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Installation: Direct Glue Down V.S. Cushion

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The most commonly used method of installation in commercial environments is the direct glue down method. This method of installation is generally considered the practical choice for high traffic areas and high stress areas such as educational buildings, restaurants, hospitality corridors, and religious centers. When carpet is properly installed this method of installation virtually eliminates the potential for wrinkles, buckles, seam peaking, split seams, shrinkage, and delamination. Issues such as correct cushion, type of tack strip, type of seaming tape and amount of stretch are vital considerations that are avoided with the direct glue down method. Few would argue the point that the direct glue down method of installation is much less complex than carpet installed over cushion and generates fewer callbacks.

What are the advantages of carpet installed over cushion? Since 1990 there have been several studies attempting to relate cushion usage to enhanced carpet performance. Studies performed by the Georgia Institute of Technology School of Textile Engineering suggest that cushion in almost any form has a very definite benefit of improving carpet wear and prolonging carpet appearance. Carpet installed over cushion is significantly quieter than carpet installed direct glue down. According to studies using the ASTM F608-78 test method, carpet installed over cushion provides as much as 58% more efficient soil recovery during vacuuming (depending on the type of carpet). Carpet installed over cushion may be less expensive to install than the direct glue down method when you consider the cost to sand, strip, patch and prime subfloors, adhesive costs, the cost of carpet removal, and the cost of floor repair. A recent national survey of 57 carpet workrooms suggest that the cost of the direct glue down method of installation may be as much as $3.00 square yard more than carpet installed over cushion when all costs are considered.

The first consideration when selecting cushion is construction. Most manufacturers recommend a "firm" cushion; however, firm is a vague term. While considerations for cushion compression load deflection, and indentation load deflection are well founded, one of the most dependable and easiest understood rules of thumb is cushion density. Density is the weight of one cubic foot of the cushion. Most manufacturers agree that the minimum cushion weight density for commercial installations is 12-14 pounds, and the minimum weight density for residential installations is 6-8 pounds. One issue that must be understood when evaluating cushion weight density is substance versus form. Substance pertains to the raw materials added to achieve a dense cushion. Form is a light volume of raw materials including stiffener or blowing agents. The firm feel of cushions with these fillers is soon lost with normal residential traffic.

Thickness is another important issue for proper cushion selection. Cushion thickness is given in fractions of an inch or in decimal equivalents. Soft, thick cushions tend to allow excessive vertical flex of the carpet , which leads to many of the arguments for using the direct glue down method. Because of this, cushion thickness can not be overstated. Ideally, cushion thickness for commercial installations should be 1/4 inch (.225) and no greater than 3/8" (.375). In commercial environments underfoot comfort should only be a secondary consideration in cushion selection . It is fair to say that the cushion density levels required for most commercial environments tend to provide minimal tread comfort. For residential installations cushion thickness should be 3/8 inch (.375) and no greater than 7/16 inch (.437). Types of cushions that meet density and thickness criteria for both commercial and residential installations are fiber (rubberized hair and rubberized jute), rubber (flat, textured, waffle), and polyurethane foam (frothed). Cushions that meet weight density and thickness criteria for residential installations include fiber (synthetic), polyurethane foam (bonded), and rubber (waffle)/ Polyurethane foam reportedly accounts for 75% of the residential cushion market.

Direct glue versus installing over cushion. The method of installation selected should be based on considerations for the amount and type of traffic expected. If cushion is selected the appropriate grade of cushion must be used. The cost of prevention is cheaper than the cost of replacement.

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Beaulieu

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