# **IMPORTANT**



All material <u>MUST</u> be inspected before cutting or installation. We will not honor any claim after material has been cut or laid.

All patterned carpets must be dry layed before glued down. If you are having trouble matching a pattern call the manufacturer at once.

Any claims for a glued down carpet will Not Be Honored.





# RECOMMENDED PROCEDURES FOR THE INSTALLATION OF PATTERNED CARPET USING ADHESIVE

#### **Carpet Installation Check List**

- 1. Per ASTM F-710, all concrete slabs regardless of age should be tested for moisture. ASTM F-2170-11 and F-1869-11 are the industry recognized test procedures to accomplish this. Barring instructions to the contrary, the results obtained from this testing should conform to the recommendations of the adhesive manufacturer. If no specification is available. in situ RH as determined by the F-2170 test should not exceed 75%. MVER (Moisture Vapor Emission Rate) as determined by the F-1869 test should not exceed 3lbs/24hours/1000 square feet. Newly poured concrete floors generally will take 90 to 120 days to dry to this level. For any installation using adhesive either direct or double glue the alkalinity or pH of a concrete slab should be between 5 and 9 as determined by the procedure described in ASTM F-710.
- All concrete slabs should have a low permeance properly placed vapor retarder directly beneath the concrete. This vapor retarder should conform to the requirements described in ASTM E-1745 for a class "A" vapor retarder and should conform to ACI (American Concrete Institute) document 302 placement guidelines.
- 3. The temperature of a concrete slab must be stabilized above 65 degrees both 24 hours prior to and after the installation.
- 4. The following environmental conditions inside the building are critical for proper installation. Temperature must be between 65 degrees F and 95 degrees F and the humidity between 10% and 65% for at least 72 hours before and 72 hours after installation. In addition, adhesive and seam sealer should be stored under these conditions for a minimum of 24 hours prior to installation.
- 5. Old cut back adhesive must be properly sealed or removed prior to any installation using adhesive. See note below.
- 6. Carpet should be rolled our and allowed to relax for at least 24 hours prior to installation.
- 7. Never install carpet over carpet.
- 8. Never cut carpet over carpet as this can result in over penetration of blade, and cutting of carpet loops on carpet being cut over.
- 9. Carpet should never be folded or creased, as this can result in permanent wrinkles.
- 10. Furniture placement and heavy traffic should be avoided for at least 24 hours after the carpet is placed into the adhesive. Furniture and heavy equipment concentrate pressure on carpet and can cause an adhesive breakdown during movement over unprotected carpet. This may result in buckling and/or wrinkling. It is strongly recommended that during this move-in phase, plywood or Masonite board be used over the carpet to spread the concentrated weight of furniture and heavy equipment.

NOTE: Asbestos containing floor tiles, any adhesive possibly containing asbestos or other asbestos containing floor coverings require special preparation, handling and removal procedures. Consult appropriate local or state

authorities or the Resilient Floor Covering Institute before disturbing any suspected asbestos containing material.

# **Pile Direction**

Please check before seaming to make sure the pile direction is the same as the carpet was dyed with the pile all in the same direction.

### Measuring Pattern Repeat and Determining Installation Sequence:

Prior to beginning the installation, each roll should be measured for pattern elongation, bow (length and width) and skew. This allows the installer to properly plan and sequence the installation and insure that a proper pattern match is achieved. Rolls should be sequenced starting with the most elongated and working down as gradually as possible to the least elongated.

# Side Seam Trimming Procedure:

Once Pile direction has been decided and the proper installation sequence has been determined carpet edges should be trimmed for seaming using a straight edge and cutting tool from the top so that the pattern can be visually trimmed from point to point in the design. In printed patterned carpet, there is no relation between the tuft rows or "wires" and the pattern. Running a row will generally not provide an acceptable match. For best results, Nortex recommends the use of the #295 Unicutter from Gundlach (benojgundlachco.com) along with the Hang-Over Straight Edge also from Gundlach. Also acceptable is the use of a conventional straight edge and a cushion back cutter.

# Seam Sealing:

Since all edges in a printed patterned carpet installation are cut across tuft rows, it is an absolute requirement that all edges be properly sealed and protected. In a direct glue installation this can most easily and effectively be accomplished using a specialized applicator tip - such as the Glue2® tip from Gundlach - that applies the seam sealer to both sides of the seam simultaneously. Conventional seam sealing that dictates that one breadth be laid into the adhesive bed with a bead of seam applied to the base of the tufts. This is followed by laying the other breadth into the adhesive in such a way that the seam sealer supposedly transfers to and fully protects this second breadth. In addition, any pattern manipulation is done while the wet seam sealer is between the two breadths which inevitably leads to the seam sealer getting on the face of the carpet. The Glue2® tip allows both sides of the seam to be placed into the adhesive bed at the same time. At that point any pattern adjustment is performed. The Glue2® tip is then inserted and used to apply a small bead of seam sealer directly to both sides of the seam with no guessing as to whether the seam sealer is present in the correct amounts or in the correct place on the edges of the two breadths that make up the sea.

#### Widthwise or "Cross" Seams

Follow the same basic procedure as was used with the side seams to insure an acceptable Pattern Match. It must be understood that carpet is a textile and

cannot be made to exact specifications. All pattern carpet is subject to certain manufacturing tolerances, therefore, a perfect pattern match cannot be guaranteed on the carpet as it is shipped from Nortex. It is the expectation of Nortex and every manufacturer of patterned carpets that variations that were within the tolerances noted above will be adjusted such that the installed variation level is virtually zero.

Shipping tolerances for Patterned Carpet Are:

Widthwise Bow: Not to exceed 1-1/2 inches across the 12 foot width with no abrupt changes, hooks or re-curved pattern.

Lengthwise Bow – also referred to as "Trueness of Edge" – Not to exceed ½ inch in 30 feet with not abrupt changes

Skew – also referred to as Bias: not to exceed 1-1/2 inches across the 12 foot width

Pattern Elongation – also referred to as Lengthwise Pattern Repeat Variation: Not to exceed 2 inches of variation in 12 linear feet within one dyelot.

# If you are having trouble matching a pattern "stop" and call the manufacturer at once.

NOTE: Pattern installation instructions and diagrams are shipped in each roll of carpe that illustrate how to properly measure the tolerances outlined above and how to deal with these variation during the installation process.

#### **Roll Sequencing:**

As stated above, rolls of patterned carpet must be sequenced so the longest pattern is installed first and the roll with the next longest pattern can be stretched to match the longer one. This procedure is critical in that it is impossible to shrink a longer pattern to match a shorter pattern. This will require that each roll be measured for pattern repeat prior to installation. Measuring all rolls for pattern repeat size will establish the sequence in which the carpet must be installed and will allow the installation to proceed without the necessity of dry laying the entire are which is often impossible on a project site.

#### **Equipment Recommendations**

For stretch in installation and for stretching to match pattern on glue down installation a Power Stretcher and/or a Crab Stretcher are generally required to obtain suitable matches. Knee kickers should only be used to position the carpet. The same procedures should be used for Double Glue Installations.

A "dead man" is typically very helpful for obtaining suitable stretch on longer breadths.

#### **Corrective Steps for Bow and Skew**

If the carpet is being installed as a stretch in over separate cushion, it is most efficient to assemble the side and end seams first being sure to seal both edges

and use a premium quality hot melt tape. Bow and Skew would be dealt with as part of the stretching in process. Removing Skew and Bow requires forcing the pattern in the carpet to follow the walls where the ends of the carpet meet the walls. In cases where there is significant skew, forcing the carpet pattern to follow the end wall creates a large wrinkle in the carpet adjacent to that wall which must be worked to the opposite end of the room to cause the pattern to follow the wall on that wall. While doing this, a dry line is stretched across the carpet to allow the pattern to be pulled to a visually straight condition as the wrinkle is worked across the room.

For direct glue installations, Bow and Skew must be dealt with on each breadth individually. To accomplish this it is most efficient to change the method in which the carpet is pulled back to allow the spreading of the adhesive. As a first step the location of the first seam is established with a chalk-line. Instead of folding the carpet back from the seam, it is more efficient to roll the carpet up from the ends to the middle. Adhesive is applied to an area approximately 11 feet wide by 10 to 15 feet long. The carpet is carefully rolled into the adhesive insuring that the edges fall onto the previously established chalk-line with the bow and skew adjusted using a power stretcher to a dry line that is straight and parallel to the end walls. This procedure is repeated until the first breadth is straight and square to the area. The second breadth in the sequence is brought in and a match point is established close to the center of the seam. The same rolling up and adhesive application process is performed insuring that the pattern is matched and the bow and skew are effectively removed in each section. The six inches left unglued under the first breadth is adhered during this process leaving six inches unglued on the opposite edge to allow that seam to be assembled.

#### **Trueness of Edge**

Trueness of edge will show up on an installation as trimmed seam edges that do not form a completely straight line. This will result in a seam that has tight areas and gaps. The most effective way to deal with this is to butt the "lowest" point of the seam together such that all other areas of the seam are either net or overlapped. The edges should be folded back with a 3 to 4 foot wide strip of the recommended adhesive applies to both side. Both sides should be laid into the adhesive. Working from the areas that are well butted the carpet should be pushed away from the seam until the tight and overlapped areas are also net. This will result in wrinkles running roughly parallel to the seam that must be worked into the adhesive by pushing the wrinkle away from the seam. It may be necessary to use a minimal number of stay nails to secure the seam in position and to insure it remains properly abutted until the adhesive dries. Once the seam is secure and well butted, the Glue2® tip should be inserted and the edges sealed.

# Pattern Elongation:

As stated above, the most elongated pattern must be installed first, then the next longest, etc. This allows stretching of the shorter pattern to match the longer pattern and keeps the closest pattern repeats together. After the roll sequence is established as noted above, glue half of the long pattern and half of the shorter pattern lengthwise. Stretch the shorter pattern to match the longer pattern by establishing a match in the center of the seam and stretching toward the ends in short increments of three to five feet along the "shorter" side of the seam. As a

general rule the more variation that is present, the shorter the increment that can be brought totally into match. In severe cases, there are thermoplastic seaming tapes such as Orcon K-80<sup>™</sup> that are engineered specifically for adhesive installations that allow each increment of the seam to be melted together and secured as it is brought into match. This tape is very low profile. In addition the paper backing is easily removable after the seam is assembled so that there is essentially no telegraphing of the tape. Using thermoplastic seaming tape to secure the seam essentially eliminates the need for stay nails and all of the potential issues associated with their use on direct glue or double stick installations. This also creates a much stronger seam that is virtually waterproof and highly resistant to damage from downstream maintenance.

# **Applying Approved Adhesive for Direct Glue Down:**

To make certain that the proper amount of adhesive is applied a 1/8" x 1/16" x 1/8" V-Notched trowel must be used. This will result in a spread rate of 10 to 12 yards per gallon. Higher spread rates and different adhesive types are used when the double glue method of installation is used.

#### **Proper Open Time and Slip Time**

When working with patterned carpet it is recommended that an adhesive be selected that allows for as long a slip time as possible after the appropriate open time has been allowed and the carpet is dropped into the adhesive bed. This allows the installer the opportunity to adjust the pattern as needed while the adhesive still allows movement of the carpet. Failure to properly select the adhesive for any adhesive applied installation of patterned carpet can render it impossible to properly adjust and align the pattern.

#### Installation

Note that these procedures may require modification depending on the type and degree of pattern variation encountered.

- A. Place two lengths in proper position for installing; trim selvages. Line up seam edge with chalk line perfectly flat and tension free. Fold or roll both widths back three feet from seam area the entire length of the carpet.
- B. Spread the Adhesive from approximate center towards each end using a 1/8" x 1/16" x 1/8" V-Notched trowel with steady even strokes. When sufficient floor area has been covered with adhesive wait until adhesive has reached appropriate "tacky" stage before dropping the first breadth of carpet into place. Apply a bead of Seam Sealer to the seam edge of the first breadth. Be sure to follow this procedure for each succeeding breadth at seam. Drop or roll second breadth into position, and fit the seam in tightly using a knee kicker if necessary. Roll looseness and air bubbles away from seam. As an alternate to this method of adhesive application and seam sealing, use the Glue2® applicator tip mentioned earlier in this document. This allows both breadths to be dropped into the adhesive with all required pattern matching to be done before the seam sealer is applied to the edges of the carpet. This greatly minimizes the probability of seam sealer getting on the face of the carpet and

- eliminates any guesswork as to whether both sides of the seam are completely protected from raveling, peaking and delamination.
- C. The remaining portion of the first breadth can now be folded or rolled back from floor. The adhesive is applied to the floor and after waiting for the adhesive to reach the proper "tacky" stage the carpet can be dropped into place. Be sure to have enough people spreading the adhesive so that after the floor is covered, each breadth is in place within the determined period of open time.
- D. Roll or fold back dry portion of the second breadth towards seam, spread the adhesive and place the carpet to (3) feet from where next seam will fall
- E. Be sure to roll out looseness and air bubbles as carpet is put in place. Repeat above procedures on continuing breadths. For trimming carpet at wall, use a razor blade knife or suitable wall trimmer.
- F. Roll completed installation with a 50 to 75 lb. roller in both length and width. This will allow proper adhesive penetration to carpet back.

# **Suggested Tools and Material Needed**

- 1. Power Stretcher & Crab Stretcher
- 2. Premium Adhesive as recommended
- 3. Seam Sealer and recommended applicator bottle and tip
- 4. Appropriate and recommended transition treatments
- 5. Knee Kicker (position carpet only)
- 6. Recommended Cutting tools and straight edge
- 7. Stay Nails
- 8. Dead Man and Pull Boards

These items may be purchased from a local carpet workroom supplier.

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