Insight Plus Collection - Sheet Vinyl

Installation Guidelines

GENERAL INFORMATION

All recommendations are based on the most recent available information. The information on this sheet provides general installation guidelines. All instructions and recommendations must be followed for a satisfactory installation.

Good preparation is essential for a trouble-free installation. Do not install Mannington Insight Plus until jobsite testing and subfloor preparations are finished and the work of all other trades is complete. Site conditions must comply with relevant building codes and local, state and national regulations.

Mannington Insight Plus is recommended to use over properly prepared concrete, suspended wood, metal and other suitable substrates. Never install Mannington flooring products over residual asphalt type (Cutback) adhesive as "Bleed Through" may occur.

- Mannington flooring is not suitable for external installation or unheated locations.
- Mannington flooring, adhesive, jobsite and subfloor must be acclimated to a stable condition before installation.
- Following installation, foot traffic should be minimized for 24 hours; point loads and rolling traffic for 48 hours and should utilize minimal wet cleaning for 5 days.
- Once installed, the Mannington On Main Insight Plus GB temperature must be maintained above 55° F for the life of the floor.
- Insight Plus must be fully adhered using Mannington V-81 adhesive.
- All seams must be sealed by using Mannington Commercial MLG 33 chemical seam sealer.

MATERIAL RECEIVING, HANDLING & STORAGE

1. All floor covering products require care during storage and handling. It is important to store flooring products in a dry, temperature-controlled interior area.
2. Material must be conditioned for at least 48 hours before beginning the installation.
3. If the material has been stored at colder temperatures, it will need to be unrolled and allowed to relax overnight before proceeding with the installation.
4. Verify materials delivered are correct style, color and quantity. Report discrepancies immediately to Mannington on Main at 1-800-241-2262 ext. 2 (Claims), as installation of products installed with visual defects, mixed production runs, or incorrect style or color will not be honored.

JOBSITE TESTING AND CONDITIONS

1. Before jobsite testing, the building envelope must be sealed (walls, roofing, windows, doorways etc., installed).
2. The installation area and materials to be installed shall be maintained at a stable condition of 65°F (18.3°C) and a maximum of 85° F (29.4°C) for 48 hours before, during and for 48 hours after completion of the installation. Relative humidity level extremes should also be avoided. General recommended humidity control level is between 30 – 65%. If a system other than the permanent HVAC source is utilized, it must provide proper control of both temperature and humidity to recommended or specific levels for the appropriate time duration.
3. Test sites must be properly prepared and protected for the duration of testing to achieve valid results.
4. Surface Flatness for all Subfloors: The surface shall be flat to 3/16" (3.9mm) in 10 ft. (3050 mm) and 1/32" (0.8 mm) in 1 ft (305 mm) To check flatness, place a 10 ft straight edge, string, laser level or use another suitable method on the surface and measure the gap.

5. Concrete Subfloors:
   a. Concrete subfloors must be finished and cured, free of all sealers, coatings, finishes, dirt, film forming curing compounds, or other substances that may prevent proper bonding of the flooring materials (ACI 302.1 and ASTM F710).
   b. Randomly check concrete subfloor for porosity using the drop water test. Place a single drop of water directly onto the concrete subfloor. If the water droplet does not dissipate within 1 minute the subfloor is considered non-porous. Please refer to ASTM F3191.
   c. Concrete subfloors must have a minimum compressive strength of 3500 psi. Concrete subfloors shall not consist of lightweight concrete or gypsum.
   d. Moisture Testing: Perform either the preferred In-situ Relative Humidity (RH) Test (ASTM F2170) or the acceptable Moisture Vapor Emission Rate (MVER) Test (ASTM F1869). For acceptable moisture limits please refer to the specifications of the adhesive of choice.
   e. Alkalinity: Must test surface alkalinity. When moisture is present excess alkalinity can potentially affect the product and the adhesive bond. See ASTM F710 and ASTM F3441 standards for measuring pH. The pH requirement is 7-9 pH unless the adhesive type permits a higher tolerance. To reduce pH, use Mannington Premium Universal Primer.
6. Wood Subfloors and underlayment panels shall have the moisture content tested using a suitable wood pin meter. Readings between the wood subfloor and underlayment should be within 3% and have a maximum moisture content of 14% or less.

MOISTURE SUPPRESSANT SYSTEM

Concrete subfloors where % RH/MVER exceed adhesive specifications will require a Moisture Suppressant System. Due to complexities associated with moisture vapor transmission, emissions and movement of soluble salts (alkalinity) in concrete subfloors, we do not offer, recommend, or warrant a specific solution for excess moisture in concrete slabs. However, there are many companies that offer solutions with warranties for excess moisture in concrete slabs.

Mannington On Main suggests that you reference the current ASTM F710, “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring” and ASTM F3010 Standard Practice for Two Component Resin Based Membrane Forming Moisture Mitigation Systems for Use under Resilient Flooring Systems. Contact one or more of the following or other moisture suppressant system suppliers for assistance:

Ardex: 724-203-5000, www.ardex.com
Koester American Corp.: 757-425-1206, www.koesterusa.com
Mapei: 800-426-2734, www.mapei.com
Schonox: 855-391-2649, www.hpsubfloors.com
Uzin: 800-505-4810, www.ufloorsystems.com

SUBFLOOR PREPARATION

Careful subfloor preparation is vital for an excellent floor appearance and good adhesion. The subfloor must be smooth, firm, flat, clean, dry, and free from defects, and fit for purpose. A suitable smoothing compound should be used to ensure that no irregularities show through to the surface of the finished floor. In all cases, the subfloor must meet the moisture and pH requirements before installation. For a porous subfloor (concrete or wood) that has high pH and/or needs a primer, use Mannington Commercial Universal Primer.

Mannington On Main Universal Floor Primer / pH Blocker is an acrylic latex solution made to neutralize excess alkali and is also recommended as a primer to prevent over absorption of adhesive to ensure a better bond. Gypsum topped or patched areas must receive a full application of Mannington Commercial Universal Floor Primer, as well as any subfloor that is porous, gritty, chalky, or dusty. Porous subfloors with chemical pH above 9 may require a second application. Mannington Commercial Universal Floor Primer can be applied by pouring directly on the subfloor and spreading evenly with a broom or paint roller. Primer can also be applied with a garden sprayer, airless rig, or similar spray equipment. Allow the primer to dry completely prior to second application or before applying adhesive. Primer is dry if there is no transfer when touched. Coverage is approximately 350-400 square feet per gallon. Note: Do not use primer with epoxy or urethane adhesives.

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Concrete

Below and On-grade concrete subfloors must have a suitable vapor retarder properly installed directly beneath the slab. Always follow manufacturers' written recommendations for the use and installation of their appropriate surface preparation materials.

1. Record and file site conditions, test results, and any correction action(s) taken. It is important to maintain this documentation throughout the warranty period.
2. Subfloor must be clean (free of dirt, sealers, curing, hardening or parting compounds or any substance that may stain or prevent adhesion), smooth, flat, sound, fit for purpose, free of movement, excessive moisture and high alkalinity.
3. Slick surfaces such as power troweled concrete shall be abraded or profiled to allow for a mechanical bond between the adhesive and subfloor.
4. Remove existing resilient floor covering; remove all residual adhesive, paint or other contaminants following RFCI recommended work practice. The use of adhesive removers or solvents in the abatement or removal of existing or old adhesives is prohibited and may void any warranty. WARNING: ASBESTOS & SILICA - Refer to the current Resilient Floor Covering Institute (RFCI) document "Recommended Work Practices for Removal of Existing Resilient Floor Coverings" for guidance (www.RFCI.com).
5. Perform corrective actions necessary for elevated moisture or high alkalinity conditions.
6. Surface Flatness for all Subfloors: The surface shall be flat to 3/16" (3.9mm) in 10 ft. and 1/32" (0.8mm) in 1 ft. Bring high spots level by sanding, grinding etc. and fill low spots. Smooth surface to prevent any irregularities or roughness from telegraphing through the new flooring.
7. Leveling and Patching: For concrete subfloors, use only high-quality Portland cement based materials (minimum 3500 psi compressive strength according to ASTM C109). Mix with water only, do not use latex. Caution: Do not lightly skim coat highly polished or slick power troweled concrete surfaces. A thin film of floor patch will not bond to a slick subfloor and may become a bond breaker causing flooring to release at the interface of the subfloor and patching material. If in doubt, perform a bond test prior to commencing with the installation.

Note: If the flooring contractor elects to install new floor covering over an existing floor covering, the flooring contractor assumes all responsibility as to the suitability and continued performance of the existing floor covering.

Wood

1. All wood subfloor systems should be suspended at least 18" above the ground, with adequate cross ventilation and suitable vapor barrier.
2. Wood subfloors require an underlayment (double layer construction) with a minimum total thickness of 1" (25 mm). Use minimum ¼" (6 mm) thick APA rated "underlayment grade" plywood with a fully sanded face or other underlayment panel that is appropriate for the intended usage. Install and prepare panels and seams according to the manufacturers' instructions. Also refer to ASTM F 1482 Standard Practice for Installation and Preparation of Panel Underlayment's to receive Resilient Flooring.

   Panels intended to be used as underlayment should be specifically designed for this purpose. These panels should have a minimum thickness of ¼" (6mm). Any panels selected as an underlayment must meet the following criteria:

   - Be dimensionally stable
   - Have a smooth, fully sanded face so graining or texture will not telegraph through
   - Be resistant to both static and impact indentation
   - Be free of any surface components that may cause staining such as plastic fillers, marking inks sealers, etc.
   - Be of uniform density, porosity and thickness
   - Have a written warranty for suitability and performance from the panel manufacturer or have a history of proven performance

3. Any unevenness at the joints between panels must be sanded to a level surface. Gaps between panels, hammer indentations, and all other surface irregularities must be filled and sanded.

   Many times wood panel subfloors are damaged during the construction process or are not of underlayment grade. These panels must be covered with an approved underlayment. Underlayment panels are intended to be used to provide a smooth surface on which to adhere the finished floor covering. It must be understood that underlayment panels cannot correct structural deficiencies. Particleboard, chipboard, construction grade plywood, OSB, flakeboard and wafer board are not recommended as underlayments. All have inadequate uniformity, poor dimensional stability, and variable surface porosity. Mannington on Main will not accept responsibility for adhered installation over these subfloors. In all cases, the underlayment manufacturer or underlayment installer is responsible for all underlayment warranties.

INSTALLATION PROCEDURE

Before starting installation, ensure the following are satisfactorily completed.

- Expansion joints, isolation joints, or other moving joints are incorporated into concrete floor slabs in order to permit movement without causing random cracks in the concrete. These joints must be honored and not be filled with underlayment products or other materials, and floor coverings must not be laid over them. Expansion joint covering systems should be detailed by the architect or engineer based upon intended usage and aesthetic considerations.
- Surface cracks, grooves, depressions, control joints or other non-moving joints, and other irregularities shall be filled or smoothed with high quality Portland cement based patching or underlayment compound. Patching or underlayment compound shall be moisture, mildew, and alkali-resistant, and shall provide a minimum of 3500 psi compressive strength after 28 days, when tested in accordance with ASTM C109 or ASTM C472, whichever is appropriate.
- Subfloor Preparation: Make sure all surfaces to be covered are completely clean, dry and smooth and that all necessary subfloor preparation has been properly completed and documented.
- Inspect Substrate: Perform final acceptance inspection of substrate.
- Adjacent Surfaces Protection: Protect adjacent work areas and finished surfaces from damage during product installation.
- Flooring Protection: Mannington flooring should be the last material installed to prevent other trades from disrupting the installation and adhesive set-up or damaging the floor.
- Start of flooring installation indicates acceptance of current subfloor conditions and full responsibility for completed work.

CUTTING & FITTING

Mannington On Main sheet products are flexible and will handle easily when cutting and fitting. This product characteristic enables the installer to fit the material using freehand knifing techniques.

- If the job site is complex and requires a precise fit, use pattern-scribing techniques.
- When cutting and storing the flooring pieces, remember that each piece must be installed in sequential order. If you need more than one roll of floor covering, make sure the roll numbers are in consecutive order.
- The material may also be fit using direct scribing techniques.
- Once the material has been fit, it is necessary to tube or lap back half of the sheet to expose the under floor for adhesive application.
- Take care when folding the material back. Always fold the material in a wide radius to avoid sharp kinks and creases which may cause breaks in the product.

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ADHESIVES

Mannington On Main recommends V-81 adhesive only for the installation of Insight Plus. Other adhesive may not provide adequate performance and could result in a failure. V-81 Premium Latex Adhesive: Premium latex adhesive for Mannington On Main-grade resilient sheet products having a felt back. Moisture limits are 5 lbs MVER or 80% Rh. Spread rate for porous substrates approximately 135 sq ft per gallon; Non-porous substrates approximately 180 sq ft per gallon. See adhesive label and/or specification sheet for details.

APPLYING ADHESIVE

- Fully adhere Mannington On Main Insight Plus flooring to an approved under floor.
- After you have trimmed the material to fit the room, tube or lap it back to expose the under floor. Apply adhesive with the recommended notched trowels found in the adhesive label.
- Spread adhesive over 100% of the exposed subfloor, leaving no gaps or puddles.
- Maintain uniform coverage by keeping the trowel clean and properly notched.
- In most cases it is advisable to give the adhesive sufficient open time. Open time allows the moisture to flash off the adhesive, permitting the adhesive to develop more body and immediate tack. Open time is always determined by subfloor porosity and atmospheric conditions. Be certain to provide ample open time on non-porous subfloors and at seam lines.
- After the adhesive has begun to tack-up, roll the sheet forward into the adhesive to avoid trapping air. Do not drop or flop the material into the adhesive. Roll the floor covering with a three-section, 100 lb (or heavier) floor roller in both directions.
- After the first half of the sheet has been adhered and rolled, fold back the second half and repeat the procedure.

Important note: Mannington V-81 adhesive is specifically formulated to be fully compatible with our product chemistry and to maximize the performance of Mannington flooring. Using substitutes or failing to use Mannington V-81 adhesive as recommended can shorten product life, cause installation failure, and/or lead to a chemical reaction such as hydrolysis, which will permanently damage the product and void all applicable warranty coverage.

DOUBLE-CUTTING SEAMS

1. If required to seam Insight Plus products, provide additional length on the second and succeeding sheets to allow for proper pattern alignment.
2. Position Insight Plus floors using the “Reverse” or “Do not Reverse” method.
3. To minimize pattern run-out, the floor covering should always be laid out minimizing the length of the seams.
4. Cut material to the appropriate sizes the day before the actual installation.
5. Store the material at recommended temperatures.
6. Roll these cuts tightly, face-out around a core, maintaining as equal a diameter as possible.
7. Cut and install the pieces in sequential order. If the job requires more than one roll of floor covering, make sure all rolls are marked with the same shade letter and that the roll serial numbers are in consecutive order.
8. After aligning the pattern and providing adequate overlap, adhere the sheets of material up to the predestinated dry zone.
9. Cut the seam using a utility knife with a new, sharp blade. Using a steel straightedge, cut through both sheets of flooring at a 90º angle to the floor covering.
10. Once you have cut the seam, remove the selvage and fold back the sheets to expose the dry zone.
11. Apply adhesive with a properly notched trowel across the dry zone.
12. Allow the adhesive to develop tack, and lay the sheet that was on the bottom during the cutting process into the adhesive first.

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13. Then place the top sheet into the adhesive; avoid scraping adhesive into the cut. Roll the area with the three-section floor roller.
14. Bring seam edges level with the use of a hand seam roller.
15. Thoroughly clean the seam area and wipe dry with a damp cloth.

SEAM SEALING

- Before sealing Insight Plus, make certain all seams are clean, dry, and free of adhesive contamination.
- Use Mannington's MLG 33 seam sealer
- Part B, which contains the de-glossing agent, must be shaken vigorously before blending with Part A.
- Empty entire contents of Part A and B into the supplied applicator bottle after securing the VST Tip to the application bottle; gently shake the bottle to mix the ingredients.
- After mixing, the bottle should stand until all trapped air bubbles have dispersed which is typically 15 minutes.
- Before using, check the flow through the applicator on a scrap piece of flooring.
- Insert the fin into the seam cut and lightly squeeze the bottle to apply a uniform bead of sealer, approximately 1/8" wide,centered on the seam cut. It is crucial that the seam sealer penetrates the full thickness of the seam cut to ensure proper chemical bond.
- Do not wipe the sealer from the surface of the flooring.

NOTE: Never use heat welding on Mannington resilient product Insight Plus.

FINISHING & MAINTENANCE

- Protect all exposed edges of floor covering with trim or restrictive moldings.
- Remove all scraps and trash from the jobsite.
- Remove all adhesive smears or residue from the surface of the floor covering with a clean cloth dampened with mineral spirits.
- After 24 hours of the completed installation, thoroughly clean the floor.

CAUTIONS & MISCELLANEOUS

- Do not place heavy items on newly installed floor covering for at least 48 hours after completion of the installation.
- Heavy furniture should be equipped with suitable non-staining, wide-bearing casters.
- Furniture should be moved onto the newly installed floor using an appliance hand truck over hardboard runways.
- Floor covering subjected to excessive heat and light exposure is subject to thermal degradation. Use appropriate precautions to minimize potential affects on the floor covering.
- Oil or petroleum-based products can result in surface staining. Do not track asphalt driveway sealer or automobile oil drips onto the vinyl floor covering.
- Use non-staining walk-off mats at building entrances to remove excess dirt and grit from foot traffic-rubber can discolor vinyl floor covering.
- Radiant Heat: Mannington Commercial resilient sheet flooring can be installed over radiant heating (hydroponic) systems. The maximum temperature of the subfloor surface must not exceed 85°. Before installing flooring products over newly constructed radiant-heating system, set the thermostat to a comfortable room temperature for the installation. For existing systems, the system must be switched off for a minimum of 48 hours before, during and 48 hours after flooring installation.

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REPAIRS

Replacing Damaged Areas

- The floor covering repair piece should come from the original installation. Typically, consumers retain leftover pieces from the original installation or attic stock.
- Tape the repair piece over the damaged area, and double-cut using a steel square as a guide.
- Remove the damaged area, and scrape the subfloor clean. Apply adhesive on the back of the repair piece and insert into the flooring.
- Roll the repair piece with a hand seam roller.
- Use the appropriate Mannington seam sealer to seal all cuts.

FLASH COVING RESILIENT SHEET PRODUCTS

All Mannington resilient sheet goods can be installed using the flash coving method. This edging technique, often preferred by hospitals and other health care facilities, is a process of extending the resilient flooring up the wall to create a wall base. Normally, the floor covering is extended up the wall to a height of 4” to 6”. Coving is popular with end users because it eliminates the need for a floor/wall juncture, and it is also easy to maintain.

For more information, contact Mannington On Main Technical Services at 800-241-2262 ext. 3 or visit manningtononmain.com.