

BROADLOOM INSTALLATION MANUAL STANDARD CARPETS



CONTENTS





OBJECTIVE

Standard Carpets has adopted the Carpet & Rug Institutes (CRI) installation standard, as a basic minimum industry guideline for the installation of its carpet products. This manual has been prepared to assist professional contractors to install Standard Carpets broadloom carpets.

This instructions cover the important common installation circumstances and it will help them understand the right methods of sub floor preparation, adhesives and dos and don't s.





BROADLOOM CARPET

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CARPET SEAMING

All seams must be properly prepared in strict compliance with carpet manufacturer recommendations.

1.1 Trimming

Carpet seams must be trimmed using tools and techniques best suited for the carpet style (e.g., loop-pile, cut-pile, cut-and-loop pile). Refer to the Tools and Materials table in the appendix of this standard. Trim edges far enough into the material to maintain the structural integrity of the carpet and to seam without gaps or overlaps

NOTE: Although “row-cutting” both edges is preferred, other trimming techniques may be more suitable on some carpet. Many carpets do not lend themselves to all methods of cutting. Trimming too far into patterned carpet will compromise pattern match. Contact carpet manufacturers for specific seaming methods.

SEALING EDGES/SEAMING

All seams must be sealed unless otherwise specified by the manufacturer. Regardless of installation method, most carpet requires an edge protective material be introduced between the edges to be joined. This material can be a liquid or thermoplastic and can be applied using various procedures and techniques.

2.1 Edge Sealing

For carpet backings that require edge sealing, apply an appropriate seam adhesive covering the thickness of the primary and secondary backing without contaminating face yarns on both edges of the seam. This ensures that all edges trimmed for seaming are protected from edge ravel. Allow seam adhesive to dry before proceeding with the installation to prevent transfer to the face yarn.

2.1.1 Seam Sealing (Direct Glue Down Only)

Apply a bead of seam adhesive to the cut edge of one side only in sufficient quantity to seal both trimmed edges. Ensure the bead thickness is sufficient to cover the primary and secondary backing without contaminating face yarns (See Figure 1). In order to bond the seam edges together, join the edges while the seam adhesive is still transferable.

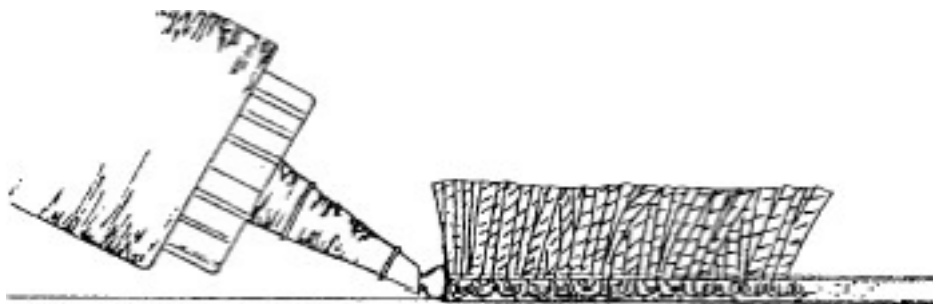


Figure 1

SEALING EDGES/SEAMING CONTINUED...

2.2 Seaming Methods

The seaming method depends upon carpet construction and backing type. Always follow manufacturer recommendations for seaming. Seaming methods include:

- hot-melt tape
- hand sewing

2.2.1 Hot Melt Seaming

A seaming tape pre-coated with a thermoplastic adhesive is centered beneath the seam. Tape is heated by a seaming device which melts the adhesive, laminating the carpet backing to the tape. Seams should be made over a hard, flat surface (i.e. seaming board). A carpet seam roller is recommended to achieve proper penetration of adhesive into the carpet backing from the seaming tape.

NOTE:

2.2.1.1 Premium grade tape with high tensile strength, sufficient adhesive on the woven scrim and a minimum adhesive width of 2¾ inches is recommended.

2.2.1.2 Rollers with star or spike design are not recommended for use on hot melt seams, especially, cut or cut-loop constructions.

When using a seaming iron, a grooved iron is recommended for better penetration of the adhesive. Proper iron temperature is essential to avoid secondary backing distortion.

Temperature settings will vary according to iron and tape manufacturers.

Always run the iron in the direction of the pile. A heat shield is required.

SEALING EDGES/SEAMING CONTINUED...

A metal surface should not be used to weight the seam behind the seaming device, as metal traps the heat and moisture. **Wood or non-heat conducting material should be used for this purpose.**

Provide adequate ventilation to dissipate any fumes from the seaming process.

2.2.2 Hand Sewing

Hand sewing shall be overcast stitches placed not more than 1/2 inch (13 mm) apart and no less than 1/2 inch from the edge of the carpet. It is recommended that a latex coating and tape be applied over the stitching. When using a seaming iron, a grooved iron is recommended for better penetration of the adhesive. Proper iron temperature is essential to avoid secondary backing distortion.

Temperature settings will vary according to iron and tape manufacturers. **Always run the iron in the direction of the pile. A heat shield is required.**

2.3 Proper Seam Characteristics

With any seaming method, a properly constructed seam:

- has cleanly trimmed edges properly secured with edge/seam sealer
- has tightly abutted edges without gaps or overlaps
- maintains reasonable pattern match where applicable
- will not be invisible

SEALING EDGES/SEAMING CONTINUED...

3. Direct Glue Down

Direct Glue Down is an installation method where carpet is directly adhered to the substrate using the proper adhesive.

3.1 Layout

Refer to General Requirements > Planning section of this document. Lay out the carpet according to the seaming diagram. Where applicable, allow for pattern repeat. Dry lay and align all carpet breadths/widths to their proper position; and then trim seams.

3.2 Floor Adhesive Application

This section covers proper application of adhesives in carpet installation procedures.

3.2.1 Trowel Selection

Select the appropriate adhesive and trowel notch configuration recommended by the carpet manufacturer and/or adhesive supplier, or refer to the general minimum guidelines in Table II – Trowel Size Minimum Guidelines at the end of this document.

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DIRECT GLUE DOWN CONTINUED...

3.2.2 Adhesive Application

Spread floor adhesive uniformly over the substrate with an appropriate trowel, leaving ridges of sufficient height to achieve full and complete coverage of both the substrate and carpet backing. Trowel notches wear down during use. Replace trowel as necessary to maintain proper spread rate. After sufficient open time, press carpet into the adhesive and roll with an appropriate roller as specified in the Broadloom > Direct Glue Down > Rolling section of this document.

NOTE: Bond failure most often is caused by:

- 3.2.2.1 inadequate adhesive application from incorrect trowel notch size and/or trowel notch configuration
- 3.2.2.2 wear or improper trowel angle during application
- 3.2.2.3 improper type and grade of adhesive
- 3.2.2.4 incorrect open time and/or working times
- 3.2.2.5 bond breakers or substrate contaminants such as, but not limited to, residual curing and parting compounds
- 3.2.2.6 pH and moisture-related problems
- 3.2.2.7 lack of protection
- 3.2.2.8 premature traffic or cleaning before adhesives have adequately cured
- 3.2.2.9 lack of protection, Refer to Broadloom Carpet > Direct Glue Down > Post Installation > Materials for Protection section of this document.

3.2.3 Open/Tack Time

Appropriate open time varies depending upon environmental conditions, substrate porosity, backing system and adhesive type. Refer to the adhesive and/or carpet manufacturer for requirements regarding open/tack time.

DIRECT GLUE DOWN CONTINUED...

3.2.4 Working Time

Working time (also referred to as slip time) is the length of time after covering the adhesive with carpet to make adjustments or manipulate the carpet without negatively impacting the permanent bond.

3.3 Alternative Adhesive Systems

Alternative field-applied systems, such as spray adhesive or roll-adhesive films, are available. Refer to carpet manufacturer information whether an adhesive system is acceptable.

3.4 Seam Sealing

All seams must be sealed unless otherwise specified by the manufacturer. Refer to Broadloom Carpet > Carpet Seaming > Sealing Edges/Seams > Seam Sealing (Direct Glue Down Only) section of this document.

3.5 Rolling

After the required amount of adhesive has been applied to the floor and the prescribed open time has been allowed, the carpet is carefully placed into the adhesive. To insure an adequate bond, it is then required that the carpet be uniformly pressed into the adhesive using a roller designed for this purpose. Rolling should be performed with the lightest roller that will cause the adhesive ridge pattern to transfer to the back of the carpet while still leaving the adhesive bonded to the floor. Do not exceed 75 lbs. unless specifically directed by the manufacturer. Roll the carpet in both length and width directions.

NOTE: In some circumstances, re-rolling is required as well as the placement of weights in problematic areas.

DIRECT GLUE DOWN CONTINUED...

3.6 Finishing at Wall Line

Finish the installation along the wall line leaving a net, smooth, neat, and secure fit.

3.7 Post Installation

Post installation covers the correct procedures after the carpet installation has been completed.

3.7.1 Curing Adhesives

It is recommended that traffic over field-applied adhesive installations be restricted to installation personnel only for a minimum of 24-48 hours to allow adhesives to cure properly. Premature traffic will cause installation failure. Restrict carpet exposure to water from cleaning or other sources for a minimum of 30 days.

3.7.2 Materials for Protection

It is recommended that carpet installation be the last trade on any job site. However, if it is required to protect the finished floor covering from soil or paint, or if additional work is required to be done after the installation, the carpet should be covered with a non- staining, breathable building material paper. Protect the installation from rolling traffic by using sheets of hardboard or plywood in potentially affected areas.



DIRECT GLUE DOWN CONTINUED...

NOTE: Self-adhering plastic films may leave residues that result in rapid soiling after removal. Do not place plastic sheeting over any carpet installation because it may present a slip hazard. Most importantly, plastic coverings will trap moisture, retard adhesive curing and may promote mold growth.

3.7.3 Maintain Temperature

Do not allow the temperature of carpeted areas to fall below 50° F (10°C), regardless of the age of the installation.



DOUBLE GLUE DOWN

This is an installation method where carpet cushion is first adhered to the substrate, and the carpet is then adhered to the cushion using the proper adhesives.

4.0 Cushion Layout

Refer to manufacturer's installation instructions. Install cushion in the longest continuous lengths possible with consideration to traffic patterns and carpet seam placement. It is required that cushion seams be at a right angle (90°) to carpet seams or offset at least 6 inches (150 mm). Butt cushion seams net without compression, leaving no gaps. Do not tape or staple cushion seams for double glue down installations.

NOTE: Cushions should be specifically designed for double glue application and should not exceed 3/8 of an inch in thickness.

4.1 Layout

Refer to General Requirements > Planning section of this document. Where applicable, allow for pattern repeat. Dry lay and align all carpet breadths/widths to their proper position; and then trim seams. Take care to avoid cutting into cushion under seams.

4.2 Adhesives and Trowel Notch Sizes

When applying cushion to substrate and carpet to cushion, select the appropriate adhesive and trowel notch size recommended by the carpet, cushion and adhesive manufacturer. If recommendations are not available, refer to the general minimum guidelines in Table II – Trowel Size Minimum Guidelines at the end of this document.

DOUBLE GLUE DOWN CONTINUED...

4.3 Cushion to Substrate Installation

Spread adhesive uniformly over the substrate with the specified trowel or other application procedure. After sufficient open time, the cushion is to be installed into the adhesive in a manner that minimizes air pockets. Proper open time is critical for a successful installation.

NOTE: For cushion to substrate, adhesives, application methods and spread rates are different from carpet to cushion installation methods. Refer to manufacturer's installation instructions.

4.4 Carpet to Cushion Installation

When applying carpet to cushion, select the appropriate adhesive and trowel notch size recommended by the carpet, cushion and adhesive manufacturer. If recommendations are not available, refer to the general minimum guidelines in Table II – Trowel Size Minimum Guidelines at the end of this document. Spread adhesive uniformly over the cushion with the specified trowel or other application procedure.

After sufficient open time, the carpet is to be placed into the adhesive and rolled with the appropriate roller. **Proper open time is critical for a successful installation.**

NOTE: When spreading adhesive over cushion, excessive trowel pressure reduces effective adhesive coverage rate.

DOUBLE GLUE DOWN CONTINUED...

4.5 Edge Sealing

All seams must be sealed unless otherwise specified by the manufacturer. Refer to Broadloom Carpet > Carpet Seaming > Sealing Edges/Seams > Edge Sealing section of this document.

4.6 Seam Cutting

Although “row-cutting” both edges is preferred, other trimming techniques may be more suitable on some carpet. Many carpets do not lend themselves to all methods of cutting. Contact carpet manufacturers for specific seam cutting methods.

4.7 Seaming

Hot melt seaming is required for double glue installations unless otherwise specified by the manufacturer. **Do not use silicone coated seaming tape.** Refer to Broadloom Carpet > Carpet Seaming > Seaming Methods > Hot Melt Seaming section of this document.

4.8 Rolling

Rolling carpet to cushion is required. Refer to Broadloom Carpet > Direct Glue Down > Rolling section of this document.

4.9 Post Installation

Protection is required for double glue installations (Refer to Broadloom Carpet > Direct Glue Down > Post Installation section of this document).



DOUBLE GLUE DOWN CONTINUED...

5. Attached Cushion Install

The installation process for carpet products with cushion attached during manufacturing

5.1 Carpet Layout

Refer to General Requirements > Planning section of this document.

5.2 Floor-Applied Adhesive Installations

Use the carpet adhesive and seam adhesive recommended by the carpet or adhesive manufacturer.



ATTACHED CUSHION INSTALL

The installation process for carpet products with cushion attached during manufacturing

5.1 Carpet Layout

Refer to General Requirements > Planning section of this document.

5.2 Floor-Applied Adhesive Installations

Use the carpet adhesive and seam adhesive recommended by the carpet or adhesive manufacturer.

5.2.1 Trowel Notch Size

Refer to the general minimum guidelines in Table II – Trowel Size Minimum Guidelines at the end of this document

5.2.2 Open Time

Refer to Broadloom Carpet > Direct Glue Down > Floor Adhesive Application > Open/Tack Time section of this document.

5.3 Installation Procedures

Cut seam edges with appropriate tools based on carpet manufacturer recommendations. Trim into material to eliminate possible height variation at the seam. In the case of woven goods, carefully refer to the manufacturer's recommendation for that specific style. Seal cut edges at seams with proper seam adhesive applied as recommended by the carpet or adhesive manufacturer. Roll installed carpet according to manufacturer recommendations.

ATTACHED CUSHION INSTALL CONTINUED...

5.3.1 Seam Sealing (Attached Cushion Products)

Apply a bead of seam adhesive to the cut edge of one side only in sufficient quantity to seal both trimmed edges. Ensure the bead thickness is sufficient to cover the primary and secondary backing (above the cushion) without contaminating face yarns (See Figure 2). In order to bond the seam edges together, join the edges while the seam adhesive is still transferable.

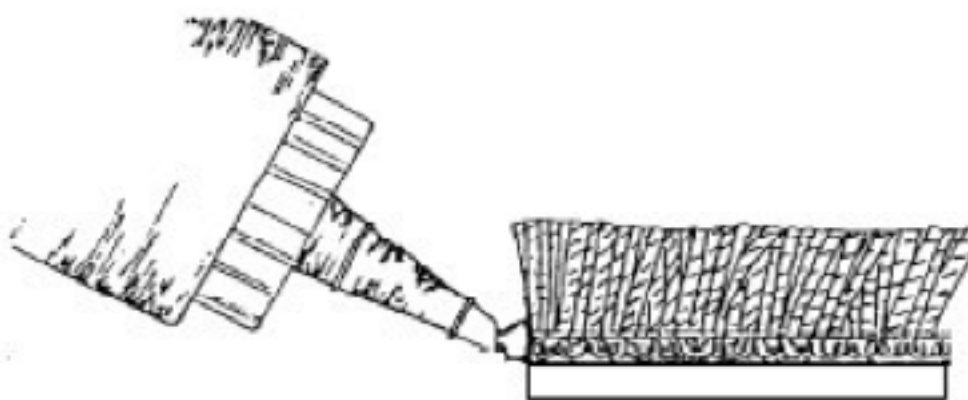


Figure 2

5.4 Pre-applied Adhesive Systems (“peel-and-stick”)

Pressure sensitive adhesives sometimes are applied to attached-cushion backings during manufacturing. Backings of this type have special floor preparation requirements. Consult the carpet manufacturer for recommended installation procedures and the use of primers, if needed.

STRETCH-IN INSTALLATION

6. Stretch-in Installation

This method involves installing carpet under tension over a separate cushion, using tack- strips fastened at all walls and other vertical abutments.

6.1 Tack-strip

Architectural strips, 1¾ inches in width (50mm) with 3 rows of pins, or 2 conventional strips with 2 rows of pins each, are required to provide secure attachment of the carpet and additional shear strength (Refer to Table III – Tack Strip at the end of this document). To prevent possible injury to building occupants, it is required that the pins on tack-strips not protrude through the carpet being installed.

Additional tack-strip installation specifications include:

- 6.1.1** Securely fasten tack-strips to maintain the tension provided by power stretching. Nailed or stapled tack-strips are required to have a minimum of 2 fasteners per piece.
- 6.1.2** Place tack-strips with the pins angled toward the vertical abutment.
- 6.1.3** The gully, or distance between the tack-strips and vertical abutments, is required to be slightly less than the thickness of the carpet but not exceed 3/8 inch (9 mm).
- 6.1.4** Avoid installing tack-strips across door openings and/or sills.
- 6.1.5** Cut tack-strips to follow the contour of door casings and other irregularly shaped abutments.
- 6.1.6** Do not staple carpet to tack-strips.
- 6.1.7** On radiant-heated floors, use manufacturer's approved adhesive to secure tack-strips. Do not use nails or screws to prevent damage to heating system.

STRETCH-IN INSTALLATION CONTINUED...

6.2 Separate Cushion Selection

It is required that the cushion conform to carpet manufacturer recommendations for the specific product being installed. Failure to follow these recommendations for cushion may void manufacturer warranties. These recommendations may differ, depending on the style and construction of specific carpet. **Cushion thickness for commercial carpet installations should not exceed 3/8 inch (10 mm).**

Install separate carpet cushion in the longest continuous lengths possible, with cushion seams placed at right angles to carpet seams, or offset at least 6 inches (150 mm) to one side. Trim cushion flush with the inside contour of the tack strip and securely fasten to the substrate using staples or nonflammable cushion adhesive at all seams and around the perimeter of each room. With the exception of fiber cushions, secure seams with appropriate vinyl-coated cloth cushion tape per the carpet cushion manufacturer's recommendations.

6.3 Seaming

The seaming method depends upon carpet construction and backing type. Refer to Broadloom Carpet > Carpet Seaming section of this document.

STRETCH-IN INSTALLATION CONTINUED...

6.3 Power Stretching

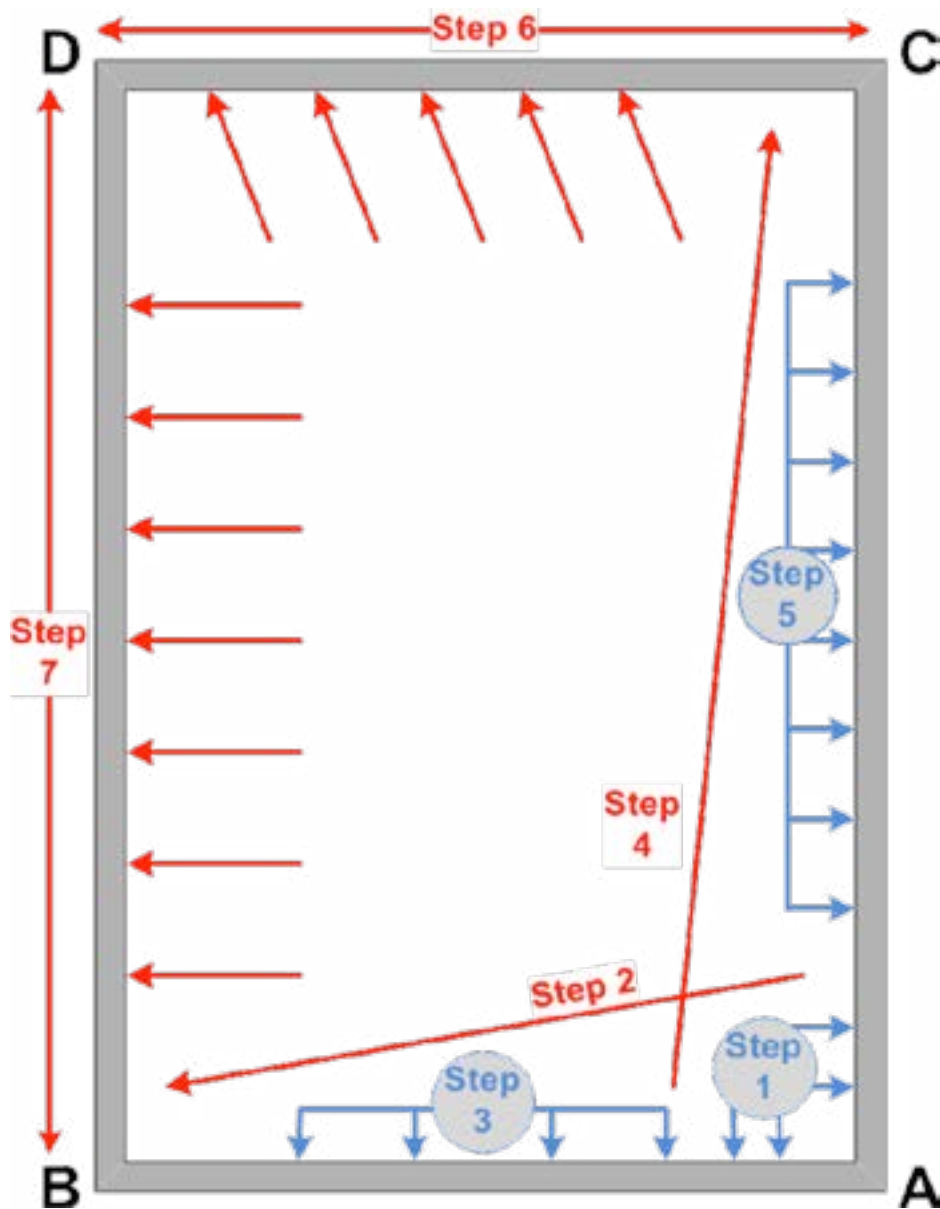


Figure 3: Stretch Diagram for Tufted Carpet
In the absence of carpet manufacturer stretch recommendations, use this diagram.

STRETCH-IN INSTALLATION CONTINUED...

For Woven Carpets, contact manufacturer for stretch-in requirements.

NOTE: When spreading adhesive over cushion, excessive trowel pressure reduces effective adhesive coverage rate.

Step 1: Hook onto tack strip approx. 3 ft. in both directions along corner A.

Step 2: Power stretch at approx. 15° angle from wall AC and hook onto tack strips at corner B.

Step 3: Hook & secure onto tack strip with knee kicker along wall from A to B.

Step 4: Power stretch at approx. 15° angle from wall AB and hook onto tack strip at corner C.

Step 5: Hook & secure onto tack strip with knee kicker along wall from A to C.

Step 6: Power stretch at approx. 15° angle from wall AB and hook along wall from C to D.

Step 7: Power stretch from wall AC and hook along wall from B to D.

The use of a Power Stretcher is MANDATORY. Devices used as a substitute for, or an attachment to such devices that penetrate through the carpet backing may cause injury, damage carpet or substrates, or result in inadequate stretch. Such devices are not acceptable.

STRETCH-IN INSTALLATION CONTINUED...

Power Stretcher – This tool should have all of the following:

- 6.4.1** Based on the carpet construction, the proper head should be selected for the power stretcher:
 - 6.4.1.1** pins – recommended for cut pile
 - 6.4.1.2** cotton head – recommended for loop construction
- 6.4.2** Ability to lock the stretch in place.
- 6.4.3** Adjustable metal tubes ending in a padded tail block/plate.

NOTE: Failure to power stretch may result in:

- 6.4.4** wrinkling and buckling
- 6.4.5** damage to the carpet
- 6.4.6** delamination of secondary backing

6.5 Amount of Stretch

Due to the difference in carpet backing types, it is required that manufacturer instructions for carpet stretch be followed. In the absence of specific instructions, tufted carpet with synthetic backing should be stretched a minimum of 1% in length and width. Patterned carpet may require additional stretch to obtain pattern match.

6.6 Finishing at Wall

Finish the installation along the wall, leaving a smooth, neat and secure transition. Trim carpet without damaging baseboards or moldings, leaving sufficient material for backing to be securely tucked into the gully without protruding face or backing yarns.

6.7 Transition Molding

Refer to General Requirements > Planning > Transitions to Other Surfaces section of this document.

CARPET ON STAIRS

The following section covers proper procedures for installing carpet on stairs.

7.1 Preparation

It is required that the stair tread, riser and stair nose should be clean, dry and structurally sound. The stair nose return should be rounded 3/4 to 1 inch (19 to 25 mm) to prevent sharp stair edges from cutting carpet and/or cushion, and to provide proper carpet contact for adhesive installations. When carpet is installed over a separate cushion, extend the cushion over the stair nose.

7.2 Stretch-in Installation

Tack strip is to be installed on each tread. It is required that pins on the tread point toward the riser. On a waterfall-type stair installation, tack strip is to be installed on risers also. Pins on risers point down to the tread. It is required that the gully between strips be slightly less than double the carpet thickness. Where a turned finish is desired, tack strip and cushion are about 1½ inches (38 mm) less than the carpet width, to allow for a “turn- and tack” on each side of the stairs. Some stairs require tack strip on the sides to maintain the proper tension. When using a cap-and-band or contoured technique, tack strip is not used on riser.

NOTE: When staples are used in upholstering carpet on stairs, take care to separate pile yarns to avoid trapping yarns, resulting in visible distortion. If the edges are exposed, they must be edge sealed. Upholstery work needs to have no raw edges exposed. Any seams or joints must be sealed. Carpet seams need to be split in the direction of the balusters/spindles.

CARPET ON STAIRS CONTINUED...

7.3 Glue-down Installation

Install carpet on stair treads and risers using recommended adhesive. Stairs without a return (nose) can be installed as one piece over the tread and riser. It is required that on stairs with a return, carpet be cut and installed with the tread and riser being separate pieces.

7.4 Carpet Direction

It is recommended that machine direction of the carpet be installed in the length direction of the stairs.

NOTE: Most manufacturers recommend carpet pile direction run down the stairs.



PATTERNED CARPET INSTALLATIONS

The following section covers proper procedures for installing patterned carpet.

8.1 Uninstalled Patterned Carpet

Carpet is a textile fabric subject to processing variations in the four pattern conditions: bow, skew/bias, elongation variation and trueness of edge. Measurement of these four conditions is performed on an uninstalled breadth/width of carpet. Individual manufacturers have tolerances to which their patterned products are required to conform. There are no industry standards for carpet pattern variation.

8.2 Manufacturing Tolerances

Most manufacturers provide established tolerances and specific installation instructions for their patterned goods.

Factors affecting pattern match on the job site include, but are not limited to:

- 8.2.1** method of installation
- 8.2.2** condition and levelness of the floor
- 8.2.3** type of carpet backing system selected.

Alignment of patterned carpet typically requires the use of mechanical stretching devices (i.e. power stretcher, mini stretcher, etc.).

8.3 Seaming Diagram

It is required that the seaming diagram reflect the desired pattern direction. Refer to General Requirements > Planning section of this document.



PATTERNED CARPET INSTALLATIONS CONTINUED...

8.4 Pattern Sequence/Roll Sequence

Sequencing information may be available from the carpet manufacturer. In the absence of sequencing information from the carpet manufacturer, sequence carpet cuts working from the longest measured repeat gradually down to the shortest repeat within the dye lot.

NOTE: Patterned carpet requires additional material for proper pattern matching.

8.5 Pattern Adjustment

Pattern adjustment during installation should be anticipated.

8.6 Pattern Alignment

Match the pattern at the midpoint of the seam's length. Work from the seam's midpoint to the seam ends.

Bring the pattern into register using appropriate tools that might include (Refer to Table I Tools & Materials at the end of this document):

- power stretcher
- knee kicker
- dead man
- "dry" lines
- stay nails
- double-headed mini-stretcher ("crab stretcher")

NOTE: For patterned carpet, exercise care to ensure pattern alignment along walls. The use of mechanical stretching devices, stay-nails and a "dead man" may be necessary to achieve pattern match at seams and alignment along walls.

TOOLS & MATERIALS

Table I

Tools

A.	Tape Measure (Metal)	L.	Seaming Tools
1.	25 ft. (7.6 m)	1.	Awl / Row Runner
2.	50 ft. (15.2 m)	2.	Cushion Back Cutter
3.	100 ft. (30.5 m)	3.	Loop Pile Cutter
B.	Straight Edge	4.	Carpet Seam Roller (Flat and Paddle)
1.	Rigid	5.	Wood / Non-Conductive Weight to follow Hot Melt Seaming Iron
C.	Chalk Line	6.	Stay Nails
1.	White Chalk	M.	Seaming Device
2.	Red or Blue (Substrate Only)	1.	Hot Melt Seaming Iron and Shield (3 inch or 6 inch)
D.	Knives and Cutters	2.	RF (Radio Frequency) Seaming Unit
1.	Carpet Knife	N.	Miscellaneous
2.	Utility Knife	1.	Base Shoe Lifter
3.	Wall Trimmer	2.	Drive Down Bar
4.	Carpet Shears	3.	Stair Tool
5.	Nap Shears (Duck Bills)	4.	Pliers
6.	Tin Shears	5.	Extension Cord and Adapter
7.	Tack Strip Cutter	6.	Hammer Drill / Mixing Paddle
E.	Hammers and Mallets	7.	Miter Box
1.	16 to 20 oz. Hammer	8.	Hacksaw
2.	White Rubber Mallet	9.	Door Pin Remover
F.	Staplers / Tackers	10.	First Aid Supplies
1.	Electric Stapler	11.	Carpenter Square
2.	Hammer Tacker	12.	Pencil and Note Pad
G.	Screwdrivers	13.	Chalk Stick
1.	Phillips	14.	Marking Pin
2.	Standard	15.	Thimble
H.	Trowels	16.	Curved Needle and Thread
1.	See Table II – Trowel Size Minimum Guidelines	17.	Vacuum Cleaner / Broom

TOOLS & MATERIALS CONTINUED...

Table I

I.	Rollers	18.	Dry Lines
1.	35 lb (16 kg)	19.	Knee Pads
2.	50 lb (23 kg)		
3.	75 lb (34 kg)		
J.	Power Stretcher		
1.	Junior		
2.	Senior		
3.	Carpet Spreader		
K.	Positioning Tools		
1.	Adjustable Knee Kicker		
2.	Double Headed Mini Stretcher		

Materials

A.	Metal and Vinyl Moldings	B.	Seaming Tape
1.	Flat Metal	1.	Hot Melt
2.	Cap Molding (T-track)	2.	Latex
3.	Stair Nosing	C.	Seam Sealer
4.	Accent Molding	1.	Liquid Seam Sealer
5.	Tap-Down (Gripper Bar or Flat)	2.	Thermoplastic sticks and applicator
6.	Access Panel Molding	D.	Tack Strip
7.	Z-Bar	1.	See Table III – Tack Strip for Various Widths

TROWEL SIZE MINIMUM GUIDELINES



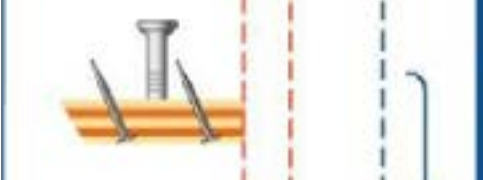

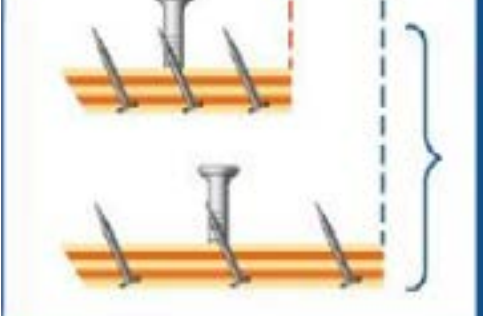
Table II

Floor Covering / Substrate	Applicator Size	Approx. Spread Rate feet ² / gal.	Approx. Spread Rate yards ² / gal.
Broadloom Carpet: rough back, woven, double stick carpet to cushion	1/8" x 1/8" x 1/8" U or Square notch (3.2mm x 3.2mm x 3.2mm)	50 – 90	6 – 10
	1/8" x 1/8" x 1/16" U notch (3.2mm x 3.2mm x 1.6mm)	45 – 75	5 – 8
Broadloom Carpet: Action Bac®, unitary back, jute	1/8" x 1/8" x 1/8" V notch (3.2mm x 3.2mm x 3.2mm)	90 – 110	10 – 12
	1/8" x 1/8" x 1/16" V notch (3.2mm x 3.2mm x 1.6mm)	70 – 90	8 – 10
Broadloom Carpet: smooth back, attached cushion, needle punched, cove base	3/32" x 3/32" x 3/32" V notch (2.4mm x 2.4mm x 2.4mm)	90 – 135	10 – 15
Vinyl back broadloom carpet, carpet pad to floor double stick, cork tile and underlay	1/16" x 1/16" x 1/16" Sq. notch (1.6mm x 1.6mm x 1.6mm)	160 – 180	18 – 20
Vinyl back broadloom carpet, carpet pad to floor double stick, cork tile and underlay	1/16" x 1/16" x 1/16" U notch (1.6mm x 1.6mm x 1.6mm)	160 – 180	18 – 20
Carpet tile	3/8" Nap Paint Roller (9.5mm) 3/4" Nap Paint Roller (19.0mm)	350 – 400 270 – 360	35 – 45 30 – 40

Note: Above dimensions are given as width x depth x spacing. Spread rates vary with texture and porosity of the substrate. Trowels should be held at a consistent 45–60° angle to apply adhesive. Examine notches regularly for wear.

TACK STRIP

Table III
TYPES AND WIDTHD OF CARPET TACK STRIP AVAILABLE

INCHES OF WIDTH		
0	1	2
		NARROW WIDTH PLYWOOD
		ONE INCH OR STANDARD WIDTH PLYWOOD
		ONE INCH OR STANDARD WIDTH ALUMINUM
		ONE INCH OR STANDARD WIDTH ALUMINUM
		TRI-TACK OR COMMERCIAL (ARCHITECTURAL) PLYWOOD

Tack Strip less than one inch (standard width) is not recommended for stretch-in carpet installations.

Plywood tack strip widths do vary and the narrower widths cause additional problems for installers. Pre-nails and pins get closer to the wall as the width narrows.

It is recommended to use one inch wide (standard width) tack strip for all carpet installations less than 30 ft. long.

Pre-nails and front and back row pins are moved farther from the wall for easier nail setting, extra strength and easier carpet hooking.

Aluminum carpet strip is recommended for carpet installations where water or termites may cause damage to plywood tack strips.

Will not rust, rot or be eaten by insects.

It is recommended to use tack strip with 3 rows of pins and at least 1 1/4 inches wide for carpet installations over 30 ft. long.

Extra pins provide more strength. Wider plywood provides stronger platform for power stretching.

ADHESIVE TYPES/DEFINATIONS

Table IV

Adhesives – Common Types Used in Carpet Installation	
A.	Carpet Floor Adhesives
1.	Latex Adhesive: Common name for adhesives used to install broadloom carpets, excluding those with vinyl backing, either directly to a substrate or over underlayment and cushion. Refer to carpet manufacturer for adhesive grade recommendation for specific backings and uses.
2.	Multi-purpose Adhesive: A latex adhesive designated for use with varying carpet types as well as non-vinyl backed (mineral-felt backed) resilient sheet goods.
3.	Vinyl-Back Carpet Adhesive: Adhesive specifically formulated for permanent installation of vinyl back carpet.
4.	Modular-Carpet Adhesive: Pressure sensitive type adhesive for releasable installation of modular carpets. Note: Always consult manufacturer for proper type adhesive.
5.	Outdoor Carpet Adhesive: Water resistant adhesive for installations of carpet designed for outdoor use. Refer to adhesive manufacturer for adhesive grade recommendation for specific backings.
6.	Polyurethane Carpet Adhesive: For installing specific polyurethane backings. Refer to adhesive manufacturer.
7.	Contact Adhesive: Used for bonding various carpet edge moldings to a substrate. It can be used for adhering carpet to difficult or irregular surfaces.
B.	Carpet Seaming Adhesives (Seam Sealer)
1.	Vinyl-back Seam Adhesive: Solvent-based (chemical weld) or solvent-free (mechanical bond).
2.	Latex Seam Adhesive: For applying seaming tapes, reinforcing sewn seams, sealing trimmed edges prior to “hot melt” seaming, securing binding, etc.
3.	Hot Melt Seam Adhesive: A thermoplastic adhesive used for adhesive or stretch-in applications.

DEW POINT

Table V

Ambient Air Temperature in Degrees Fahrenheit

Relative Humidity	40°F	45°F	50°F	55°F	60°F	65°F	70°F	75°F	80°F	85°F	90°F
90%	37	42	46	52	57	62	67	72	77	81	87
85%	35	40	45	50	55	60	65	70	75	80	84
80%	34	39	44	49	54	59	63	68	73	78	82
75%	32	37	42	47	52	57	62	66	71	76	80
70%	31	35	40	45	50	55	60	64	68	74	78
65%	30	33	38	43	47	53	57	62	66	72	76
60%	27	32	36	40	45	50	55	60	64	69	73
55%	26	30	34	38	43	48	53	58	61	67	70
50%		28	32	36	40	45	50	55	59	64	67
45%		26	30	33	37	42	47	52	56	61	64
40%		21	27	32	35	40	43	49	52	58	61
35%			24	28	31	36	40	45	48	54	57
30%				25	28	32	36	41	44	50	52

SURFACE TEMPERATURE AT WHICH CONDENSATION OCCURS

HOW TO USE THIS CHART: If the air temperature is 80°F and the RH is 65%, the dew point is 66°F. No coating should be applied unless the surface temperature of the slab is 71°F or higher.

DEW POINT: Temperature at which moisture will condense on the surface of an object. No coatings should be applied unless surface of the concrete slab is a minimum of 5 degrees above this point. Ambient temperature must be maintained during curing, or can be falling, but never rising.

RELATIVE HUMIDITY (RH): The amount of water vapor in a mixture of air and water vapor. It is defined as the ratio of the partial pressure of water vapor in an air-water mixture to the saturated vapor pressure of water at a prescribed temperature.

AMBIENT AIR TEMPERATURE: The ambient temperature is a non-specific phrase used to describe the outside temperature. When taking the temperature with a thermometer, you are getting a general idea of the temperature of the surrounding air without considering the humidity or wind in the air.



Standard
CARPETS