

**Outdoor Installation Guidelines for Needlepunch Carpets**

Every carpet construction can have its own individual idiosyncrasies, and present its own unique installation considerations. Because of this, it is very important that installers become familiarized with these considerations prior to installation of a carpet.

Needlepunch (fabrics) carpets are manufactured by using barbed felting needles that punch, compress and entangle a typically polypropylene batting into a carrier fabric to form either a flat or textured carpet. Needle punch carpet can be flocked or embossed. Different textural effects can be attained by mixing fiber deniers and by setting the needles in various positions; the flattened fabric is re-punched with the patterned needle bars to form rows or dimensional patterns. A coating of weather-resistant latex or similar material is applied to the back of the carpet, and then a coating of acrylic is applied to the face fibers to help resist fuzzing caused by foot traffic. Most needle punch carpets can be used indoor and outdoor; the backings can vary from moisture resistant latex, marine, and in some cases an attached cushion backing that is for indoor use only. The installation of needle punch carpet is unique because of its low profile construction, as well as the absence of a primary and secondary backing common to tufted products, needle punch products are designed to be direct glued and cannot be stretched. However, the same basic installation requirements for tufted indoor and outdoor carpet still apply to a needle punch, with certain additional considerations.

Outdoor installation of needle punch carpet can pose many challenges for the installer. Factors to be considered include existing temperature and relative humidity, substrate condition, proper adhesive, and the product to be installed. In addition to this, the installer must take into consideration what the post installation environmental conditions could be (e.g. rain, high-humidity), and can be while the adhesive cures. Ambient temperature must fall within the range of 65 degrees F and 95 degrees F. Substrate temperature should be a minimum 65 degrees F, and maximum of 85 degrees F. A relative humidity range from 10% - 65% is required for the adhesive to properly tack up before the carpet is placed into the adhesive. Properly tacked adhesive, when touched, will "leg" or string-up when your finger is pulled away from the adhesive. If humidity levels are too high the adhesive tack time can be greatly extended. If the adhesive is allowed to dry past the proper tack, or the humidity levels are too high, this condition can cause all carpets to not adequately adhere to the adhesive, this will allow the installed product to move and/or wrinkle when trafficked, and to a lesser extent with needle punch, react to changes in heat and humidity. In addition to this, if needle punch carpet is placed into an adhesive spread that has not come to a properly tacked state, seeing that the needle punch products do not have a woven primary backing, the adhesive has a potential to bleed through to the face of the carpet.

The use of a premium adhesive is recommended. Outdoor water-based or solvent-based adhesive is required for outdoor use. If needle punch is to be used indoors, the use of premium multi-purpose latex adhesive is recommended. For smoother surfaces the use of a 3/32 x 3/32 x 3/32 V-notched trowel with an adhesive spread-rate of 18 to 20 square yards per gallon of adhesive is recommended. Rough craggy surfaces should be repaired using appropriate floor patch and/or leveler to achieve a smooth substrate.

Unlike tufted carpet constructions, needle punch carpets do not require the need for seam sealer at seam junctures. Needle punch carpet edges exposed to traffic do require the use of a suitable low-profile transition strip to prevent "scuff" induced fuzzing at these sites.

Another consideration when installing needle punch is the use of a roller. Unlike tufted outdoor carpets, needle punch carpets should never be rolled with a weighted roller. Instead they should be rolled using the carpet core or the flat edge of a push broom. By doing this, the installer can avoid adhesive bleed through to the carpet's face. When installing needle punch carpet in the length direction, a carpet core can also be used by two installers to lay the carpet into the adhesive. The carpet can then be rolled in this process.

Although needle punch is not a tufted carpet, it will still have a pile direction; it must be installed with the pile running in the same direction. If unsure of the pile direction, the paper pencil test can be used to determine the pile direction. If adjoining breaths are installed with the pile in opposing directions, as with any carpet, the chance for a color side match is inevitable.

Walking on needle punch carpet during and immediately after installation must be avoided, since this could cause a too wet adhesive to bleed through to the face of the carpet. Foot traffic should be avoided for a minimum of 24 hours.

**Beaulieu does not make needle punch for any type commercial end-use installation.**

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