

CRI TECHNICAL BULLETIN

Carpet Wrinkles ("Buckles" or "Bubbles")

Wrinkles, which can be unsightly as well as create trip hazards, accelerate carpet wear, and cause the carpet to delaminate are rarely a result of manufacturing. Experience shows that proper installation techniques greatly reduce the potential for wrinkling.

Steps that can be taken prior to and during installation to prevent carpet from becoming loose are:

- 1. Carpet should be acclimated to the environment in which it is to be installed. Cold, stiff carpet cannot be properly stretched, and it will eventually become warm, relaxed, and loose, regardless of how tightly it was originally stretched.
- 2. It is mandatory that the carpet be power stretched,1 to 1½% over both the length and width of the carpet using power stretchers with extendable poles, not kicked with a knee kicker. Knee kickers are useful installation tools designed for positioning carpet, not for stretching. Carpet must be properly power stretched and firmly hooked onto the tack strip in accordance with the procedure described in the current CRI Installation Standards. The use of a power stretcher is mandatory. Devices used as a substitute for, or an attachment to, a power stretcher may cause injury, damage carpet or subfloors, or result in an inadequate amount of stretch and are not acceptable.
- 3. Use the correct carpet cushion. Cushion that is too thick and too soft (low density) will allow excessive flexing of the carpet, resulting in loose carpet or wrinkling. CRI recommends cushion be no thicker than 7/16 inch for residential applications and no thicker than 3/8 inch for commercial applications.
- 4. When Tack Strip is required it should be a minimum of one inch (25 mm) wide and ¼ inch (6 mm) thick. Architectural strip two inches in width (50mm) with three rows of pins, or two conventional strips with two rows of pins each are required for stretching areas exceeding thirty feet to provide secure attachment of the carpet and additional shear strength. To prevent possible injury to building occupants, it is required that the pins on tack strip not protrude through the carpet being installed.
 - a. Additional tack strip installation specifications include:
 - Securely fasten tack strip to maintain the tension provided by power stretching. Nailed or stapled tack strip is required to have a minimum of two fasteners per piece.
 - Place tack strip with the pins angled toward the vertical abutment.
 - The gully, or distance between the tack strip and vertical abutments, is required to be slightly less than the thickness of the carpet but not to exceed \(^3\)\% inch (9 mm).
 - Avoid installing tack strip across door openings and/or sills.
 - Cut tack strip to follow the contour of door casings and other irregularly shaped abutments.
 - Do not staple carpet to tack strip.
 - On radiant-heated floors, use manufacturer's approved adhesive to secure the tack strip. Do not use nails or screws to prevent damage to the heating system.
- 5. Finally, always refer to and follow manufacturer's installation instructions and/or the CRI Carpet Installation Standards (CRI 104 Installation Standard (Commercial) and/or CRI 105 Installation Standard (Residential) http://www.carpet-rug.org/Industry-Resources/CRI-Installation-Standard.aspx

The severity of the potential bubbling or wrinkling can often be influenced by changes in temperature and humidity. In addition, carpet may also wrinkle and buckle when wet cleaned; however, it will typically return to its original position upon drying.

For correction of carpet wrinkling, refer to "Guidance for Restretching to Remove Buckles, Wrinkles, and Bubbles Technical Bulletin".

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