



# PRINTED CARPET

## Installation Guidelines



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This guide was written to ensure you protect your investment of printed carpet. If you have any questions about information in this guide either before or during installation, please feel free to contact Beaulieu's Technical Services Department at **1 800 387 3155 xt. 5394**.

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Each roll of carpet you receive will be identified with the following information:

- Order number
- Roll number
- Size of the roll
- Style, pattern and color number
- Dyelot

Before cutting any material make sure the above is correct. Check and immediately report any visual defects before the carpet is installed.

## SITE PREPARATION

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**Temperature and Humidity:** The environment in which carpet is to be installed must be controlled with the temperature between 65°F and 95°F (18°C and 35°C) and the relative humidity between 10% and 65%. The subfloor temperature should not be less than 65°F. These conditions must be maintained for at least 48 hours before, during and after the installation. Carpet and adhesive must also be acclimatized in these conditions. Any changes in temperature could cause difficulties with the installation.

**Testing of Concrete Subfloors:** It is the Owner or General Contractor's responsibility to provide to the Flooring Contractor a written report on moisture and alkalinity content of the slab to ensure suitability for installation. If the concrete slab exceeds the permissible amount of moisture and alkalinity the Owner or General Contractor are responsible for making the necessary correction prior to carpet installation. These tests should be performed and documented not less than once every 1,000 square feet. Refer to the 2009 edition of the CRI Installation Standard.

**Alkalinity Testing:** The recommended range for pH is between 5 and 9. A rating greater than 9 indicates an alkalinity problem and will require corrective measures as directed by the adhesive manufacturer.

**Moisture Testing:** Both Beaulieu and the CRI recommend a calcium chloride moisture test kit be used to determine the moisture emission rate of concrete slabs. The maximum permissible emission rate for moisture barrier backings and carpet tiles is 3 pounds. Ratings between 3 and 5 pounds are considered acceptable for products with a porous backing. Subfloors exceeding these moisture ratings will require corrective measures.

## SITE CONDITIONS

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**Floor Preparation:** Each subfloor must be inspected to determine the special care required to make it a suitable foundation for carpet. All floors must be clean, dry, free of dust, grease, wax, curing agents, excessive alkalinity, paint, old adhesive and any foreign substance that would prohibit proper bonding of the carpet to the subfloor.

**New Concrete:** New concrete must be cured, clean and dry. It must also be free of curing or parting agents that interfere with the bonding of the adhesive. If the concrete has a powdery surface, a sealer compatible with the adhesive must be used to provide a suitable surface for direct glue installations.

## TOOLS, EQUIPMENT AND ADHESIVES

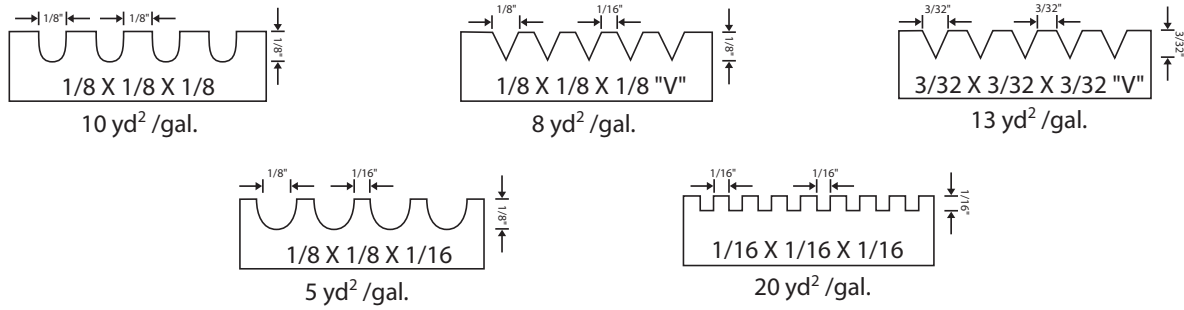
- Adhesives, seam sealers and trowels as per chart
- A two-headed power stretcher
- Metal tape measure, rigid metal straight edge and chalk line
- Carpet roller (30 – 50 lb maximum)
- Architectural or double tackless strips for stretch-in installations
- Stay nails may be required to secure carpet while the adhesive sets

**CHART 1: ADHESIVES, SEAM SEALERS AND TROWELS BY BACKING TYPE**

<b>Installation by Backing Type</b>	<b>Adhesive*</b>	<b>Trowel Size</b>	<b>Seam Sealer</b>
Direct Glue Down with standard Action Bac	High quality multi-purpose adhesive such as: Roberts 3300, Mapei 220, Parabond M-4099, iLoc Premium Multi-Purpose	1/8" x 1/8" x 1/16" V-Notch or 1/8" x 1/8" x 1/8" U-Notch	Roberts 8015 iLoc Solvent Free Universal Seam Sealer
Direct Glue Down with attached polyurethane cushion (EPIC-18)	High quality multi-purpose adhesive such as: Roberts 3300, Mapei 220, Parabond M-4099, iLoc Premium Multi-Purpose	3/32" x 3/32" x 3/32" V-Notch	Roberts 8015 iLoc Solvent Free Universal Seam Sealer
Double Glue Down – standard Action Bac with cushion underlay (Pad to Floor)	High quality multi-purpose adhesive such as: Roberts 3300, Mapei 220, Parabond M-4099, iLoc Premium Multi-Purpose	1/16" x 1/16" x 1/16" Square-Notch	Not applicable
Double Glue Down – standard Action Bac with cushion underlay (Carpet to Pad)	High quality multi-purpose adhesive such as: Roberts 3300, Mapei 220, Parabond M-4099, iLoc Premium Multi-Purpose	1/8" x 1/8" x 1/16" U-Notch	Roberts 8015 iLoc Solvent Free Universal Seam Sealer Use a silicone free, low profile double glue hot melt tape to join carpets
Stretch-in - Action Bac with cushion underlay	Not applicable	Not applicable	Roberts 8015 iLoc Solvent Free Universal Seam Sealer Use a silicone free, low profile double glue hot melt tape to join carpets

\*Open time of adhesive will vary depending upon the environmental conditions. Proper open time is critical for adhesive to develop proper tack. Open time will usually range from 10 to 30 minutes but should be evaluated in a small area before proceeding with the installation. The adhesive must be «tacky» before carpet is dropped in place. Installing carpet before adhesive has reached a «tacky» stage could result in poor adhesion and an installation failure.

## Actual size trowel notch and reasonable expected spread rate.



## SEAM AND EDGE PREPARATION

Locate an exact point in the pattern approximately  $1/2"$  from the selvedge edge. Cut along complementary patterns using a cushion back cutter and straight edge from the face. Trim with the blade closest to the seam edge; hold the cutter slightly away from the seam edge at no more than a  $5^\circ$  angle, so as to cut slightly more backing material than face yarn.

For printed patterns, do not row cut seams. Because printed patterns are created on the carpet after tufting, the patterns will not necessarily follow the rows of tufts. Use a metal straight edge as a guide to cut from pattern to pattern. Do not attempt to cut long distances between two patterns by popping a chalk line. Slight variations in the carpet might cause you to cut too far into some patterns that extend beyond your straight line.

No seam is invisible. Therefore, when possible, place seams in areas of least traffic, away from the direct lighting, and perpendicular to side lighting, such as windows.

**Seam Sealing Glue Down Seams:** All seams must be properly sealed using a continuous bead of seam adhesive large enough to cover the primary backing, yarn bundles and secondary backing. Our latex backings can be seam sealed with either a solvent or non-solvent based seam adhesive.

**Seam Sealing Hot Melt Seams:** A good quality latex seam adhesive should be applied to both cut edges and allowed to dry completely prior to beginning the hot melt seaming process.

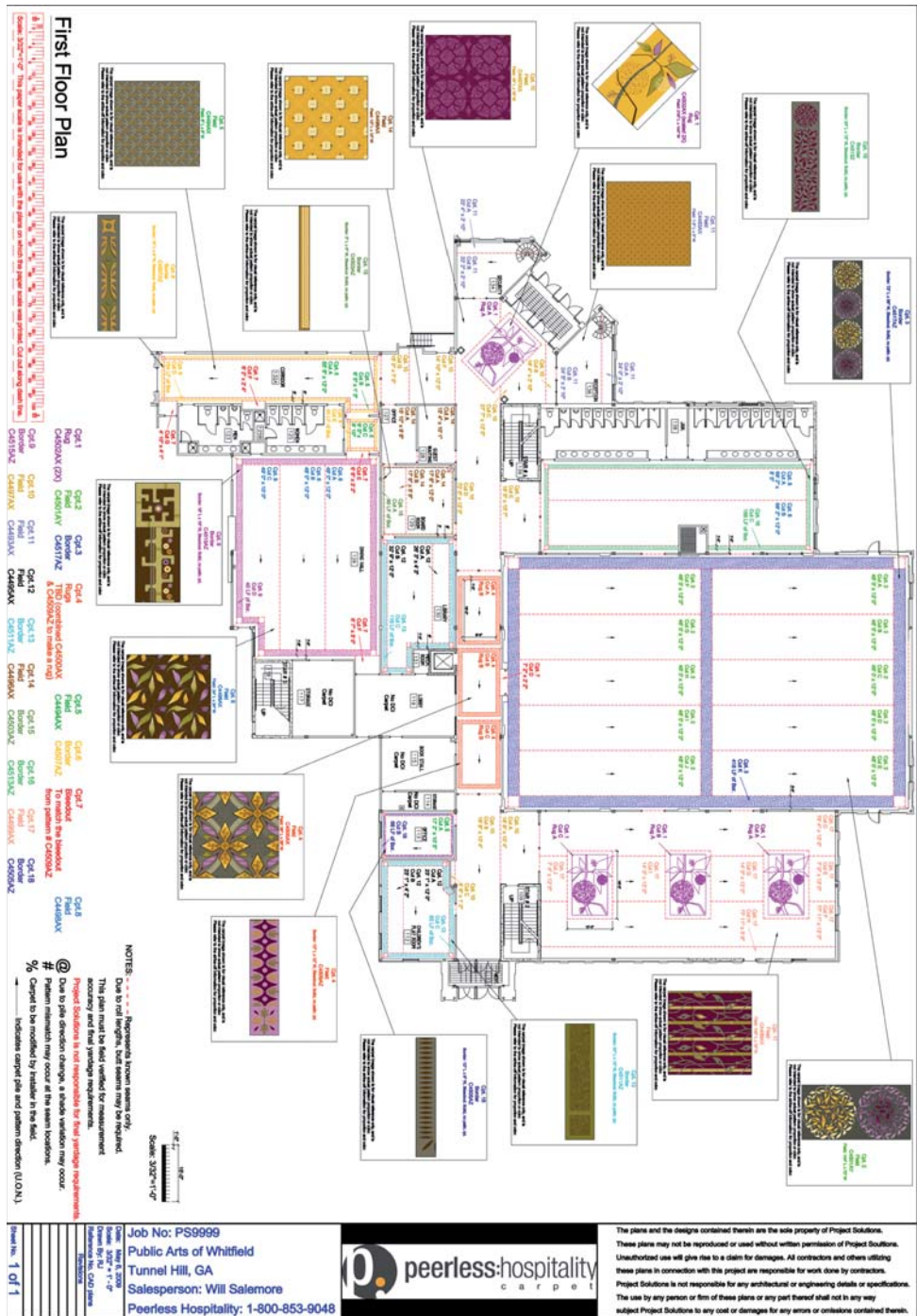
**Proper Seam Characteristics** - A properly constructed seam will have the following attributes:

- Has cleanly trimmed edges properly secured with seam sealer
- Has tightly abutted edges without gaps or overlaps
- Maintains reasonable pattern match where applicable
- Will not be totally invisible

## INSTALLATION METHODS

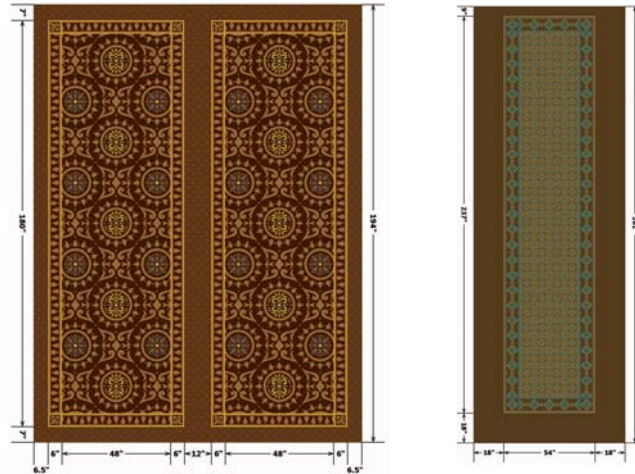
**Locate and Dry Lay Carpet** – If a seaming diagram has been provided (see Figure 1: Sample Seaming Diagram), unroll carpet and dry lay according to seaming instructions. The seaming diagram indicates all known seams, dimensions, special notes, instructions and details all of the patterns being used on the project. Also, the seaming diagram indicates the desired direction for the pile and pattern to be orientated. All of the dimensions on the plan are net, with the necessary pattern repeats accounted for at the time of quantity takeoff.

**FIGURE 1 • Sample Seaming Diagram**



If no seaming diagram has been provided, follow the roll sequence sheet. The pattern elements will be printed to minimize coverage and may be printed on 12" width carpet or 7'6" width for corridors wider than 6'.

If no seaming diagram has been provided, follow the roll sequence sheet. The pattern elements will be printed to minimize overage and may be printed on 12' width carpet or 7'6" width for corridors wider than 6'.



**Direct Glue Down Method – Action Bac:** Once the carpets have been located, dry laid and allowed to relax, the cutting and gluing phase may begin. At this point, the squareness of the carpet should be checked. When the carpet is positioned properly, use a chalk line and straight edge to remove all factory edges. In some cases, it may be necessary to adjust the amount of bleedout on each end of the corridor and/or in between rugs. This is due to possible shrinkage and/or measurement variation from the CAD plans to the actual field measurements. Align the patterns in the center of each breadth, and check for any possible bowing or skewing. If the pattern run-off is more than one half inch in twelve feet, pre-stretch the carpet using a deadman and power stretchers.

Next, fold back half of the carpet, back across the width of the space. Apply Beaulieu's recommended adhesive (see Chart) using a 1/8" x 1/8" x 1/8" U-notched trowel or 1/8" x 1/8" x 1/16" V-notched trowel. Open time will vary depending upon the environmental conditions. Secure all seams. Keep traffic and heavy equipment away from installation for at least 24 hours.

**Direct Glue Down Method – Attached Cushion:** Follow the same instructions as for the Action Bac accept apply adhesive using 3/32" x 3/32" x 3/32" trowel.

#### Double Glue Down

1. The proper pad must be selected (see cushion recommendations below).
2. A premium permanent adhesive must be used between both pad to floor and carpet to pad.
3. Use a 1/16" x 1/16" x 1/16" square notch trowel in adhering the "Pad To Floor" and a 1/8" x 1/8" x 1/16" U notch trowel when adhering the "Carpet To Pad" re-notching as necessary.
4. Carpet seams must be at right angles to cushion seams or offset at least 6" to either side.
5. Apply latex seam sealer to both edges and let dry completely before hot melting seams.
6. Use a silicone free, low profile double glue hot melt tape
7. Roll carpet with a maximum 30-50 lb. roller.
8. Absolutely no traffic for a minimum 48 hours.

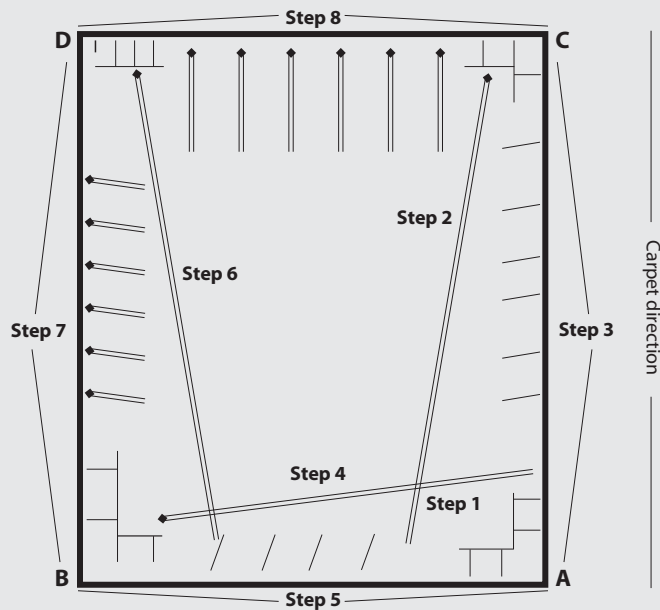
**Any deviation from the instructions above could result in wrinkles, bubbles and separation of pad from floor or carpet from pad.**

**Cushion recommendations** - Beaulieu recommends using an attached polyurethane backing system versus the double-glue installation method or stretch-in over pad method. However if a stretch-in or double glue method is employed, cushion choice is very important. Cushion, which is too soft or too thick will cause excessive flexing of the carpet and result in open seams, delamination and re-stretching problems. Beaulieu's cushion requirements is as follows: density of 12 lb./ft.<sup>3</sup>, or greater with a maximum thickness of 3/8" (10 mm).

**Stretch-in Installation** - The proper pad must be selected (see above cushion recommendations). Commercial or architectural tackless strips must be used. Before starting the stretching process, dry lay the entire corridor. Center the carpet in the corridor with equal bleedout on each side. In some cases, as in the glue-down installation, it will be necessary to change the amount of bleedout on each end of the corridors, and/or between the rugs due to the shrinkage and the stretching of the carpet.

Use a dry line or laser to ensure the carpet is running straight. Start in the center of the area and power stretch both ways. Stay nails may also be needed on long corridors to hold the stretch until the entire corridor is stretched. **SEAMS MUST BE SEALED.** Apply seam sealer to both edges of the seam. Allow the seam sealer to dry before seaming. Neglecting to seal seams can cause delamination or loss of face yarns. The carpet is to be joined with a fabric seaming tape pre-coated with a thermoplastic adhesive. A double headed power stretcher and a deadman may be needed to get a proper match while the seam is being constructed. Stay nails may also be needed to align the pattern. After the seam has cooled, the carpet is ready to be stretched. **THE USE OF A POWER STRETCHER IS MANDATORY.** The carpet should be stretched both length and width angling slightly towards the corners. (See below figure).

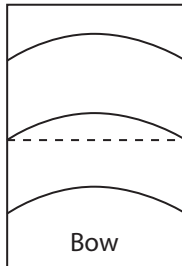
**FIGURE 2 • Stretch Diagram for Tufted Carpet**



- Step 1** • Hook onto tackstrip, approximately three feet in both directions, along corner A.
- Step 2** • Power stretch at approximately 15° angle from wall A-B and hook onto tackstrip at corner C.
- Step 3** • Hook and secure onto tackstrip with knee kicker along wall from A to C.
- Step 4** • Power stretch at approximately 15° angle from wall A-C and hook onto tackstrip at corner B.
- Step 5** • Hook and secure onto tackstrip with knee kicker along wall from A to B.
- Step 6** • Power stretch at approximately 15° angle from wall A-B and hook onto tackstrip temporarily at corner D.
- Step 7** • Power stretch from wall A-C and hook along wall from B to D.
- Step 8** • Power stretch straight from wall A-B and hook onto tackstrip along wall from C to D.

## CORRECTING PATTERN DISTORTION

Our printed carpets are produced to the most exacting tolerances however patterned carpet is a textile subject to variance in pattern repeats during the manufacturing process. Pattern distortion may be corrected with the use of stay nails and a power stretcher and the various distortion types that can occur are as follows:

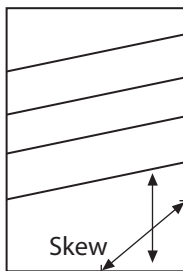


**Bowing**, as indicated in the diagram is when the pattern has gained or lagged in the middle of the roll width. Routinely, installers should be prepared to correct 1" or less of bow. However, up to two inches can be corrected.

Remember, when cutting end seams or cutting to a wall, you must cut on pattern and work bow from end to end.

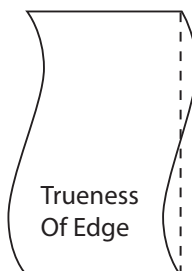
**Direct Glue:** Follow sequencing procedure and row cut selvages on pattern. Cut the end of carpet on pattern, which has the bow touching the wall and edges away. Spread adhesive within six inches of both sides so seams can be made after bow is straightened. Push the corners to the wall and stay nail creating a wrinkle/ bubble in the center. Work the wrinkle through the glue with a power stretcher and stay nailing when necessary. This will straighten the pattern across the width and make up the shortfall of carpet pattern on the opposite side of the room.

**Stretch-In:** Sequence rolls accordingly. Make side seams, being sure to match pattern. After side seams are created, cut both ends on pattern. Stretch the short edges to the wall and align the pattern. Continue to stretch accordingly to align the pattern to all walls.



**Skewing** - Again, installers should be prepared to routinely correct up to 1" skew in a 12' foot width, even though as much as 2" inches can be corrected. Most of the same instructions for correcting a bow apply to the correction of a skew (see instructions below).

**Direct Glue:** Spread adhesive to within 6" of both edges so patterns can be matched at the seam after skew is straightened. Cut end on pattern and push the short edge to the wall. This will create a wrinkle on the longer side. The wrinkle is then pushed through the glue correcting the skew as you work to the other end. Stay nail when necessary, leaving nails in for 24 hours. Finish by applying adhesive and seam sealer to edges and matching pattern. **Stretch-In:** Make the seam as prescribed earlier, matching the pattern. At this point, the carpet should be at a slight angle to the wall. Force the short side into the tackless strip, creating a wrinkle on the long side. Attach the long side to the tackless while stretching across the room. This will force the wrinkle diagonally into the short pattern on the opposite side of the room.



**Trueness of Edge** - As the diagram shows, carpet that has trueness of edge variations takes on the shape of an S. This condition is relatively easy to correct and should not prevent proper pattern matching.

**Direct Glue:** Snap a chalk line where the first seam is to be made and spread the adhesive for half of the width. Bring the most extended parts of the S to the straight line. Power Stretch the valley portions to the straight line, stay nail and leave for 24 hours. Repeat the above steps on the second half of the width and continue as needed throughout the rest of the project.

**Stretch-In:** Make hot melt seams as discussed before. As the seam is made, carefully match the pattern. Stretch each side to a straight line against the walls. This will take out the S shape and the seam will flatten.