

Carpet Adhesives

Today's carpet adhesives include a wide-range of fast grabbing, aggressive holding product types designed to meet virtually every glue-down installation need. Included here are multi-purpose latex-based adhesives, clear vinyl adhesives, vinyl and plank adhesives, contact spray adhesives, pressure sensitive adhesives, wet-set adhesives, wet-laid adhesives, water-resistant adhesives, solvent-based outdoor adhesives, and vinyl and rubber cove base adhesives that are typically low odor emitters and are easy to spread. Some of these adhesives are touted as being superlative in nature, are freeze/thaw stable, and are commonly marketed as being premium, ultra premium and other elite names that typically imply that they have a solids content of 70% or more and are recommended for commercial end-uses.

Since 1992 our industry has placed considerable emphasis on producing low-emitting carpets and installation sundries. Included here is CRI Green Label Plus adhesives designed to limit the total floor covering systems contribution to the indoor air environment.

Most floor covering adhesives are sold today in 4-gallon pails. Based on adhesive and carpet backing type, adhesive application rates can range from 1/8" x 1/8" x 1/16" U-notch trowel at 8-10 sq. yards/gallon spread rate using premium latex adhesives to 120 sq. yds/7.5" self-contained cylinder of spray adhesive using a wand with a 16"-18" spray pattern. Larger 12" cylinders are capable of providing up to 340 square yards of adhesive coverage per cylinder.

Other than spray adhesives, another type of more select floor covering adhesives is pressure sensitive adhesives. These adhesives are designed to provide an aggressive grab without forming a permanent bond typical of conventional adhesives. Pressure sensitive adhesives are often used in double stick installations, where a specific carpet cushion is adhered to the sub floor using a pressure sensitive adhesive. The most telltale characteristic of pressure sensitive adhesives is their long-lasting tacky characteristic, which allows much easier removal of a carpet and much less replacement time. Carpet tiles also utilize pressure sensitive adhesives in either attached backing adhesive coatings with a peel and strip layer or by separate application.

Higher-grade adhesives will typically allow for 20 to 30 minutes open time (the time required to allow the adhesive to form a tacky surface suitable for floor covering application). However, ambient high humidity and cooler temperature will stall adhesive tack times. In an ideal world, ambient temperature should range between 65-95 ° Fahrenheit, with a maximum humidity of 65%. Of equal importance is the floor temperature, which is a minimum of 60 °. Cold slabs impede upon adhesive tack time considerably.

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Some adhesives are manufactured with a built-in tack time inhibitor, allowing the carpet to be laid into a still wet adhesive spread. Their initial set-up properties could be compared to the same properties exhibited by pressure sensitive adhesives, with the exception being that they will lose this characteristic and form a much firmer, stronger bond. These adhesives are used primarily for the installation of heavily constructed commercial carpet and patterned carpet where initial positioning and then re-positioning of the carpet is often vital in order to obtain acceptable seams and pattern matches when more conventional adhesives would not permit these needs.

Whenever writing or speaking about floor covering adhesives, one would be amiss if they failed to touch base on floor prep. Suffice to say here that the floor prep requirements listed in CRI 104 and CRI 105 are mandatory considerations for successful direct glue down installation, including tests for sub floor porosity when applicable by pouring a small amount of water on the sub floor to determine if the water is easily absorbed into the sub floor. If it is, adhesive tack time may be accelerated, and if the carpet is not placed into the adhesive spread at the opportune time (insufficient floor adhesive transfer to the carpet's backing will occur). Although it is advisable to check with the floor adhesive manufacturer first, often times, if the sub floor is somewhat porous, the installer can place the carpet into the floor covering spread while it is still wet. Even if the sub floor does not absorb the water, it will be mandatory for the installer to pay strict attention to proper adhesive tack conditions. One of the most often used procedures to determine adhesive set-up time is done by pressing a finger into the floor adhesive spread and then pressing your index finger into your thumb to see if the adhesive produces "legs" (the characteristic of chewing gum) when you separate your finger from your thumb.

Mark Johnston