carpet installation handbook

J & J INDUSTRIES

The use of Commercialon® Premium Carpet Adhesives and Sealers is required for installing J+J/Invision products backed with TitanBac® Plus or Endure® Plus.

The use of Commercialon® Premium Modular Adhesive is required for Nexus® Modular and eKoTac™ adhesive for installing eKo® - Modular.

GENERAL INFORMATION FOR CARPET CONSIDERATIONS

The procedures in this handbook represent our best recommendations for installing J+J/Invision broadloom, Nexus Modular and eKo Modular. The information contained in this handbook is also available at www.jj-invision.com.

It is J+J/Invision's goal to assist all parties with regard to style, color, pattern configuration, the backing system, installation method, seams, layout, bow, skew and pattern variation to ensure the satisfaction of the J+J/Invision customer with their carpet and installation.

Subsequent to the specification, the specifier, end user and the carpet installation contractor must all understand their responsible involvement to achieve quality installations. J+J/Invision provides the information contained in this handbook along with pattern match policy regarding tolerances for bow, skew and pattern repeat variation. All parties must agree upon the intended expectations of a project involving J+J/Invision carpet relative to the carpet style selected and its successful installation.

For comprehensive warranty coverage, J+J/Invision requires total compliance with all information contained within this publication.

J+J/Invision does not guarantee an exact or perfect match on any patterned qualities. Reasonable pattern match may be attained by using trained certified craftsmen and by following our patterned installation procedures.

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introduction

The procedures listed in this handbook are our best recommendations for installing J+J/Invision broadloom carpets via the direct glue-down or stretch-in methods. Additionally, there are instructions for installation of Nexus and eKo modular tile. The information contained in this handbook is also available at www.jj-invision.com. If you have any further questions or require additional information please contact our Installation and Maintenance Department at 800 241-4586 Extension 8223.

Also included is information on proper carpet storage and handling procedures, as well as floor preparation for carpet installations.

Prior to any carpet installation, J+J/ Invision recommends that all trades be out of the area to be carpeted and their work must be completed. Trades may include electricians, acoustical ceiling installers, plumbers, masons, wall covering installers, etc. Further, the building must be enclosed with the HVAC in continuous operation.

J+J/Invision requires that the carpet to be installed be inspected prior to installation for proper style, color and potential defects. No claims will be honored if the carpet is installed with visible defects. Report any problems or questions to 1 800-241-4586 Customer Relations.

CAUTION: When seaming dissimilar gauge backing systems, the primary backings to be seamed together must exactly align (join) at the seam. Always ensure through dry fitting that pile surfaces are equal. Due to overall backing thickness Endure Plus backings cannot be seamed to any other backings.

CARPET STORAGE CONDITIONS

The carpet and adhesive must be stored in a secure, dry area having a maximum temperature and relative humidity not to exceed 95ºF and 65% RH, respectively. The carpet must be stored on a flat, smooth surface and should not be stacked over three (3) rolls in height. Extended storage may produce roll crush. Roll crush is not a manufacturing defect; it is the result of transportation, extended or improper storage. Additionally, pallets of carpet modules can not be stacked.

HANDLING

Use only carpet lift trucks equipped with carpet booms for roll goods. Under no circumstances should forklifts be used to move roll goods.

Caution: Bending or folding carpet may result in:

· Delamination

· Creases, wrinkles and buckles

· Pattern distortion

If the carpet must be temporarily folded for delivery purposes, ensure that the carpet is loosely rolled prior to folding. Immediately unfold and unroll the carpet upon delivery to the installation site. Do not horseshoe or fold any carpet for storage.

INSTALLATION SITE CONDITIONS

The success of a carpet installation depends greatly on the temperature and relative humidity (RH) of the carpet, floor and adhesives. For this reason, it is extremely important to strictly control the environmental conditions of the installation site. The temperature and relative humidity (RH) must be continually maintained at 65° to 95°F and 10% to 65% RH for a minimum of 48 hours prior to installation. These conditions should be constantly maintained during, and for at least 48 hours after installation. Ideally, building temperature and RH should be maintained within the stated ranges on a continual basis for the life of the carpet.

To maintain the temperature and relative humidity, permanent heating and air conditioning systems (HVAC) must be operable. Once the installation area has a stabilized temperature and RH, loose lay the carpet within the installation area and allow it to precondition for a minimum of 48 hours prior to installation.

If the humidity is above 65%, then the adhesive will not dry properly for a direct glue-down installation; and, if the floor is colder than 65ºF, the adhesive will dry without becoming tacky. Additionally, cold carpet cannot be sufficiently power stretched for a stretch-in installation. If a carpet has been installed by the stretch in method and the heat or air

is turned off, moisture can return to the carpet causing the carpet to swell, buckle or shrink. However, if the heat or air is turned back on, the moisture will be removed from the carpet and the carpet may also cause instabilities. Building owners, where the central heat and air are often turned off for extended periods of time, should be advised of these possibilities.

SHOP DRAWINGS

Ensure that the shop drawings approved by the architect or owner cover all necessary aspects of the carpet installation, layout seam placement, treatment of expansion joints, trench header ducts, type of wall base and edge moldings.

CARPET OVER CARPET

Carpet must not be stretch-in installed over carpet. Carpet over carpet installations can be accomplished only with the Lok-Lift® system by Optimum Technologies 1 800 562 5574

PROTECTING THE CARPET EDGE

The carpet edge must be protected at the transition of carpet to other floor covering materials. Seam sealer is required at carpet termination to stone or other floors where transition strips cannot be utilized. The total thickness of the carpet cannot exceed the thickness of the flooring that it is transitioning. Warranty implications apply.

direct glue-down installations

VENTILATION

Installers should be aware that whenever possible and environmental conditions permit, carpet should be allowed to ventilate with the induction of fresh air. Avoid recirculation of indoor air; exhaust to the outside. During installation, maintain fresh-air ventilation by using fans, by operating the building's ventilation fan system, and by opening windows and doors when conditions permit. After installation, continue to fresh-air ventilate for 48 to 72 hours at normal room temperatures by operating the ventilation fan system at full capacity and by opening windows and doors, if possible. Most emissions will reduce significantly within 48 hours. Any carpet and adhesive odors, if noticeable at all, usually dissipate within seven days.

This handbook cannot possibly address all situations encountered by the commercial installer. If you have any questions, please contact the J+J/Invision Installation and Maintenance Services Department at 1-800-241-4586, Ext. 8223.

CARPET INSTALLATION OPTIONS

All J+J/Invision products can be installed direct glue method. PremierBac Plus can be installed stretch-in method. The selected installation method should be based on the intended end use with regard to expectations for comfort, performance and durability. This is an informed decision made by the end-user with assistance from the dealer-installation entity.

A. Preparation for Adhesive Carpet Installations

INTRODUCTION

There are six types of floors generally encountered by the commercial installer. These include: below grade concrete, on grade concrete, suspended concrete, suspended wood, terrazzo and metal. Each of these floor types must be properly prepared to receive both the adhesive and the carpet. Accurate floor preparation is mandatory for a successful adhesive carpet installation. Though some carpet secondary backing systems may be more forgiving than

others as to the condition required of the sub-floor, every adhered carpet requires a clean, sound substrate.

This section is structured into the following subtopics:

· Concrete Floor Preparation

· Moisture and pH test

· Priming of Concrete and Wood Floors

· Wood Floor Preparation

· Non-Porous Floor Preparation

· Existing Floor Coverings

· Existing Adhesives

CONCRETE FLOOR PREPARATION

Caution: Concrete sealers and other coatings may impact the carpet floor adhesive bond to the substrate, producing a failure of the installation. The warranties, compatibility with the carpet floor adhesive and performance guarantees are the responsibility of the sealer manufacturer and not the carpet manufacturer. When in doubt we recommend bond testing a 3' x 3' area.

Other surface coatings such as curing compounds, hardeners, sealers and parting compounds are widely used in new construction and can interfere with the bond of carpet floor adhesives to the slab. Although curing compounds may contain an oil, wax or resin base and are usually eroded by foot traffic prior to carpet installation, care must be taken to ensure that all residue is removed. Hardeners do not usually cause trouble, however excess amounts must be removed. In lift-slab and tilt-up construction, parting compounds (intended to prevent adhesion to permit separation of the slabs) must also be removed. If grinding, bead blasting or sanding is necessary to treat any of the above conditions, run a porosity test to determine if a primer is required. The warranties and performance guarantees are the responsibility of the sealer, primer or underlayment manufacturer and not the carpet manufacturer.

· Surface Texture: All cracks 1/8 inch wide or wider must be filled with a suitable Portland cement-based patch reinforced with polymers. The floor surface must be a sound, dry, clean, smooth and even plane. Floors must also

be free of dust, depressions, protrusions, all existing adhesive, curing agents, parting compounds, oil, grease, paint, sweeping compound residue, and any other contaminant that may prevent the required adhesion of the carpet system backing to the floor.

Mechanical scraping with an Easy Scrape block attachment or a 3M Scotch mesh disc driven by a 175 rpm floor machine makes short work of construction related contaminants that must be removed. These include existing adhesives, paint and varnish over spray, joint compound, dried mud, etc. CAUTION: Do not sand or use a floor machine and disc on any product containing asbestos.

· Density: Adhesive carpet installation over concrete requires a minimum concrete dry density of ninty (90) pounds per cubic foot. Although lightweight concrete (concrete mixed with perlite or vermiculite) may be primed or skim coated to provide a sufficient slab surface density to prevent adhesive absorption into the floor, priming or skim coating will not prevent fractures in the slab surface. Lightweight concrete surfaces will also be a problem when the carpet is removed. A significant amount of the slab surface may remain attached to the carpet back, which has been installed via direct glue-down.

TESTING CONCRETE SUBSTRATES

· Porosity Testing: To check the porosity of a concrete surface, pour a small quantity of water in several test areas. On a proper, dense surface, the water will bead, not absorb. Should the water be absorbed into the floor, the floor is not dense enough. This situation can cause failure of the installation. The same is true in the case of dusty concrete and newly sanded wood floors. When these conditions are encountered, the floor should be primed with a barrier coat.

· Moisture Testing: A moisture test is a requirement for any slab. All on or below grade slabs, regardless of the age, should be tested. Moisture testing must be performed with a minimum slab temperature of 65°F. This is a necessary requirement, since water movement is retarded at lower temperatures and test results will be inaccurate. To test for moisture, use the following moisture test methods, independent agent or testing facility.

Concrete Moisture sealer may be applied to concrete floors that test higher than the moisture emission limits stated above. J+J/Invision recommends XL Encore DriSeal for emissions up to 85% RH, 8-pounds moisture emission per 1,000 SF per 24 hours or pH of 11. (Available from J+J/Invision or www.xlbrands.com).

Testing Concrete Substrates- Before direct glue-down, double glue-down and some stretch-in (non-porous) cushion or carpet) installations, the owner or general contractor, or their designated testing agent, is required to submit to the flooring contractor a written report on the summary of testing results completed regarding the appropriate testing of the concrete substrates for moisture emissions.

Note: It is recommended that qualified independent testing agencies be used for determining moisture vapor emissions and alkalinity in the floor surface. Testing by an independent specialist to determine installation suitability is a prudent and necessary safegard for general contractors, owners, architects, flooring product providers and installation contractors. As a minimum, testing agencies or individuals are required to demonstrate verifiable experience in concrete moisture testing or be certified by a recognized organization.

Due to the number of available carpet backing types and other variances to be addressed in a successful installation, the testing agencies or individuals are to contact the carpet and adhesive manufacturer for specific guidelines relative to the appropriate moisture vapor emission testing protocol(s) to be conducted before the carpet installation. Testing must conform to the appropriate ASTM standard(s).

Moisture Vapor Emissions Testing- Moisture vapor emission rate testing (MVER) performed in accordance with ASTM F1869 has been shown to indicate the moisture condition in the upper portion of concrete floor slabs. It may be appropriate to determine the moisture conditions via other methods of moisture testing.

Relative Humidity Testing- Use the in situ relative humidity testing method conducted in strict compliance with ASTM Test Method F 2170. Relative humidity testing indicates the moisture condition within a concrete floor and is suitable for use on normal weight and lightweight concrete floor slabs including slabs above or below grade and of various floor types, including cast-in-place (structural) floors, slabs on ground and slabs in steel deck. When testing

cast-in-place structural concrete slabs, include tests directly over thick structural elements such as cast-in-place beams as well as thinner floor web areas. A relative humidity limit of 80% or less is acceptable unless otherwise specified by the carpet manufacturer.

Relative humidity probes can be placed in concrete floors well in advance of scheduled carpet installation. Periodic RH measurements can be used to evaluate the drying progress of a concrete floor. this information can be used for scheduling and making installation decisions. gypsum based screeds and topcoats dry in days or weeks depending on composition and thickness. The in situ relative humidity test is appropriate for these surfaces.

Surface preparation of these screed coats and topcoats is important if the finish to be applied is to be installed using adhesive. Both the adhesive manufacturer and the manufacturer of the screed should be involved when this is the case.

Testing for Alkalinity- A pH range of 7-9 is acceptable. Readings outside this range require corrective measures. Perform testing in accordance with ASTM standard Practice F-710; or consult the adhesive and carpet manufacturer for recommended testing and corrective procedures. Industry consenus suggests 3 tests for the first 1,000 square feet and 1 test for each additional 1,000 square feet.

Caution: The results obtained from testing reflect only the condition of the concrete floor at the time of testing. Further, it is highly recommended that the test site or building be at the same temperature and humidity expected during normal use. These conditions are required to be maintained 48 hours prior to and during testing. The installation of a permanent, effective moisture vapor retarder with a minimum thickness of 0.010 inch and a permanency of 0.1 perms, as described in ASTM Specification E 1745, is required under all on-grade or below-grade concrete floors.

PRIMING OF CONCRETE OR WOOD FLOORS

Priming a sub-floor, either concrete or wood, is intended to eliminate, or at least moderate, minor surface dusting. Priming also reinforces the concrete surface, makes adhesive spread easily thus increasing coverage, improves the

adhesive bond and encapsulates.

NON-POROUS FLOORS

Terrazzo and other non-porous floors require special consideration as sub-floors for carpet. With conventionally backed carpets, evaporation of moisture from carpet adhesive will proceed through the carpet. However, Endure® Plus and TitanBac® Plus backed carpets have non-permeable backs, additional open- time considerations should to be planned for proper moisture evaporation.

EXISTING FLOOR COVERINGS

Many resilient floors provide an excellent base for an adhesive carpet system installation if the floors are soundly constructed, securely bonded, free of all finishes, and not cushioned or embossed. Identifying the type construction of the existing resilient floor is critical for insuring successful adhesion. For example, a securely bonded VAT or VCT floor 3/32 inch minimum thickness provides a good adhesive subfloor; yet, a vinyl floor or rubber floor may not. If it is necessary to adhere to quarry tile, or other tile with recessed grout lines, the floor must be skim coated with a fortified Portland cement underlayment to bring the grout lines flush and level. Follow the underlayment manufacturer's instructions regarding application, thickness, and priming requirements.

EXISTING ADHESIVES

It is strongly recommended that all existing adhesives be removed. Hand scraping or using an Easy Scrape block attachment with a 175-rpm floor machine on existing carpet latex floor adhesive is effective for removal or old adhesive trowel ridges. By eliminating trowel ridges and removal of excessive old adhesives, fresh adhesive will spread more evenly and will therefore produce an effective bond for the carpet to the substrate. We recommend installing several 3' x 3' test areas. Test bond to floor after 72 hours. If extraordinary force is required to pull the carpet from the floor, leave the floor and carpet back fully covered with adhesive, the installation can proceed. Do not attempt installation over dissimilar or incompatible adhesives. Portland cement underlayment similar to Ardex SD-L. Ardex, Inc., 800-899-6698 or Dependable Skimcrete, Dependable Floor Underlayments 800-227- 3434 may also be utilized over existing adhesives. Follow manufacturers instructions.

TriSeal One Coat Encapsulator Sealer (available from J+J/Invision or www.xlbrands.com) is an effective high strength acrylic polymer formulated to isolate cutback or other incompatible adhesive residue. Seal porous, dusty or wood floor that may impede or affect the bond of new floor adhesive over concrete subloors.

LIQUID ADHESIVE REMOVERS

The use of liquid adhesive removers is not recommended, as any residual left on or in the concrete slab is capable of producing a failure of the new floor adhesive.

WOOD FLOOR PREPARATION

All existing wood surfaces must be free of chemicals, oils, wax, paint, varnish, old adhesives and any other contaminant that may prevent the required adhesion of the carpet backing system to the floor. Additionally, it is strongly recommended that all wood floors be suspended a minimum of eighteen (18) inches, be cross-ventilated, and have an appropriate vapor barrier installed.

Wooden sub-floors bonded directly to, or laid over, sleepers on concrete that directly contact the ground are not an acceptable substrate for any carpet installation. Possible moisture contained in the concrete can cause the wood to swell, buckle, or eventually rot.

A double-layer wood sub-floor suspended over open wood joists (sixteen inches on center or less) and made of ½ inch plywood rated as either APA underlayment INT (interior type), APA underlayment INT (with exterior glue), APA underlayment CC plugged ext. (exterior type), is acceptable as an adhesive subfloor. Single layer tongue and groove with a maximum three (3) inch face should be covered with a ¼ inch APA underlayment grade plywood. Single layer floors not of tongue and groove construction and having more than a three (3) inch face should be covered with a ½ inch APA underlayment grade plywood. An uncupped, double-layer tongue and groove wood floor is a suitable subfloor for adhesive carpet installations.

The warranties and performance guarantees are the responsibility of the plywood or underlayment manufacturer and not the manufacturer of the carpet.

J+J/Invision does not recommend the use of chipboard or particleboard as carpet underlayment material.

PRIOR TO INSTALLATION

Before actual installation begins, check the following list to ensure compliance with every detail:

CAUTION: Carpet performs best when the major traffic runs the carpet length. It is not recommended that the carpet length be run the corridor width, producing a seam every 12 feet across the corridor.

a. Carpet rolls transported to the job site are free of any wrinkles or creases. DO NOT BUNDLE! Bundling will cause creases and wrinkles that may prove difficult to remove during installation. If loose bundling or bending is absolutely necessary to transport the carpet to the installation site, unroll the carpet as soon as it is delivered. If possible, do not bend, fold, or bundle any carpet.

b. Floors are properly prepared.

c. Building, carpet and adhesive must be preconditioned for 48 hours prior to installation at a constant temperature and relative humidity between 65º to 95ºF and 10% to 65%RH, respectively.

d. Carpet is laid out according to roll sequence and approved layout specifications.

e. Shop drawings/plans are prepared for the area to be carpeted.

f. Plan checked against the available roll lengths and dye lot numbers to keep cross seaming to a minimum. If using more than one dye lot, record on the shop drawing the exact location where the dye lot change will occur to minimize possible shade or texture differences. This transition point must be recorded on the shop drawing.

g. Seam locations are planned so that no perpendicular seams will occur at doorways or entries. All doorway seams should be centered directly under the door.

h. Seams should run with the flow of traffic. The only exception occurs when windows allow incoming daylight to highlight seams from the side. In this situation, run the seams into the daylight to reduce the visibility of the seam.

i. All seams are to be trimmed properly with pattern match consideration and seam sealed.

j. Pile is running in the same direction. Directional arrows on backing and/or pile yarn sweep on fill pieces.

k. Correct adhesives on hand and correct trowel notch size determined.

l. There is enough manpower available to professionally complete the installation.

NOTE: Prior to beginning a direct glue-down installation, the installer must be familiar with all information contained in the section, "Floor Preparation for Adhesive Carpet Installations".

Direct glue-down installations can involve carpets with several types of backings; those may include PremierBac Plus, Endure Plus, and TitanBac Plus.

Regardless of the type carpet backing applied, direct glue-down installations require a clean, sound substrate.

This section is divided into six major topics:

· Preparatory Information for Adhesive Carpet Installations
· Procedures for Installing PremierBac Plus, Endure Plus, TitanBac Plus
· Procedures for Stretch-In Patterned carpet
· Pattern Match Policy
· Procedures for Installing Nexus and eKo modules

CARPET LAYOUT

Dry lay entire area prior to adhesive application in order to allow the carpet to become relaxed and conditioned to the room environment. Dry lay carpet in the area a minimum of 24 hours prior to the actual carpet installation.

J+J/INVISION APPROVED ADHESIVE AND MINIMUM TROWEL NOTCH SIZE

Commercialon® Premium Carpet Adhesive is approved for all direct glue-down installations. The floor adhesive is to be spread uniformly over the subfloor with the correct trowel leaving adhesive ridges of sufficient size to achieve full

and complete coverage of the carpet backing. THIS REQUIREMENT IS NOT OPTIONAL!

PremierBac Plus, Endure Plus and TitanBac Plus installations require a minimum U notch trowel size of ⅛ inch wide ⅛ inch deep and spaced at ⅛ inch. If in doubt about the trowel notch size to use, spread some adhesive onto the floor that is to be covered for a test area. Lay the carpet into the adhesive and roll the carpet with the appropriate roller. Then, pull the carpet off the floor and confirm there is full and complete coverage of the carpet backing while still maintaining complete adhesive floor coverage. If necessary, adjust notch size to achieve the required full and complete coverage of the carpet backing.

SEAM PREPARATION

Seams shall be prepared by trimming off the mill, or factory edge. This cut is to be made far enough in from the carpet edge so that a clean and even seaming edge is achieved, considering pattern match a minimum of one inch must be trimmed off each edge. Cutting tools with razor-type blades, such as cushion-back cutters, should be used for seam preparation. All recommendations for seam preparation and cutting must be followed.

All cut edges must be properly treated with a ⅛ inch bead of Commercialon® Seam Sealer. The sealer must be applied along the cut edge of the carpet at the point where the face yarn meets the primary back. Any excess sealer, which contaminates the carpet face, must be removed immediately using white cotton towel wet with soap and water. It cannot be 100% removed after drying!

SEAM TRIMMING

· Loop Pile Constructions: If the carpet is a straight row, level, or multi-level loop construction, insert a row finder, a screwdriver or the nose end of the cushion-back cutter (with the blades retracted) between tuft rows. Run tool the entire length of the carpet to be seamed, separating the yarn and opening a path for the cutter. Trim into the body of the carpet far enough from the factory edges to obtain full-face weight and good lamination of the backing system. This distance will vary from a minimum of 1 to 2 inches from the edge on straight row constructions to as much as a 3 inch minimum on some graphic constructions. Using the cushion-back cutter, separately trim both seam edges by cutting between the tuft rows. Cut close to the main body to obtain a tight seam by trimming with the blade close to

the seam edge.

· Cut Pile Constructions: In order to obtain a uniform pile height on both seam sides, it may be necessary to trim in further on cut piles than on level loop construction. Depending upon pile height, this distance will range from a minimum of 1 to 2 inches into the body of the carpet.

· Pattern Constructions: These carpets must be trimmed from the face using either a loop pile cutter (Roberts #10-152) or a cushion- back cutter. Trim into the body of the carpet far enough from the factory edges to obtain full face weight and good lamination of the backing system at a point of pattern match.

Because of the shifting mechanism of pattern tufting equipment, there may be a variance of 2" to 6" in width after selvage edges are trimmed. To separate the rows, use a row finder, cushion-back cutter with the blades retracted or a screwdriver with the blade corners rounded off and run the instrument the length of the seam.

SEAM CHARACTERISTICS

Regardless of the installation method, a properly constructed seam:

· Has cleanly trimmed edges properly sealed with Commercialon® Seam Sealer.

· Has tightly abutted edges without gaps.

· Maintains reasonable pattern match where applicable.

· Will not be invisible.

PATTERN CARPET

PATTERNED CARPET CONSIDERATIONS

It is imperative that all parties discuss pattern configuration, the backing system, installation method, bow, skew and possible pattern variation to prevent the possibility of having a very dissatisfied customer.

Subsequent to the specification, the specifier, end user and the carpet installation contractor must all understand the J+J/Invision pattern match policy regarding tolerances for bow, skew, trueness of edge and pattern repeat variation.

All parties must agree upon reasonable expectations relative to the pattern alignment, pattern impact on quantities and the labor cost to install patterned carpet. The larger the pattern, the easier to match and install.

SEQUENCE PATTERN CARPET BY PATTERN SIZE

Patterned carpet must be sequenced by the pattern size length keeping dye lots seperate not by manufacturing roll numbers; however do not mix dye lots.

Patterned carpet is a textile product, and as such, it may not perfectly match at the seams. The flooring contractor must be familiar with the carpet's styling to be installed prior to delivering the carpet to the job site.

Also, the technician must be qualified and have proper equipment (power stretchers, mini-stretchers, etc.).

J+J/Invision patterned carpet must be installed working from the longest pattern in the dye lot to the shortest pattern: The goal is to minimize the effort associated with bringing the pattern into register at seams. This is facilitated through sequencing of the rolls for installing the longest pattern in the dye lot first, then the next longest pattern, etc.

Continue in this manner until the installation is complete. Remember it is very difficult, if not impossible, to shrink / compress carpet patterns; however carpet patterns can be stretched into register.

a. Dry lay the entire area before gluing any carpet; this process allows for documentation of panel sizes and fine-tuning of pattern sequencing.

b. As a minimum check, measure the pattern repeat at the open end of each roll. All measurements should be to the nearest ¼”. J+J/Invision’s maximum tolerance for pattern repeat variation is set at 2" in every 15 linear feet.

c. When possible, rolls 60’ and longer should be checked at open end, roll center, and core end for pattern length, then sequenced accordingly.

J+J/Invision does NOT GUARANTEE AN EXACT OR PERFECT MATCH ON ANY PATTERNED QUALITIES. REASONABLE PATTERN MATCH MAY BE ATTAINED BY USING TRAINED CERTIFIED CRAFTSMEN OR INSTALL

CERTIFIED PROFESSIONALS www.installfloors.org AND BY FOLLOWING OUR PATTERNED INSTALLATION PROCEDURES.

PATTERNS

Select the match point far enough in from the factory edges to obtain full face weight and good lamination of the backing system. Tufted patterns are to be row cut so that when the carpet panels are seamed together, the pattern will be completed (i.e., a diamond pattern should be seam trimmed point to point, thus splitting the diamond into halves). Run a row finder or a cushion-back cutter with the blades retracted down the length of the selected tuft row. This procedure will open the face yarn and clear a path for easier seam trimming. By staying between the selected tuft rows with the cushion-back or loop pile cutter, there will be no deviation from the selected match point as long as the selected tuft row is not crossed. Keep the blade of the seam-trimming tool close to the seam side. Do not trace cut, or double cut pattern carpet having a published pattern repeat.

1. Determine seam locations and cut sufficient lengths of carpet to cover the installation area. Be sure to allow for pattern match, plus enough extra carpet along each wall (approximately 2 to 3 inches) for trimming.

2. Sequence the cuts, count 30 patterns and compare the measurements to determine the best pattern sequence.

3. Align the breadths so the best possible match occurs. Align the rolls working from the largest pattern repeats down to the shortest patterns. Virtually the only way to achieve proper pattern match is to dry lay an entire area before proceeding.

4. Align the pattern along the wall and balance the pattern within the room so the best effect is obtained. For instance, if ⅓ of the pattern is showing on one wall, have ⅓ showing on the opposite wall.

5. Strike a chalk line on the floor the total length of the seam nearest the center of the area to be covered. Ensure that this seam line is square with the area.

6. Align the trimmed seam edges to the chalk line. Match the pattern at the seam center.

7. Should the pattern not match along the length of the seam, it will be necessary to power stretch the short pattern seam edge into register with the long pattern seam side.

8. Turn back the seam side with the long pattern. Apply Commercialon® Premium Carpet Adhesive 4 feet to 6 feet wide the full length of the seam side to the chalk line. Ensure that the trowel will supply enough floor adhesive for the required full and complete transfer onto the carpet back.

9. Following the correct open time, lay this first seam side into the adhesive. Stretch and adjust so that this seam edge is aligned with the chalk line.

10. Ensure that the second seam side is matched at the center of the seam length. Check pattern alignment as far toward each end as the pattern matches. Mark the floor at these points.

11. Turn back the second seam side and apply the floor adhesive 4 feet to 6 feet wide down the length of the seam to the pattern matched marks on the floor.

12. Apply Commercialon Premium Carpet Seam Sealer to cut edges that are now matched.

13. Drop in and close up the seam in the pattern matched area.

14. Clean any carpet seam sealer from the carpet face yarn immediately with white cotton toweling moistened with soap and water.

15. Tractor seam area, and roll the carpet both directions with the appropriate roller. It may be necessary to stay nail the carpet in place.

16. Roll up the second seam side from both ends to the area of the applied floor adhesive.

17. Apply the floor adhesive 4 feet to 6 feet wide down one end of the rolled up seam length about 10 feet.

18. Apply Commercialon Premium Carpet Seam Sealer to all cut edges at seams and transitions.

19. Roll the carpet into the adhesive, close the seam and use a power/mini stretcher to align the pattern.

20. Use a "dead man", made of a wooden pallet with a ¾" piece of plywood nailed to one side of the pallet, completely covered with "C" tackless strip nailed in with all pins facing the same direction. The pallet being tiered allows for easy positioning of the dead man. The dead man may then be stretched from any angle or location. Only 2 stretcher sections will be needed. Use care when positioning the dead man, lifting it in a slight sweeping motion toward the power stretching direction to avoid pulling out any carpet face yarn.

21. Stay nailing may be required to hold carpet in place until adhesive sets up.

22. Complete the seam makeup working from the seam center towards each end.

23. Power stretch, align, check diagonals and stay nail to complete seam.

B. Installation Instructions for J+J/Invision Styles of PremierBac Plus, Endure Plus and TitanBac Plus Secondary Backed Carpet

The following procedures are to be used as a guide for proper installation techniques of PermierBac Plus, Endure Plus and TitanBac Plus carpets.

Prior to beginning the installation, ensure that all information presented in Topic A, *Preparatory Information for Adhesive Carpet Installations* has been followed. The following instructions are for the installer who is an experienced and qualified professional. ENDURE PLUS AND TITANBAC PLUS CAN ONLY BE INSTALLED BY THE DIRECT GLUE METHOD.

Patterns: Select the match point far enough in from the factory edges to obtain full face weight and good lamination of the backing system. Tufted patterns are to be row cut so that when the carpet panels are seamed together, the pattern will be complete (i.e., a diamond pattern should be seam trimmed point to point, thus splitting the diamond into halves). Run a row finder or a cushion-back cutter with the blades retracted down the length of the selected tuft row. This procedure will open the face yarn and clear a path for easier seam trimming. By staying between the

selected tuft rows with the cushion-back or loop pile cutter, there will be no deviation from the selected match point as long as the selected tuft row is not crossed. Do not trace cut or double cut pattern carpet having a published pattern repeat.

ADHESIVES:

All TitanBac Plus and Endure Plus backed carpets require use of J+J/Invision Commercialon adhesives.

TROWEL SIZE:

The minimum trowel size to be used for the installation of PremierBac Plus, Endure Plus and TitanBac Plus is a U notch ⅛"w x ⅛"d x ⅛"s. Floor conditions may require a trowel with deeper notches.

ADHESIVE APPLICATION:

The floor adhesive shall be spread uniformly over the subfloor with the correct trowel leaving adhesive ridges of sufficient size to achieve full and complete transfer of coverage from the subfloor to the carpet backing.

SITE CONDITIONS:

The floor temperature must be a minimum of 65˚ F, not to exceed 95˚ F and the humidity a maximum of 65%. These conditions must be maintained a minimum of 48 hours prior to installation and continually maintained 24 hours a day for at least 72 hours following completion of the installation.

HANDLING:

Use only lift trucks equipped with carpet booms. Bending or folding is not recommended.

PREPARATORY INSTALLATION INFORMATION (Read all instructions below prior to proceeding.)

1. Dry lay the area to be carpeted, checking against the available roll lengths and dye lot numbers to avoid extra cross seaming. Take into consideration all support columns, entrance areas and other obstructions to attain the best carpet layout.

2. Then select a starting point near the center of the area. Strike a white chalk line on the floor to mark the first seam

location. Be sure this first seam is parallel to the outer walls.

3. Check the carpet for direction of pile lay, being careful to keep all the carpet pile laying the same direction.

4. Cut two lengths of carpet allowing about 1 to 2 inches for non-patterned styles or a full pattern for patterned styles to run up the walls for future trimming, and position the lengths of carpet side by side along the chalk line with the pile lay of both in the same direction.

5. Perform seam trimming operations as described in *Seam Preparation and Seam Trimming* Information for Adhesive Carpet Installations.

6. Move the first length of carpet up to the starting chalk line and stay nail along its centerline, parallel to the seam. During this procedure, work out any wrinkles allowing the carpet to lie smoothly on the floor. Stay nail at approximately 12 to 18 inch intervals following the centerline of the carpet along its entire length. Make sure the carpet does not shift from the chalk line. Drive the nails into the floor just far enough (approximately ⅛ inch) to temporarily hold the carpet in place. Use the strip of carpet that was trimmed from the width as a “marker” and nail staytack through it. In this manner, the stay nails will be clearly visible, and none will be lost in the carpet as the installation proceeds.

7. Now check the yarn alignment of the second cut against that of the first and decide whether the yarn will align properly to produce a tight seam.

8. A compression of 1/16 inch is recommended for compression seam set up. Ensure that both lengths of carpet lay perfectly flat and tension-free.

9. Stay nail the second length as in Step 6.

10. Carefully fold back both lengths toward stay nails. Carpet may become torn or ripped if pulled against stay nails.

11. The exposed floor between the folded cut should be swept and vacuumed, if necessary.

12. When installations are on very dry concrete, it is recommended that water be used to damp mop the floor. (Be certain to remove all puddles or excess moisture.) For relatively non-porous surfaces such as epoxy-terrazzo, vinyl or steel, it is important to allow sufficient time for the adhesive to become tacky before applying the carpet.

13. With a U-notched trowel (minimum size of ⅛"w x ⅛”d x ⅛"s), spread the Commercialon Premium Carpet Adhesive evenly and without interruption using a sweeping semi-circular motion. Apply the adhesive using as many craftsmen as necessary to ensure uniform adhesive open time the length of the seam length. Spread the adhesive in a straight line at the folds so that there are no scalloped edges to spread to when the uncemented portion is turned back. The trowel must be kept clean and periodically renotched as required. The floor adhesive must be spread uniformly over the subfloor with the correct trowel leaving adhesive ridges of sufficient size to achieve full and complete coverage of the carpet backing.

14. In most installations Commercialon Premium Carpet Adhesive requires no open time. Conventional adhesives will require sufficient open time to provide green grab (light adhesion to the floor). Do not let the adhesive skin over. Use the tacky wet installation method. Open time will vary depending upon environmental conditions, generally 20 minutes but not to exceed one hour. Lay the folded edge of the first cut into the adhesive. To do this, the installers should position themselves at intervals along the entire length of the fold, grasp the folded edge, lift it up, and walk towards the seam. The installer in the middle of the roll walks ahead thus forming a wedge. A cardboard carpet roll core cut into 2 foot lengths can be used for smoothing the carpet into place.

15. Carefully apply a ⅛" continuous bead of Commercialon Premium Carpet Seam Sealer to the cut edge at the point where the face yarn meets the primary backing to lock in the tufts and seal the edge of the first cut.

16. Next, grasp the folded edge of the second breadth and place it over the adhesive as in Step #14 with the exception that this flap should be “walked in” evenly rather than using the wedge method. “Walk in” all but 1 foot of the second breadth and fold this amount back again.

17. The installers should now step onto cut #1, face cut #2, and holding thumbs up, grasp the 1 foot fold of cut #2

and place it into the adhesive approximately ¼ inch from the edge of cut #1. Slide this edge until it tightly abuts the edge of the first roll. The 1/16" overage will help achieve a tight, compressed seam. Do not let the seam peak.

18. Hold the edge in place by kneeling on it and work the excess created by the 1/16" overlap out toward the stay nails. The seam adhesive on the edge of the first length will transfer to the seam edge of the second length to seal the seam and prevent fraying. In case of slight peaks or gaps, a knee kicker or mini-stretcher may be needed for adjusting the carpet slightly to obtain a closed and even seam. Immediately clean up wet Commercialon Premium Carpet Seam Sealer from face yarn with a clean white cotton cloth wet with soap and water. Do not allow sealer to dry in any area in need of clean up. Brush or roll any looseness and trapped air bubbles away from the seam with a light roller or carpet tractor. This procedure must be complete before the adhesive sets up.

19. Turn the unglued portion of the first length of carpet back toward the seam. Spread adhesive for a 6-foot width along the entire length. Lay the carpet onto the adhesive. Brush or roll out looseness and trapped air toward the wall, i.e., away from seam.

20. Cut the next and continuing lengths of carpet and position each. Repeat the above procedure to complete the installation.

21. While the adhesive is still tacky, the carpet must be pressed down along the wall. As each length is installed, trim and fit at walls and around jogs, pillars, etc., using the Roberts 10-905 wall trimmer and Roberts 10-440 hooked blades. The carpet can now be rolled with a 75-pound roller.

22. If cross seaming is necessary, follow the procedures outlined in the next subtopic entitled *Cross Seaming*.

23. The exposed edges MUST always be protected by a suitable edge molding and seam sealed. Resilient moldings can be fastened to the floor by contact cement or a similar material. The metal can be fastened with concrete nails or other appropriate fastening devices.

24. Clean up Commercialon Premium Carpet Adhesive while still wet using soap and water. Apply with a clean, white cotton cloth using a blotting action. Do not saturate the carpet by pouring water directly onto the carpet's surface.

CROSS SEAMING

When cross seaming is necessary, ensure that the direction of the pile is the same for all pieces and lay each piece into position allowing a minimum of 2 inches overlap with a pattern match at the seam area and 1 – 2 inches for trimming at the wall. Trim all lengthwise edges, and fit the trimmed edges to the trimmed edge of the last full width. Reverse roll both seam sides prior to trimming to establish a downward carpet curl. If the carpet will allow, trim both seam edges of the cross seam at a pattern match point at a stitch row. Patterned carpet must be matched and seam closed which may require use of a mini-stretcher or knee kicker and stay-nails.

On all seams, length or cross, all edges must be sealed with Commercialon Premium Carpet Seam Sealer. This step must be followed and is not optional.

CAUTION:

- *Carpet should not be subjected to traffic for at least 24 hours after the completion of the installation.*
- *Do not wet clean any direct glue-down carpet until the installation has been completed for thirty (30) days.*
- *Do not cover a direct glue-down installation with a moisture barrier protection such as plastic, as it will cause buckling and possible mildewing by "trapping" moisture in the adhesive. Protect the installation with a nonstaining building paper.*
- *Flooding voids manufacturer's warranties.*

PATTERN CARPET

PATTERNED CARPET CONSIDERATIONS

It is imperative that all parties discuss pattern configuration, the backing system, installation method, bow, skew, and possible pattern variation to prevent the possibility of having a very dissatisfied customer.

Subsequent to the specification, the specifier, end user and carpet installation contractor must each understand the

J+J/Invision pattern match policy regarding tolerances for bow, skew, trueness of edge and pattern repeat variation. All parties must agree upon the expectations relative to the pattern alignment, pattern impact on quantities and the labor cost to install the patterned carpet properly. The larger the pattern, the easier to match and install.

SEQUENCE PATTERN CARPET BY SIZE

Patterned carpet requires sequencing by the pattern size keeping dye lots seperate, not by manufacturing roll numbers. Patterned carpet is a textile product, and as such, will seldom perfectly match at the seams. The flooring contractor must:

a. know what product he is installing prior to opening the carpet at the job site.

b. have the qualified personnel, equipment (power/mini stretchers, etc.)

c. be training to properly install the specified product to the customer's realistic expectations.

J+J/Invision patterned carpet must be installed working from the longest pattern in the dye lot to the shortest pattern; or the goal is to minimize the labor cost in bringing the pattern into register at seams. Install the longest pattern in the dye lot to the next longest pattern – continuing in this manner to the shortest pattern in the dye lot. Compressing of patterns in carpet can be very challenging or impossible.

a. Dry lay the entire area before gluing any carpet. This process allows for documentation of panel sizes and fine-tuning of pattern sequencing.

b. As a minimum check, measure the pattern repeat at the open end of each roll. Ideally, all measurements should be to the nearest ¼". If possible rolls 60' and longer should be checked at open end, roll center and core end.

J+J/Invision does NOT GUARANTEE AN EXACT OR PERFECT MATCH ON ANY PATTERNED QUALITIES. REASONABLE PATTERN MATCH MAY BE ATTAINED BY USING TRAINED, CERTIFIED CRAFTSMEN OR INSTALL CERTIFIED PROFESSIONALS www.installfloors.org AND BY FOLLOWING OUR PATTERNED INSTALLATION PROCEDURES.

C. Direct Glue-Down Procedures

Seam Trimming Note: Do not trace cut or double cut seams J+J/Invision recommends row cutting all seams.

PATTERNS

To cut seams, select the match point far enough in from the factory edges to obtain full face weight and good lamination of the backing system. Patterned carpets are to be row cut so that when the carpet panels are seamed together, the pattern will be completed (i.e., a diamond pattern should be seam trimmed point to point, thus splitting the diamond into halves). Run a row finder or a cushion-back cutter with the blades retracted down the length of the selected tuft row. This procedure will open the face yarn and clear a path for easier seam trimming. By staying between the selected tuft rows with the cushion-back or loop pile cutter, there will be no deviation from the selected match point as long as the selected tuft row is not crossed. Do not trace cut or double cut pattern carpet having a published pattern repeat.

Note: Manufacturing equipment used to tuft patterned carpets may create visible lines in both the length(pattern lines) and width directions (shift marks). This characteristic will not always be detectable in small samples and is not considered a manufacturing defect. Because of the shifting mechanism of graphics tufting equipment, there may be a variance of 1" to 3" in width after selvage edges are trimmed.

PATTERN ALIGNMENT TIPS FOR DIRECT GLUE-DOWN INSTALLATIONS

1. Determine seam locations and cut sufficient lengths of carpet to cover the installation area. Be sure to allow for pattern match, plus enough extra carpet along each wall (approximately 3 inches) for trimming.

2. Sequence the cuts, count 30 patterns and compare the measurements to determine the best pattern sequence.

3. Following previously determined pattern size sequence, align the breadths so the best possible match occurs. The rolls should now be closely aligned working from the largest pattern repeats down to the shortest patterns. Virtually the only way to achieve proper pattern match is to dry lay entire area before proceeding.

4. Align the pattern along the wall and balance the pattern within the room so the best effect is obtained.

5. Strike a chalk line on the floor the total length of the seam nearest the center of the area to be covered. Ensure that this seam line is square with the area.

6. Align the trimmed seam edges to the chalk line. Match the pattern at the seams center.

7. Should the pattern not match along the length of the seam, it will be necessary to power stretch the short pattern cut into register with the long pattern seam side.

8. Turn back the seam side with the long pattern. Apply the Commercialon Premium Carpet Adhesive 4 feet to 6 feet wide the full length of the seam side to the chalk line. Ensure that the trowel will supply enough floor adhesive for the required full and complete coverage of the carpet back. (Too little adhesive will not allow the carpet to be moved into alignment.)

9. Following the correct open time, lay this first seam side into the adhesive. Stretch and adjust so that this seam edge is aligned with the chalk line.

10. Ensure that the second seam side is matched at center of seam length. Check pattern alignment as far toward each end as the pattern matches. Mark the floor at these points.

11. Turn back the second seam side and apply the floor adhesive 4 to 6 feet wide down the length of the seam to the pattern matched marks on the floor.

12. Apply the Commercialon Premium Carpet Seam Sealer to the cut edge that is now matched.

13. Drop in and close up the seam in the pattern matched area.

14. Clean any carpet seam sealer from the carpet face yarn immediately with white cotton towel moistened with soap and water.

15. Tractor seam area, and roll the carpet both directions with the appropriate roller.

16. Roll up the second seam side from both ends to the area of the applied floor adhesive.

17. Apply the floor adhesive 4 feet to 6 feet wide down one end of the rolled up seam length about 10 feet.

18. Apply the Commercialon Premium Carpet Seam Sealer to the next seam side the same distance. Roll the carpet into the adhesive, close the seam and use a power /mini stretcher or knee kicker to align the pattern. Use a dead man such as wooden pallet with a ¾" piece of plywood nailed to one side of the pallet completely covered with “C” tackless strip nailed in with all pins facing in the same direction. The pallet being tiered allows for easy positioning of the dead man. The dead man may be used to stretch from any angle or location. Only 2 stretcher pole sections will be needed. Lifting of the dead man in a slight sweeping motion toward the power stretcher direction will avoid pulling any carpet face yarn.

19. Roll the carpet into the adhesive, close the seam and use a power /mini stretcher or knee kicker to align the pattern.

20. Stay nailing may be required to hold carpet in place until adhesive sets up.

21. Complete the seam makeup working from the seam center towards each end.

22. Power stretch, align, check diagonals and stay nail to complete seam.

D. Procedures for Stretching-in Patterned Carpet

PATTERN CARPET CONSIDERATIONS

Patterned carpet requires sequencing of rolls according to pattern size. (See Pattern Alignment Section).

Achieving a proper patterned carpet installation requires substantial installation experience, additional labor, and thus can be more costly. Patterned carpet may be more easily installed by the direct glue-down method.

It is imperative that all parties discuss pattern configuration, the backing system, installation method, bow, skew and pattern variation to prevent the possibility of having a dissatisfied customer.

Subsequent to the specification, the specifier, end user and the carpet installation contractor must all understand J+J/Invision's pattern match policy regarding tolerances for bow, skew and pattern repeat variation. All parties must agree upon the expectations relative to the pattern alignment, pattern impact on quantities and the labor cost to install the pattern carpet.

PATTERN ALIGNMENT

1. Determine seam locations and cut sufficient lengths of carpet to cover the installation area. Be sure to allow for pattern match plus enough carpet along each wall (approximately 3") for trimming.

2. Sequence the cuts, count 30 patterns and compare the measurements to determine the best pattern sequence.

3. Align the breadths so the best possible match occurs. Align the rolls working from the largest pattern repeats lengths down to the shortest. Virtually the only way to achieve proper pattern match is to dry lay the entire areas before proceeding.

4. Align the pattern along the wall and balance the pattern within the room so the best effect is obtained.

5. Should the pattern not match after completing the preceding steps, it will be necessary to power stretch the short pattern to the longer pattern. It is a rule to start at the center of the length of carpet and work the pattern in opposite directions until a match is obtained.

6. After the match is obtained in the center of the length of the two breadths to be joined, stay nail across both widths. Set up the power stretcher so the head of the stretcher will be 2 or 3 feet in front or ahead of the stay nails on the side with the short pattern. Stretch the short pattern to the long pattern until an acceptable match is obtained, and stay nail the carpet on both sides of the seam to hold the match in place. Reset the stretcher by moving it 2 or 3 feet and stretch until the two sides match, then stay nail. The carpet must be stretched at 2 to 3 foot intervals.

There are occasions when it will be necessary to swap sides of the seam with the stretcher.

7. Once the patterns are matched and both edges are butted together, butter both edges with Commercialon Seam Sealer. Take the carpet roll core and place it under the seam. The carpet core will keep the seam edges separated until the Commercialon Premium Carpet Seam Sealer dries.

8. When the sealer dries, remove the core and seam the carpet together. Allow the seam tape adhesive (hot melt or latex) to cure; then remove the stay nails.

9. The area is now ready to power stretch. (See Power Stretching Procedure.)

E. Pattern Match Policy

· J+J/Invison does NOT GUARANTEE AN EXACT PATTERN MATCH ON ANY OF OUR PATTERNED CARPET. Carpet is a flexible textile material and some degree of shrinkage and/or stretch occurs during the manufacturing process. For this reason, an exact pattern match cannot be assured on patterned carpet. The installation of patterned carpet requires more time, expense and expertise than installing carpet with no pattern. J+J/Invision recommends that our carpet be installed by certified installation contractors or INSTALLcertified professionals. A reasonable pattern match should be attainable through following proper installation procedures.

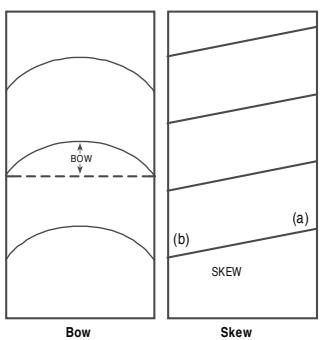
· PATTERN BOW – Maximum bow is 1".
To measure, stretch a string across the width of the carpet from the pattern match point on one side to the corresponding match point on the opposite side. Measure the match point of the greatest separation from the string.

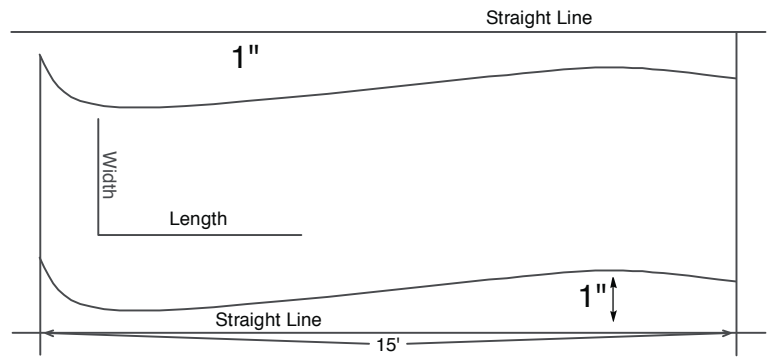
· PATTERN SKEWING – Maximum skew is 1¾".
This is sometimes referred to as being on the bias. Square the carpet on one end. If the pattern on one side (a) is farther from the squared end than the pattern on the opposite side (b), then the pattern is skewed or on a bias.

· PATTERN RUN OFF OR REPEAT VARIATION – Maximum lengthwise repeat variation is 2" in 15' of carpet. Exactly match the sequenced carpet pattern at any point along the seam length. The pattern mis-match should be no more

than 2" in 15'. (Linear Feet)

· TRUENESS OF EDGE – Maximum variation is 1" in 15' of length. This is sometimes referred to as serpentine edge. This condition is most visual along the carpet edges, but will to a lesser degree be obvious into the body of the carpet. Do not attempt to correct trueness of edge by cutting the carpet to a straight line. The carpet must be row cut, on pattern then nudged or stretched back into a straight line using knee kickers or mini-stretchers. STOP — If you have any doubts about installing this carpet to meet the customer's expectations. Call J+J/Invision's Maintenance and Installation Department at 800.241.4586, ext. 8223.





CAUTION:

· *Carpet should not be subjected to traffic for at least 24 hours after the completion of the installation.*

· *Do not wet clean any direct glue-down carpet until the installation has been completed for thirty (30) days.*

· *Do not cover a direct glue-down installation with a moisture barrier protection such as plastic, as it will cause buckling and possible mildewing by "trapping" moisture in the adhesive. Protect the installation with a nonstaining building paper.*

· *Flooding voids manufacturer's warranties.*

stretch-in installations

NOTE: Prior to beginning a stretch-in installation, the installer must be familiar with the information presented in the Introduction.

PremierBac Plus is the only J+J/Invision backing system that is approved for installation by the stretch-in method. This section contains information on proper preparatory and installation techniques for installing PremierBac Plus backed carpet via the stretch-in method. These instructions are for the qualified professional installer. Carefully read all instructions prior to beginning the installation, and ensure all proper tools and materials are readily available.

This section is structured as follows:

A. Preparatory Information for Stretch-In Installations
   1. Floor Preparation
   2. Tackless Strip and Carpet Moldings
   3. Separate Cushion Specifications
   4. Stretching Considerations

B. Installation Procedures
   1. Prior to Installation
   2. Tackless Strip and Separate Cushion Installation
   3. Recommended Seaming Materials
   4. Seam Preparation
   5. Seam Trimming
   6. Hot Melt Tape Seaming Procedures
   7. Power Stretching Procedures

C. Procedures for Stretching-In Patterned Carpet
   1. Procedures
   2. J+J/Invision Pattern Match Policy

A. Preparatory Information for Stretch-in Installations

FLOOR PREPARATION

a. Fill all floor cracks or gaps over ¼" wide with a latex base underlayment.

b. Fill and level all low or shallow places with a latex base underlayment.

c. Level all high spots or ridges to prevent excessive carpet wear.

d. Sweep the area clean.

e. Floor temperature must be a minimum of 65ºF and not to exceed 95ºF and relative humidity a maximum of 65% for at least 48 hours prior to installation. Additionally, these conditions should be constantly maintained both during and after installation.

TACKLESS STRIP AND CARPET MOLDINGS

Carpet installed over a separate cushion will use a tackless strip of water-resistant plywood with two rows of rust-resistant angular pins. The pins must be of sufficient length to penetrate through the carpet backing, but not so long as to be seen from the surface or to be a safety hazard. The thickness of the tackless strip will be the minimum suitable for the thickness of the cushion specified; yet, under no circumstances will the dimensions of the tackless strip be less than ¼ inch thick and 1 inch wide. For large areas subjected to heavy traffic, or when any dimension exceeds 30', use a tackless strip with three rows of pins. (Architectural Strip) Install the tackless strip using one of the following methods:

a. Pre-nail for wood or concrete floors.

b. Adhere with a quality adhesive as recommended by the tackless strip manufacturer.

c. Drill and pin by driving square aluminum pins into round holes to form a permanent anchor on an approximately 6-inch center.

Securely fasten the carpet to the tackless strip so that all the pins have penetrated the carpet backing and will hold

the carpet stretch. Secure all raw cut edges behind the tackless strip so that no frayed ends or edges show.

Carpet moldings must be specified prior to installation. All carpet moldings will be anchored using the same methods described for installing tackless strips. Carpet moldings used to finish carpet edges in doorways, etc., must be marked on shop drawings and approved by the owner's representative prior to installation.

SEPARATE CUSHION SPECIFICATIONS

Cushions specified for use with J+J/Invision commercial carpet are to be high density, low profile, with a scrim, fabric or film cover. This cover provides a slip surface so that the cushion will remain in place as the carpet is shifted during installation. This cover also provides sufficient reinforcement to stop the staples from pulling through the cushion. Generally speaking, a carpet cushion which has some "give", yet is still firm, is preferable. A cushion with excessive vertical flexing can produce a loose or wrinkled carpet, split seams, delamination of the secondary backing, foot and leg fatigue and accelerated wear.

Minimum recommended criteria for satisfactory carpet cushion performance in commercial installations for Class I, Moderate Traffic; Class II, Heavy Traffic; and Class III, Extra Heavy Traffic are as follows:

FIBER	CUSHION TYPE
1. Synthetic Fiber	Wt. 36 oz.; Th. .35" - 5% min.; D 8.0 pcf
2. Resinated Recycled Textile Fiber	Wt. 38 oz.; Th. .375" - 5% min.; D 8.0 pcf

RUBBER	CUSHION TYPE
1. Flat Sponge	Wt. 62 oz.; Th. .150" - CR@25%=4.0 psi min; D 26 pcf
2. Textured Flat Sponge	Wt. 80 oz.; Th. .250" - CR@25%=1.75 psi min; D 26 pcf
3. Reinforced Rubber	Wt. 54 oz.; Th. .200"- CR@25%=2.0 psi min; D 22 pcf

POLYURETHANE	CUSHION TYPE:
1. Grafted Prime	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; CLD 25% 130 lb.
2. Densified Prime	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; Polyurethane; CLD 65% 7.0 psi
3. Bonded	D 14 pcf - 5% min.; Th. 0.25 - 5% min.; CLD 65% 36.2 psi; Particle size ½" max. Polyester foam content 50% max.
4. Mechanically	D 19 pcf; Th. .183"; Frothed Polyurethane; CFD 65% 30.5 psi

J+J/Invision will not honor any claims relating to seam splitting, edge raveling, buckling, delamination or accelerated wear for separate cushion installations not complying with the cushion specifications depicted in this manual.

STRETCHING CONSIDERATIONS

PremierBac Plus requires 1.0% to 1.5% (1 to 1 ½ inches) of stretch per 10 feet of carpet in both the length and width. Stretch-in installations will be accomplished by using power stretchers and other devices as necessary to properly stretch the carpet.

B. Installation Procedures

PRIOR TO INSTALLATION

Before actual installation begins, check the following list to ensure compliance with every detail:

a. Carpet transported to the job site in rolls free of any wrinkles or creases. DO NOT BUNDLE! Bundling will cause creases and wrinkles which may prove difficult to remove during installation. If loose bundling or bending is absolutely necessary to transport the carpet to the installation site, unroll the carpet as soon as it is delivered.

b. Floors properly prepared.

c. Building and carpet preconditioned for 48 hours prior to installation at a constant temperature and relative humidity between 65º to 95ºF and maximum of 65% relative humidity.

d. Shop drawing/plan prepared for the area to be carpeted.

e. Plan checked against the available roll lengths and dye lot numbers to keep cross seaming to a minimum. If using more that one dye lot, plan the exact seam location where the dye lot change will occur to minimize possible shade differences. This transition point must be recorded on the shop drawing.

f. Plan seam locations so that no perpendicular seams will occur at doorways or entries. All doorway seams should be centered directly under the door.

g. Seams should run with the flow of traffic. The only exception occurs when windows allow incoming daylight to highlight seams from the side. In this situation, run the seams into the daylight to reduce the visibility of the seam.

h. All seams trimmed.

i. Pile running in the same direction.

j. All necessary installation equipment available.

k. Enough manpower available to professionally complete the installation.

TACKLESS STRIP AND SEPARATE CUSHION INSTALLATION

· Tackless Strip: Fasten the tackless strip to the floor, leaving a gully or tuck-in space equivalent to about 2/3 of the carpet thickness but not to exceed ⅜ inch. A commercial-rated tackless strip three rows of pins must be used when dimensions exceed 30 feet or in areas designated for Extra Heavy Commercial Traffic.

· Separate Cushion: Install cushion in the longest possible lengths using the minimum number of sections. If a foam or sponge cushion is used, all seams must be taped using a minimum 2-inch wide industrial tape. Paper tape is not recommended. A slight stretch must be applied to the cushion to flatten and free it from bubbles and wrinkles. Cushion seams are to be positioned so the carpet seams will not fall directly on them. The cushion is to be trimmed flush to the inside edge of the tackless strip. For wood subfloor, the cushion must be stapled; random staple through

the tape so as not to leave a depressed strip along the seam. On concrete floors, the cushion must be securely adhered to the subfloor with a good quality cushion cement to prevent shifting and buckling.

RECOMMENDED SEAMING MATERIALS

· Seam Adhesives

- Commercialon Premium Carpet Seam Sealer
- Orcon Fast Lock Applicator
- Roberts 0502 Latex Carpet Seam Adhesive

SEAM PREPARATION

All required seam edges must be treated with seam sealer and joined using hot melt tape. Seams should have a breaking strength of not less than 100 pounds, and all seam tape should have a minimum width of 3 inches and be of good quality. When stretched, some carpet constructions tend to promote seam peaking; such peaking tendencies can often be minimized by using a 6-inch wide seam tape. Prior to the seaming operation, all seam edges must be sealed with carpet seam adhesive to prevent edge delamination and loss of face yarn. Seams should lie flat and should not pucker. Matched seams will be straight and patterns will be acceptably matched.

Recommended seaming methods in order of priority are the hot melt method, the Sinch KoolGlide seaming system www.koolglide.com latex / tape method and hand sewn. The hot melt tape seaming method is detailed in a later paragraph.

SEAM TRIMMING (Read all instructions below prior to beginning seam trimming.)

Cut the desired lengths of carpet and position them side-by-side ensuring uniformity of pile lay. If the carpet is patterned, allow for pattern match. Trim into the body of the carpet far enough from the factory edges to obtain full-face weight and good lamination of the backing system. This distance will vary from a minimum of 1 to 2 inches on straight row constructions to as much as 6 inches on some graphic constructions.

On all seams, length or cross, treat both edges with Commercialon Premium Carpet Seam Sealer before joining. This

step must be followed and is not optional. Apply seam sealer at the base of the pile where the face yarn enters the primary backing. Press the adhesive into the seam edge with your thumb, ensuring that there is no build-up of excess sealer.

· Length Seaming Loop Pile Constructions: If the carpet is a straight row, level or multi-level loop construction, insert a row finder or the nose end of a face cutter (with the blade retracted) between tuft rows. Run it the entire length of the carpet, separating the yarn and opening a path for the cutter. Trim into the body of the carpet far enough from the factory edges to obtain full-face weight and good lamination of the backing system. Using a loop pile cutter, trim both seam edges by cutting between the tuft rows. Cut close to the main body to obtain a tight seam by trimming with the blade close to the seam edge.

· Length Seaming Cut Pile Construction: Cut pile carpet is sheared in the final stages of manufacturing. The only support keeping the cut pile yarn in an erect position is the yarn tuft beside it. Along the factory edge, the face yarn naturally lies to the outside (no support side). To obtain a uniform pile height on both seam sides, it is always necessary to trim in further on cut piles than on level loops. Depending upon pile height, this distance will range from 1 inch to 1½ inches into the body of the carpet.

· Cross Seaming: Cross seams should be made before making the lengthwise seams. Cross seams should be kept to a minimum and placed appropriately so that they are not in heavily trafficked areas. Well made cross seams are as serviceable as well made length seams; however, because of the construction direction of the carpet pile, cross seams may be more noticeable. Ensure that the direction of the pile is the same for all pieces and lay each piece into position allowing a minimum of 2 inches overlap at the seam area and 1½ inches for trimming at walls.

If the stitch rows across the width of the carpet are reasonably straight, do the following:

a. Trim both edges to be seamed from the face using a cushion-back cutter. Trim the edge with the pile sweeping toward the seam first. Follow carefully between the stitch rows keeping the blade close to the seam edge of the carpet.

b. Then trim the adjacent edge in the same manner.

c. Lock in all face yarn by treating both edges with Commercialon Premium Carpet Seam Sealer before joining. Apply at the base of the pile, where the stitch enters the primary backing. Press the sealer into the seam edge with your thumb, ensuring that there is no build-up of excess sealer.

d. Stretch using a mini-stretcher and stay nail in place.

HOT MELT TAPE SEAMING SINCH KOOLGLIDE SEAM PROCEDURE

Installers must have prior hot melt tape or Sinch KoolGlide Seam seaming experience. If proper techniques are not used, the seam will fail. It is very important to ensure that the seaming iron is equipped with a heat shield to avoid the possibility of damaging the backing and the face yarns. The installer must use the proper seam cutting tools to obtain a precision cut edge for seaming. Do not double-cut edges for seaming. Prior to beginning the hot melt tape seaming procedures, the installer must have installed the tackless strip and the separate cushion, as well as completed seam trimming operations. Read all instructions prior to proceeding.

1. Set up seaming so all seams are made in the direction of the pile lay.

2. Stretch the carpet lengthwise at both seam edges and staytack to hold the tension. Place the thermoplastic tape so that it is centered under the seam's edges. Align and stay nail the seam edges to straighten any trueness of edge that may be present. Any buckles formed by this procedure can be stretched-out after the seam is completed.

3. On all seams, length or cross, treat both cut edges at the proper height with Commercialon Premium Carpet Seam Sealer for prevention of raveling or fraying.

4. Move the lengths of carpet into position, slightly overlapping them by 1/32 inch at the seam area. Do not hook on pins at the seam, but leave the seam area open by 6 inches on each side. On each side of the seam at one end, hook one the carpet lengths on pins for about 12 inches and stretch lengthwise to the opposite seam end to remove buckles and slackness.

   *KoolGlide seaming system differs from this point forward.

5. Center the hot melt seam tape under the carpet seam edges. Set the heat regulator on the seaming iron at the lowest possible temperature that will still give full adhesive melt. The temperature control on seaming irons is often far from precise. To eliminate temperature deviations, either determine the proper temperature setting in the shop, or test the iron on a small piece of the carpet to be installed.

6. Place the hot melt iron with heat shield attached under the carpet and on the tape. Move the iron slowly and continuously in the direction of the pile lay at approximately 2 feet per minute. To obtain a level and tight seam, adjust and position the carpet seam directly behind the iron; this procedure must be done before the hot melt adhesive begins to cool.

7. To press the carpet into the adhesive, use a 1 inch x 6 inch board approximately 18 inches long to follow the iron and flatten the seam. This board may be weighted or knelt upon as the seaming work progresses. Avoid placing any localized pressure on the seam until the seam is completely cool. A common installer mistake may occur by pressing the hot seam with the foot or dragging a toolbox over the seamed area while the face yarns are still warm, thus causing pile depression and shading. Note: For cut pile carpets do not use a spike carpet tractor as damage to the carpet pile may result.

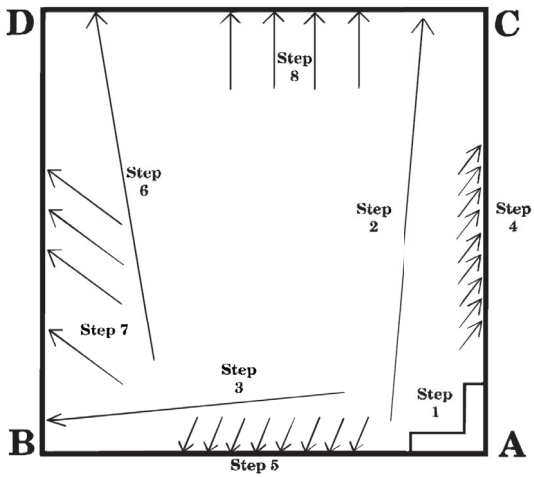
8. Trim loose yarns from the seam and remove the stay-tacks.

9. Cut, trim and seam the additional lengths needed for the installation.

· Seam Peaking: A correctly prepared hot melt tape seam will be flat and will not peak. Physics dictates that every taped seam may peak to some degree once power stretching is applied across the seam. This peaking has nothing to do with either the quality of the carpet or the quality of the installation. The use of 6-inch seaming tape or thermoplastic seam sealers will minimize seam peaking complaints. Additionally, seams on level loops are more visible than on cut pile constructions, and heavier carpets are more prone to show peaking vs. lighter weight carpets. Stretch the carpet tighter in the direction parallel to the seam. A lighter stretch across the seam will help in reducing seam peaking.

THE USE OF POWER STRETCHERS IS MANDATORY

POWER STRETCHING PROCEDURE



(Please refer to the chart above. Read all instructions below prior to power stretching.)

1. Hook 18 inches of carpet in one corner along two walls AB and AC.

2. Using a power stretcher, stretch the carpet along wall AC. Hook the carpet onto the tackless strip at the opposite wall near Corner C. Stretch uniformly. Stretch enough to achieve a firm, tight installation. This generally requires between 1 to 1½ inches of stretch for every 10 feet of carpet. Uniform stretching at proper stretch levels can be estimated by chalking a white line across the carpet at the wall to which the carpet is being stretched. Measure (or estimate) the amount the carpet rides up the wall during stretching.

3. Stretch from the original corner A along wall AB and hook onto the tackless strip along wall BD at corner B. Now the carpet has been stretched along walls AB and AC and hooked in at corners A, B and C.

4. Set in wall AC with a knee kicker at a slight angle (10° to 15°).

5. Next, set in AB in the same manner. Note: it is generally easier to stretch carpet in the filling direction, so this should be done first. This also gives a tighter installation.

6. Stretch from wall AB along wall BD and temporarily hook to wall CD at corner D.

7. Starting from corner B, power stretch from wall AC to wall BD at a 15° angle to AC and hook in. As you approach corner D, restretch and hook.

8. Power stretch carpet from wall AB to wall CD at a right angle, starting at corner C.

Be sure to power stretch all areas regardless of their size in both the width and length directions. In large areas it may be necessary to stay nail the middle of the length and stretch toward one end, and then repeat on the other half so that a uniform stretch through the whole length is achieved. PremierBac Plus must be stretched from 1 to 1.5 percent.

· If sufficient stretch is not applied, then restretching may be necessary when the temperature or humidity increases.

C. Step Areas (Stairs)

Auditoriums - Altars - Teaching Wells - Stairs

All stair nosings to receive carpet should have a minimum radius of ¾". This minimum curvature is necessary for all installation systems to prevent sharp stair edges from cutting the carpet and/or cushion and to provide full contact of the carpet back in adhesive installations.

A. Carpet Direction

1. The carpet machine direction should run the length of the stair.
2. The pile lay up the stair makes a safer stair.

B. Direct Glue Down - Stair With a Return Nosing

1. Each step is two (2) separate pieces of carpet: one piece for the tread and one piece for the riser. The carpet

for the tread is measured the stair width by tread length measured from riser across tread over and under stair nosing back to riser below. The riser portion is measured the stair width by the riser height.

C. Two Adhesive Systems

System #I

Commercialon Premium Carpet Adhesives as contact adhesive.

1. Trowel adhesive onto the stair, work from the top to bottom of stair. Use a ⅛" x ⅛" x ⅛" trowel". Barricade top & bottom of stair to exclude traffic.

2. Trowel Commercialon Premium Carpet Adhesive onto back of carpet.

3. Allow adhesive on stair and carpet to dry until it does not transfer when touched. This may require up to 8 hours or more.

4. Install stair working from bottom to top. First install the carpet cut for the tread. Using a carpet seam roller, ensure that the carpet is fully contacted, especially on the under side of the nosing return.

5. Place the carpet cut for the first riser into the adhesive of the first riser under the previously installed stair tread. Roll riser section.

6. (a) Install second step tread. (b) Install second step riser.

7. Complete stair working from bottom to top of stair.

System #II

Commercialon Premium Carpet Adhesive In Conjunction With Contact Adhesive

1. Cut carpet tread and riser per B #1.

2. Apply nonflammable contact adhesive to stair nosing so that 2 inches of adhesive is on the step portion with a continuous application back under the stair nosing return to the riser below. Next apply the contact adhesive

to the adjoining bonding area of the carpet back on the precut tread carpet. Allow adhesive to dry. There is enough contact adhesive if the adhesive area on both surfaces have a glossy finish when dry.

3. Apply Commercialon Premium Carpet Adhesive to the balance of the tread with a trowel that will supply enough adhesive for the required full and complete coverage of the carpet back. Trowel floor adhesive onto riser portion of stair after adhesive has dried until it does not transfer when touched. This may require 8 hours or more. Install the tread portion first. Then install the riser portion. Thoroughly roll the tread and riser.

4. Complete the stair installing from the bottom of stair to top.

* *NOTE: If the stair is not enclosed, bind or serge any open sides of the stair prior to installation.*

D. Direct Glue Down Waterfall Stair

1. Each step is one piece of carpet. The stair is installed from the bottom to top.
2. Each step is cut stair width by length of step as measured from the stair riser over tread, nosing, and riser to tread below.

3. Bind or serge any open stair sides.

4. Install stair using either of the two previously described adhesive systems section C and D.

E. Separate Cushion Stretch-In

· Cushion

1. Carpet folded under one side, both sides, or cut net determines cushion width. Cut cushion 1½" short at each folded side.

2. Cut cushion ¼" short of wall if carpet is to be cut net to wall.

3. Install cushion net to tackless strip on tread and riser.

· Tackless Strip

1. The tackless strip length is determined by carpet edge finish. Cut tackless strip into lengths the same width of the carpet cushion.
2. Tackless strip is securely anchored on both the tread and riser portion of the stair.
3. The tackless strip is installed on the riser with the pins pointed toward the tread.
4. The tackless strip is installed on the tread with the pins pointed toward the riser.
5. The gully between the leading edges of the tackless strip in the stair crotch should be slightly less than double the carpet thickness.
6. The stair width and/or the carpet construction may require tackless strip installation at one or both sides of the stair tread.

· Carpet Installation

1. Run the carpet machine direction the length of the stair; with pile laying down the risers.
2. Turn under any carpet edges to be folded.
3. Unroll the carpet onto the stair.
4. Align the carpet along the stair length working from the bottom to the top.
5. Secure the carpet to the bottom riser at the floor line via tackless strip or tacking.
6. Using a knee kicker, stretch the first step carpet into the first crotch. Stretch first to the stair center, and finally toward each side.

7. Drive the carpet into the crotch of the stair using a stair tool and rubber mallet.

8. The folded edges may require a tack into the crotch.

9. Complete the stair working from the bottom to the top.

· Stretching Via Stair Stretcher

1. Secure the carpet into the crotch at the top of the stair.

2. Stretching from the top riser center, stretch the carpet with the stair stretcher over the stair nosing and hook into the crotch below.

3. Stretch and hook the right and left sides of the step.

4. Using a stair tool and mallet, drive the carpet into the stair crotch.

5. Complete the stair working from the top to the bottom.

D. Protection of the Installation

Traffic over adhesive installation should be restricted for a minimum of 24 hours.

Protect the installation with a non-staining reinforced building paper. Plastic sheeting should not be placed over any carpet installation. Any vapor barrier material may trap moisture, retard adhesive cure, and promote mold and mildew growth.

It is highly recommended that plastic films utilizing adhesives should not be used. Adhesive residue may transfer to the carpet surface resulting in rapid soiling. Check with the manufacturer of these protective films for warranty information regarding adhesive transfer and removal.

Anytime heavy items are to be rolled over the carpet, protect the installation using sheets of plywood or hardboard in these areas.

eKo® modular carpet installation

J+J/Invision eKo modular backing supports our green priority without sacrificing performance and style or adding cost. eKo backing is PVC-free-built for an enduring and indefinitely recyclable life.

INSTALLATION PROCEDURES FOR eKo® MODULAR CARPET

MAKE SURE YOU INSPECT CARPET MODULES PRIOR TO INSTALLATION. NO CLAIMS WILL BE HONORED IF MODULES ARE INSTALLED WITH VISIBLE DEFECTS. READ ALL INSTRUCTIONS PRIOR TO BEGINNING INSTALLATION.

J+J/Invision eKoTac™ is an aggressive, pressure sensitive adhesive designed for the installation of J+J/Invision eKo® (non-PVC) modular carpet tiles. eKoTac is nonflammable and both alkali and water-resistant. It has low odor and "zero" calculated VOC's, which makes it ideal for use in schools, health care facilities, public buildings and anywhere odor is a concern. eKoTac has MicroSept antimicrobial and is CRI Green Label Plus™ approved and is packaged in an environmentally friendly, recyclable eKoBox.

SITE AND MODULAR MATERIAL CONDITIONING

The building must be enclosed and the HVAC in continuous operation. Modules must be conditioned to room temperature for 48 hours prior to installation. The ambient air relative humidity must be between 10% – 65% with the floor and room temperature between 65 – 95 degrees Fahrenheit. These conditions must be maintained for a minimum of 48 hours prior to installation and at least 48 hours after completion of the installation.

SURFACE PREPARATION

Dust, dirt, debris, and non-compatible adhesive must be removed before the installation begins. Surfaces must be smooth and level with all holes and cracks filled with Portland cement-based patch reinforced with polymers. eKoTac adhesive cannot be applied to any substrate where chemical or solvent-based cleaners have been used.

LATEX ADHESIVES

Old latex adhesives must be scraped or mechanically removed to bare residue. Latex adhesive residues may be smooth and level with all holes and cracks filled with a Portland cement-based patch reinforced with polymers, or encapsulated with TriSeal Sealer. Note: Failure to remove or seal old latex adhesive may cause installation failure, shifting, buckling or edge curling; these conditions will not be covered under warranty.

CUT BACK ADHESIVES

Must be wet, mechanically scraped to a minimum residue and encapsulated with TriSeal Sealer. Note: Failure to remove or seal old cut back adhesive may cause installation failure, shifting, buckling or edge curling; these conditions will not be covered under warranty.

CONCRETE MOISTURE TESTING AND PH TESTING

Substrate surfaces must be tested for moisture emission. It is the responsibility of the owner or owner's representative to perform moisture testing prior to starting the installation. ASTM-F2170-2 relative humidity probe moisture testing or ASTM-F1869 calcium chloride testing can be performed on the concrete to determine the surface moisture emission rate. Acceptable relative humidity probe testing results are up to 80% RH. An acceptable result for calcium chloride moisture testing is up to 5 lbs per 1,000 SF per 24 hours. Alkalinity tests should also be performed per ASTM-F710. The maximum acceptable pH is 9.0. J+J/Invision prefers relative humidity probe moisture testing over calcium chloride testing, as the results are more accurate and reliable. For test results that determine RH test readings of 80%-85%, moisture emission rates of 5 lbs – 8 lbs, or pH readings of 9.0 – 11.00, XL Brands DriSeal Concrete Moisture Sealer is required. NOTE. When both XL Brands TriSeal Sealer and DriSeal Concrete Moisture Sealer are required, TriSeal is applied prior to DriSeal.

SUBFLOORS

New Concrete – New concrete must be fully cured and free of moisture (see ASTM 710). New concrete requires a curing period of approximately 90 days.

Old Concrete – Old concrete must be checked for moisture. Dry, dusty, porous floors must be primed or encapsulated with TriSeal Sealer; Note: primers will not correct a moisture problem.

Wood – Wood floors must be smooth and level. If the floor is uneven, an approved underlayment will be required. Old finishes must be tested for compatibility with adhesives or removed and porous wood primed.

Terrazzo / Marble – Level all grout lines with Portland cement-based patch reinforced with polymers. Glossy surfaces must be sanded for adhesive bond. Waxes and similar finishes must be removed.

Hard Surfaces – Tiles must be well secured to the floor or removed. Broken, damaged, or loose tiles must be replaced. Waxes and similar finishes must be removed from VCT before applying adhesive. Existing sheet vinyl is not a suitable substrate for modular installation and must be removed.

OLD CARPET

Remove old carpet adhesives by scraping or other mechanical means. Any remaining adhesive residues may be covered with a Portland based patching compound or encapsulated with Triseal Sealer.

FULL SPREAD ADHESIVE SYSTEM

J+J/Invision requires full spread use of eKoTac Modular Adhesive for eKo backed products. The spread rate for eKoTac Modular Adhesive is approximately 120 sq. yds. per four gallon bucket and can be spread using either a 1/16" x 1/32" x1/32" U notched trowel or can be spread using a 3/8" foam paint roller. Keep the roller saturated and wet with adhesive throughout the installation in order to maintain a constant spread rate. Allow to dry until transparent or adhesive does not transfer to finger when touched. Drying time will vary with temperature, humidity and air velocity; however carpet modules must be installed within two hours after adhesive has dried. Note: Inadequate amounts of adhesive can cause modules to shift and move and will not be covered by warranty. J+J/Invision will not be responsible for the adhesive bond where other adhesives have been used.

TILE PLACEMENT

Arrows are embossed or printed on the module backing to show pile direction. To ensure proper alignment, check

spacing every ten modules. Measure ten modules; proper spacing should be within ¼ inch. Continue to check spacing every ten modules throughout the entire installation.

PALLET AND BUNDLE SEQUENCING

It is very important to install J+J/Invision modular tiles in the order they were manufactured; this is easily accomplished by selecting pallets in sequential order and following the numbers located on each bundle of tiles. Typically, an installation will begin with the lowest bundle numbers and progress through the highest numbers until the project is complete. Installing modular tiles by bundle sequence will assure the most even uniform look possible. (For layout and installation instructions, refer to J+J/Invision *Carpet Installation Handbook* or CRI 104 standards.)

FLATWIRE CABLE / TRENCH HEADERS

Cable should be centered under modules and no adhesive used unless approved by the manufacturer. Trench headers require a control grid of adhesive on either side of header panels to prevent movement. It is highly recommended that these areas be installed ashlar.

STAIRS

Use single or double undercut stair nosing and cut tiles to fit nosing, both step and riser. Use full spread adhesive under modules.

FINISHED INSTALLATION

Roll entire job with 75-100 lb. roller after completion of installation.

CHAIR PADS

Chair pads are highly recommended for use under chairs with roller casters. If chair pads are not used, the appearance of the modules will decrease and maintenance and/or shifting of the modules may be required more frequently.

LOOP PILE CONSTRUCTION

Carpet modules with loop pile constructions or cut and loop constructions may experience yarn blossoming at the

edges, which is consistent with this type of construction and is not considered a manufacturing defect. Clipping or shearing the yarn edges will remedy this condition.

REPLACEMENT TILES

On occasion, it may be necessary to replace damaged or heavily soiled modules. Modules can be replaced with new J+J/Invision modules from on-site inventory or from another area of the installation. A difference of appearance may be noticed when modules are replaced; this difference usually diminishes in a short time.

The procedures listed above are our best recommendations for installing eKo Modular Carpets. The J+J/Invision *Carpet Installation Handbook* and *Carpet Maintenance Handbook* are available at www.jj-invision.com. If you have further questions or require additional information please contact our Installation and Maintenance Department at 800-241-4586, Ext. 8223.

nexus® modular carpet installations

GENERAL

J+J/Invision Nexus® modular thermoplastic polymer (PVC) carpet backing system provides outstanding features and benefits for commercial carpet including corporate, educational, healthcare and institutional applications.

INSTALLATION PROCEDURES FOR NEXUS® MODULAR CARPET

MAKE SURE YOU INSPECT CARPET MODULES PRIOR TO INSTALLATION. NO CLAIMS WILL BE HONORED IF MODULES ARE INSTALLED WITH VISIBLE DEFECTS. READ ALL INSTRUCTIONS PRIOR TO BEGINNING INSTALLATION.

SITE AND MODULAR MATERIAL CONDITIONING

The building must be enclosed and the HVAC in continuous operation. Modules must be conditioned to room temperature for 48 hours prior to installation. The ambient air relative humidity must be between 10% - 65% with a floor and room temperature between 65 – 95 degrees Fahrenheit. These conditions must be maintained for a

minimum of 48 hours prior to installation and at least 48 hours after completion of the installation.

SURFACE PREPARATION

Dust, dirt, debris, and noncompatible adhesive must be removed before the installation begins. Surfaces must be smooth and level with all holes and cracks filled with Portland cement-based patch reinforced with polymers or primed with TriSeal Sealer.

OLD ADHESIVES

Must be mechanically scraped down to a bare residue flat with the concrete substrate or covered with a skim coat of Portland cement-based patch reinforced with polymers. Any old adhesive residue must also be covered with TriSeal Sealer. Note: Failure to remove or seal old latex or cut back adhesive may cause installation failure, plasticizer migration, shifting, buckling or edge curling; these conditions will not be covered under warranty.

CONCRETE MOISTURE TESTING AND PH TESTING

Substrate surfaces must be tested for moisture emission. It is the responsibility of the owner or owner's representative to perform moisture testing prior to starting the installation. ASTM-F2170-2 relative humidity probe moisture testing or ASTM-F1869 calcium chloride testing can be performed on the concrete to determine the surface moisture emission rate. Acceptable relative humidity probe testing results are up to 80% RH. An acceptable result for calcium chloride moisture testing is up to 5 lbs per 1,000 SF per 24 hours. Alkalinity tests should also be performed per ASTM-F710. The maximum acceptable pH is 9.0. J+J/Invision prefers relative humidity probe moisture testing over calcium chloride testing, as the results are more accurate and reliable. For test results that determine RH test readings of 80% - 85%, moisture emission rates of 5 lbs – 8 lbs, or pH readings of 9.0 – 11.00, XL Brands DriSeal Concrete Moisture Sealer is required. NOTE: When both XL Brands TriSeal Sealer and DriSeal Concrete Moisture Sealer are required, TriSeal is applied prior to DriSeal.

SUBFLOORS

New Concrete – New concrete must be fully cured and free of moisture. New concrete requires a curing period of approximately 90 days.

Old Concrete – Old concrete must be checked for moisture. Dry, dusty, porous floors must be primed; primers will not correct a moisture problem.

Wood – Wood floors must be smooth and level. If the floor is uneven, an approved underlayment will be required. Old finishes must be tested for compatibility with adhesives or removed and porous wood primed with TriSeal Sealer.

Terrazzo / Marble – Level all grout lines with Portland cement-based patch reinforced with polymers. Glossy surfaces must be sanded for adhesive bond. Waxes and similar finishes must be removed.

Hard Surfaces – Tiles must be well secured to the floor or removed. Broken, damaged, or loose tiles must be replaced. Waxes and similar finishes must be removed from VCT before applying adhesive. Existing sheet vinyl is not a suitable substrate for modular installation and must be removed.

OLD CARPET

Remove old carpet and check adhesives for compatibility. If unsure, remove or cover adhesive with a Portland based patching compound or encapsulated with XL Brands TriSeal Sealer.

FULL SPREAD ADHESIVE SYSTEM

J+J/Invision requires a full spread adhesive system for installation of Nexus Modular (carpet tile). Fully spread Commercialon® Premium Modular Pressure Sensitive Adhesive using a 1/32 x 1/16 x 1/16 “U” or “V” notch trowel or spread using a 3/8” foam paint roller. Keep the roller saturated and wet with adhesive throughout the installation in order to maintain a constant spread rate. Allow to completely dry so adhesive does not transfer when touched. The spread rate for Commercialon Premium Modular Adhesive is approximately 140 sq. yds. per four gallon bucket. Nexus® Modular Spray Adhesive is available in a 14 lbs cylinder (coverage is approx. 165 sq yds). Note: Inadequate amounts of adhesive can cause modules to shift and move and will not be covered under warranty. Warranty coverage requires the use of Commercialon Premium Modular Adhesive. J+J/Invision will not be responsible for the adhesive bond where other adhesives have been used.

TILE PLACEMENT

Arrows are embossed or printed on the module backing to show pile direction. To ensure proper alignment, check spacing every ten modules. Measure ten modules; proper spacing should be within ¼ inch. Continue to check spacing every ten modules throughout the entire installation.

PALLET AND BUNDLE SEQUENCING

It is very important to install J+J/Invision modules in the order they were manufactured; this is easily accomplished by selecting pallets in sequential order and following the numbers located on each bundle. Typically, an installation will begin with the lowest bundle numbers and progress through the highest numbers until the project is complete. Installing modules by bundle sequence will assure the most even uniform look possible. (For layout and installation instructions refer to J+J/Invision *Carpet Installation Handbook* or CRI 104 Standards.)

FLATWIRE CABLE / TRENCH HEADERS

Cable should be centered under modules and no adhesive used unless approved by the manufacturer. Trench headers require a control grid of adhesive on either side of header panels to prevent movement. It is highly recommended that these areas be installed ashlar.

STAIRS

Use single or double undercut stair nosing and cut tiles to fit nosing, both step and riser. Use full spread adhesive under modules.

FINISHED INSTALLATION

Roll entire job with 75-100 lb. roller after completion of installation.

CHAIR PADS

Chair pads are highly recommended for use under chairs with roller casters. If chair pads are not used, the appearance of the modules will decrease and maintenance and/or shifting of the modules may be required more frequently.

LOOP PILE CONSTRUCTION

Carpet modules with loop pile constructions may experience yarn blossoming at the edges, which is consistent with this type of construction. Clipping or shearing the yarn edges can remedy this condition.

REPLACEMENT TILES

On occasion, it may be necessary to replace damaged or heavily soiled modules. Modules can be replaced with new J+J/Invision modules from on-site inventory or from another area of the installation. A difference of appearance may be noticed when modules are replaced; this difference usually diminishes in a short time.

The procedures listed above are our best recommendations for installing Nexus® Modular Carpets. The J+J/Invision *Carpet Installation Handbook* and *Carpet Maintenance Handbook* are available at www.jj-invision.com. If you have further questions or require additional information please contact our Installation and Maintenance Services Department at 800-241-4586, Ext 8223.

Module Installation Pattern

CUTTING / TRIMMING

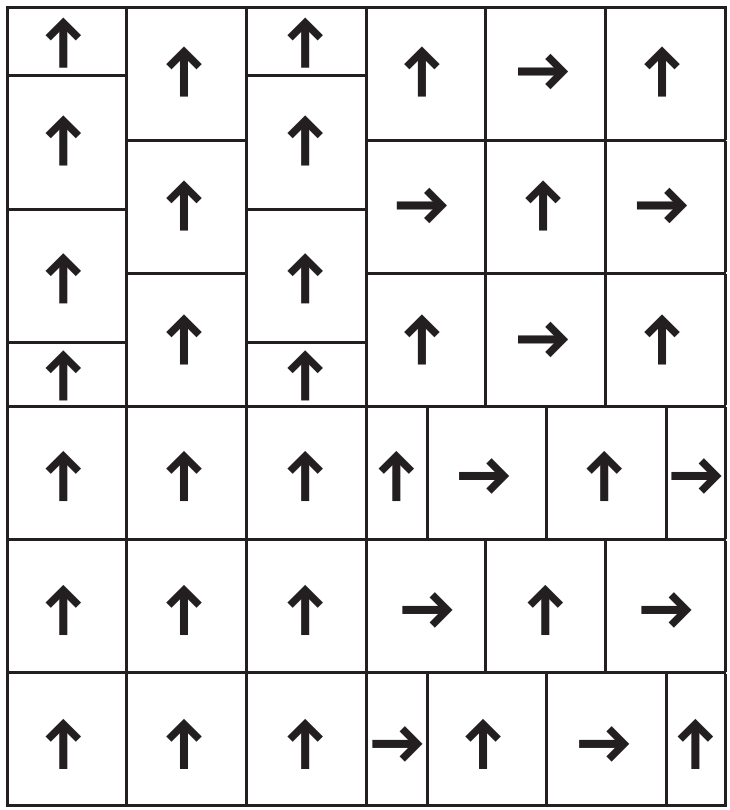
Carpet modules will require cutting at perimeters, floor electrical outlets and door openings. Whenever modules are cut or trimmed, adhesive must be used. Loop pile modules may require some trimming or clipping of tufts. This is typical of this type construction and is not a manufacturing problem. Small pieces of carpet tile should also have glue applied to the backing to help hold them in place.

OPTIONAL MODULAR INSTALLATION METHODS

Carpet modules may be installed by the following techniques that will produce different effects in modular carpet. J+J/Invision provides their suggested recommendations, but the final decision is the customer's.

J+J/Invision modular carpets have an arrow on the back of each module denoting pile direction. This allows the modules to be installed in any number of patterns (See Figure 1). Example: Point to Point, Quarter Turned, Point to Point Monolithic, Ashlar stair step and Ashlar Bricked.

ASHLAR STAIR STEP QUARTER TURNED



POINT TO POINT MONOLITHIC ASHLAR BRICK

FIGURE 1

STAIRS

Install double under cut carpet stair nosing similar to Burke Mercer's #265V/265R. Then, using full spread adhesive, install modules on steps and risers, inserting the stair nosing edge and the top of the riser edge of each module into the vinyl undercut. On steps with return, use product similar to Burke Mercer #270V/570R.

TRIMMING OUT

Perimeter modules may be cut in the conventional way of letting them cove up the wall areas then cutting them down with a tool similar to Robert's Cushion Back Wall Trimmer; or they may be cut by measurement, cutting from the back using a carpenter's right angle square and a tool similar to National #578 or the Crain #301 Cushion Back Cutter.

ADHESIVE CLEAN UP

Use a moist cloth when wet; if dry, use a solvent based product applied to a towel for adhesive, pain, oil and grease,

COMPLETING THE INSTALLATION

To avoid dislodging modules, do not walk on or move furniture onto carpet until the area is completely anchored. Roll entire area with a 75-100 lb. roller. It is also required that sheets of plywood or hardboard be laid over the carpet surface when transporting heavy furniture on carts or dollies. As a final step, vacuum the entire area with an upright vacuum or a pile lift.

Note: These installation recommendations are made for the experienced installer. Adherence to these procedures will result in a quality job. Any questions concerning these recommendations or any special situation encountered should be directed to Installation and Maintenance Department.

FLATWIRE CABLE/TRENCH HEADERS

Cable should be centered under modules and no adhesive used unless approved by the manufacturer. Trench headers require adhesive on both sides of the header panels.

SHOP DRAWINGS

(See Figure 2). Show placement of all central anchor lines. Central module anchor lines are 90° perpendicular intersecting lines adjusted as near the center of the module area as possible so as to produce perimeter cut modules 9" or larger in size. Use the 6-8-10 method as a check to ensure 90° anchor lines. The central anchor lines extend to each wall line and establish and maintain a true and squared installation.

Show placement of all edge moldings.

Show modular direction for all monolithic areas. Basket weave pattern modules will be installed in two directions only. Example–North & East.

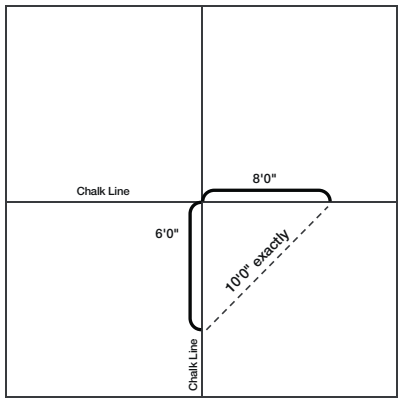


FIGURE 2

TOOLS

Steel measuring tape, right angle square, chalk line, adhesive trowel, knife.

INSTALLING MODULES

After adhesive has dried, begin the installation at the intersection of the central module anchor lines. Complete the installation one quarter area at a time laying the modules firmly and accurately along the anchor lines. Remaining modules in the quadrant should be installed using the stair step method. (See Figure 3).

TIGHTNESS CHECK

A tight installation without compression is mandatory for good performance of the module installation. As a periodic check throughout the installation, the cumulative space gained should be monitored.

Check spacing every 10 modules. 18” modules for a total of 180” inches; 24” modules a total of 240” inches; proper spacing should be within ¼ inch.

JOINTS

Although a tight installation is required, care should be taken to avoid exerting excessive pressure when butting one module against another. This can result in buckled or peaked joints. Additionally, when installing cut pile modules, brush back the pile at the module edge and tip into place. This avoids trapping pile fiber between modules which accentuates joints.

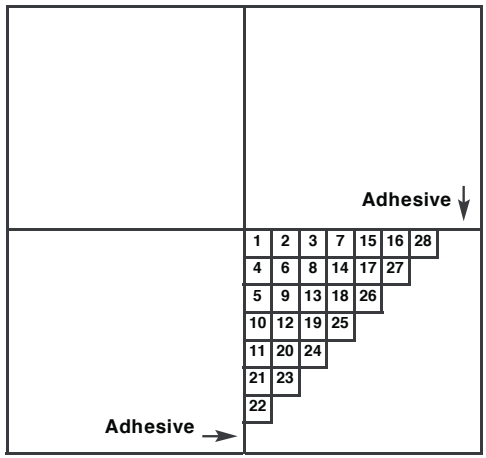


FIGURE 3

ALIGNMENT

As each module is installed, ensure that the installation is remaining “square” and conforming to the chalk lines by checking the joints for excessive play.

COMPLETING THE INSTALLATION

To avoid dislodging modules, do not walk on or move furniture onto carpet until the area is completely anchored on all sides. It is also required that sheets of plywood or hardboard be laid over the carpet surface when transporting heavy furniture on carts or dollies. As a final step, vacuum the entire area with an upright vacuum, HOST machine or pile lift.

Note: These installation recommendations are made for the experienced installer. Adherence to these procedures will, under most conditions, result in a quality job. Any questions concerning these recommendations or any special situation encountered should be directed to Installation and Maintenance.

Note: Flooding voids manufacturer's warranties.

notes

notes

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