 Premium High Strength Vinyl Flooring Adhesive**

Use as Pressure Sensitive or Wet-Set Adhesive

Outstanding Initial Grab And Bond Strength

Ideal for the Installation of Large Format Tile using the Pressure Sensitive Method

Moisture Resistant Up To 90% Rh

Excellent Plasticizer Migration Resistance

Bio-Based Content 28% (ASTM D6866)

Again, this variety of adhesives does not replace the recommendation for test installations and proper acclimation of the jobsite and flooring materials. Please note that **W.W. Henry cannot be held responsible for installation issues such as peaking or curling, which are caused by dimensional changes in flooring structures.**

If you have any questions or require further information, please feel free to contact the Technical Service Department.



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