

## **Carpet and Pad Adhesive Use for Indoor Requirements**

The use of carpet adhesives in indoor, direct glue-down applications is a viable option for both solvent-based and latex-based adhesives.

Solvent-based adhesives are typically reserved for much more demanding commercial installations because their greater tensile strength is more advantageous for the demands of the traffic loads associated with this type end-use. Solvent-based adhesives are more costly than latex-based adhesives and, because of their solvent composition, will release Volatile Organic Compounds (VOC's) that while heavier than air, will have a tendency to dissipate to a non-discernable level in a relatively short period of time. Emissions associated with solvents used in carpet adhesives can be more noticeable and discomforting to individuals with allergies, chemical sensitivities, and breathing disorders than latex-based adhesives. While both types of carpet adhesives require the installation site to be well ventilated, because of their typically more malodorous, and even potentially noxious contents, solvent-based adhesives deserve extra consideration. Individuals who know they are especially sensitive to chemicals and odors should alert installers of any additional considerations they may require them to take into account prior to carpet installation to assure they are not discomforted by any product the installer might use. The selection of solvent-based carpet adhesives should only be made after careful thought to assure the use of these adhesives will not compromise occupant comfort and health.

While the need for proper ventilation when using latex-based and solvent-based adhesives is one that cannot be overlooked, since much less aromatic, non-volatile solvents used in solvent-based adhesives can permeate into porous materials, including carpet and slab, and can be picked-up by filters used in HVAC units, related odors can linger for longer periods of time. Migration of heavier non-volatile solvents can also occur in carpet areas that were not properly climate controlled. In either case, odor molecules from these solvents will evaporate into the air and no longer be noticeable or not as noticeable when the carpet area receives adequate fresh-air exchange.

Generally speaking, latex-based and solvent-based carpet adhesives, including solvent-based aerosols are suitable for use as carpet cushion (pad) adhesives. One particular consideration when using these adhesives to adhere pad pertains to the use of non-

permeable pad constructions (e.g. urethane and slab rubber). The adhesive “tack time” of solvent-based adhesives are quicker to occur under the same environmental conditions than latex-based adhesives. Setting aside the more non-“curable” nature of solvent-based pressure sensitive adhesives, because non-permeable pads significantly slow the release of any still present VOC “odors”, once the pad is placed into the adhesive spread, it is necessary to give strict attention to the readiness of the adhesive before proceeding with the installation. Although any still present and fugitive adhesive odors at the subfloor and pad interface will eventually migrate into the indoor air until they evaporate. If a solvent-based adhesive was used, a stalled release and evaporation of their more odoriferous contents may cause related VOC's to linger and be more apparent.

Written by: Mark Johnston  
Technical Services Staff: Mark Johnston,  
Tammy Smith, Tonya Monk, Greg Raborn