



Understanding Flooring Adhesive Terminology – Part V

By Seth Gladden, Director of Marketing - Taylor Adhesives

Welcome back to this in-depth flooring terminology article series. In this section, **Part V**, we will continue discussing some of the most important and often misunderstood terminology regarding adhesives in the flooring industry. In case you missed the previous articles, you can check them out here:



Part I focused on **MOISTURE**-related terminology and covered RH, MVER, pH, waterproof bond, water-resistant bond, ASTM E1745, hydrostatic pressure, and moisture barrier vs moisture tolerant adhesives.



Part II looked at **SUBSTRATE** (porous, non-porous, CSP, ASTM F710 [flat vs. level, free of contaminants, structurally sound]), and **TIME** (open time, flash time, working time, cure time, pot life).



Part III explored **SET** (wet-set, semi-wet-set, dry-set, soft-set, firm-set, hard-set), **TRAFFIC** (light traffic, heavy traffic, heavy rolling loads), and **SOUND** (STC, IIC, Δ (delta) IIC).



Part IV explored **CHEMISTRY** (elastomeric, isocyanates, VOCs, crosslinking, latex, acrylic, urethane, hybrid silane, and epoxy).

Today we will be taking a closer look at some of the **SUBSTRATE PREPARATION** terms referenced in flooring adhesive documentation.

SUBSTRATE PREPARATION MATERIALS

Flooring adhesives must be adhered to a substrate ready to receive flooring. Proper substrate preparation is a critical step in ensuring a successful installation. The type of substrate preparation materials needed will vary from jobsite to jobsite and often from room to room. Ensure that you know the available products and their purpose before selecting your entire flooring system.

- **Self-Leveling Underlayment:** Depending on the severity of irregularities in your substrate, you may need a self-leveling underlayment to create a smooth, flat surface prior to flooring installation (see Part II of this series for the difference between flat and level). Some self-leveling



underlayment products may require a primer before application to achieve a proper bond. These products come in a wide range, including rapid-setting, high-flow, reactivatable, lightweight and even fiber-reinforced. Depending on the product, they can correct many types of substrates, including concrete, gypsum, wood, terrazzo, ceramic and quarry tile, VCT, epoxy coatings, and even existing patching and leveling materials. Not all products can be used over all substrates, so double-check the manufacturer's documentation to ensure correct selection and usage.

- **Portland-Based Patching Compound:** A Portland-based patching compound is typically made by blending Portland-based cement with other hydraulic cements to provide a smooth, permanent finish ready to receive adhesive and flooring. Many manufacturers' Portland-based patching compounds often have different features and capabilities, such as fast-drying or high compressive strength. Most of these products can be used to patch or skim-coat concrete and wood subfloors, and some can even be used over existing adhesive residue. Some patching products may require additional additives when used over certain substrates. Most Portland-based patching compounds are self-drying, which means they are not water-resistant. If you have elevated substrate moisture, a moisture-resistant patching compound is recommended. These patching compounds often have a low (85% RH) tolerance, making them more cost-effective but less robust than their moisture-resistant counterparts.

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MAPEI Novoplan 2 Plus at the Town and Country Mall, Miami



Schönox AP synthetic gypsum self-leveling compound

- **Moisture-Resistant Patching Compound:** Much like the Portland-based patching compounds discussed above, moisture-resistant patching compounds are still comprised of a blend of Portland-based cement and other hydraulic cements. The main difference is that moisture-resistant patching compounds are designed with different polymers and a different curing mechanism that allow them to withstand moisture vapor transmission and sometimes even liquid water. These characteristics make them an ideal choice whenever moisture is a concern. Most moisture barrier adhesives require a moisture-resistant patching compound to maintain their warranty.
- **Primer:** Often, the conditions of a jobsite or the floor covering materials chosen will require the use of a primer. Primers can serve multiple functions; however, their primary uses are to reduce the porosity of a substrate or to reduce degradation or dusting that happens with substrates like gypcrete. When using a primer before applying flooring adhesive, it can often change the trowel notch needed as the substrate would now be considered “non-porous” (see Part II of this series for the difference between porous and non-porous substrates). Often a flooring adhesive will cover more square footage over a primed (non-porous) substrate. Primers can also be used in different stages of substrate preparation, as mentioned above in the self-leveling underlayment section. Even though most primers are fairly cost-effective, it is still important to know when and where to use them so you can plan accordingly.
- **Detackifier:** Detackifiers can be a great way to significantly speed up a renovation project. When old flooring is removed, the adhesive residue is often left on the substrate. Most flooring adhesives manufacturers will not warrant an installation over any existing adhesive residue, requiring it to be completely removed prior to application of new adhesives. Adhesive removal can be a difficult and expensive process which includes mechanical removal. When allowed, the use of a detackifier can offer a much faster and cheaper alternate solution. Most detackifiers are roller-applied and only require the old adhesive ridges to be smoothed down prior to application. By using these products, it removes the tack (residual adhesion) from

the substrate, leaving a non-porous, bondable surface for flooring adhesives.

- **Encapsulator:** Similar to a detackifier, an encapsulator is designed to create a better bonding surface when existing adhesive residue is present. However, the main difference with an encapsulator is that it can isolate old adhesive residue, including cutback adhesives. This is important as black asphalt-based cutback adhesives can react with the backing of vinyl flooring, causing staining or other undesirable effects. By using an encapsulator, you can save valuable time where other solutions would not work as well.
- **Bond Enhancer:** As with any adhesive, the main purpose of flooring adhesives is to adhere the floor covering material to the substrate. Some substrates are more difficult for adhesives to bond to, like Advantech plywood, terrazzo tile and some moisture mitigation coatings. This is where using a bond enhancer product can again speed up a project’s timeline and reduce potential bond failures. A bond-enhancing product can be roller-applied to the substrate and, once cured, will form a surface to which flooring adhesives will easily stick.

As always, it is a good idea to familiarize yourself with the different product types available to help make any jobsite a success. Ensure you read through all product manufacturers’ available documentation to ensure you understand it and how to use the product correctly. Not only will this help make flooring installation projects go smoother, but it will also keep the product warranties intact, reducing your liability. ■■■

About the Author: Seth Gladden, director of marketing and commercial business development for Taylor Adhesives, is focused on the brand’s communication strategy and market positioning. Before getting stuck in the adhesive industry (pun intended), Gladden gained sales and management experience in industries ranging from security to oil. Shortly after joining Taylor, Gladden rebranded the company, with its focus on being an industry leader in mind. He chairs the Taylor Advisory Council to stay informed of market trends and installer needs from distributor partners.