

### GENERAL INSTALLATION GUIDELINES

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1. Read all instructions prior to installation. Follow all guidelines for a successful installation.
2. Inspect materials upon delivery to verify material is undamaged and the correct product, color, and quantity are present prior to moving material to your installation site. Claims for incorrect material, quantity, or visibly damaged goods will not be accepted if the material has not been moved from the original delivery location. Store materials in dry, indoor areas away from direct sunlight. Report discrepancies to your point of purchase immediately.
3. It is the responsibility of the installer to ensure that products are installed correctly in accordance with all applicable guidelines. Refer to the Knockout warranty for any questions about the suitability of a product for any application.
4. Conduct and document a bond test prior to installation to ensure an acceptable adhesion between the Eastern Flooring Products™ adhesive and your subfloor.
5. It is important to work out of several cartons to mix the patterns when installing Knockout to properly mix the décor and ensure a beautiful application.
6. All pieces should be thoroughly inspected for color, texture, sheen, and design prior to installation. Installation of material constitutes acceptance of physical and/or aesthetic imperfections. If you have any concerns about the product, please immediately contact us at [info@easternflooringproducts.com](mailto:info@easternflooringproducts.com). Flooring that has been cut or installed is not eligible for return or claim.
7. Eastern Flooring Products produces Knockout to imitate natural color and texture variation, but there are a finite number of unique pieces. Therefore, it is necessary to pay attention to avoid creating unintended patterns by installing identical pieces beside one another.
8. Avoid creating patterns with the end joints of the material. Stagger the first piece of each row in size to avoid the end joints of alternating rows from lining up. No pieces smaller than ¼ of the piece in length should be installed to maintain the aesthetic integrity of the floor. End joints in adjacent rows should be a minimum of 12" from one another.
9. Acclimate Knockout for a minimum of 24 hours prior to installation. Material that has been exposed to temperatures warmer than 80°F or cooler than 60°F should be acclimated an additional 24 hours prior to installation. To acclimate material, place material in stacks of no more than 2 cartons in the installation area after HVAC has been running at normal temperatures in a completely enclosed installation space for at least 7 days. Be sure that material is out of the path of direct sunlight, heaters, or air vents to ensure proper acclimation.
10. Install Knockout in indoor environments with a constant air and subfloor temperature between 65°F and 85°F.

11. It is important to protect Knockout from exposure to direct sunlight. Direct sunlight can result in thermal expansion, UV fading, and discoloration. Ideal protection will include UV treated windows and the use of drapes/blinds during peak sunlight hours.
12. Install Knockout after all other trades have completed their work to avoid damaging or soiling the floor.
13. Install Knockout with the Eastern Commercial Flooring adhesive recommended for your product and application, taking care to follow all additional guidelines provided for that product.
  - a) Residential installations of Knockout not subject to rolling traffic may use Eastern Flooring Products Adaptable™ firm-set, pressure sensitive adhesive.
  - b) Commercial installation of Knockout and any installation that may be subject to rolling traffic must use Eastern Flooring Products Perpetual™ hard set, transitional, pressure sensitive adhesive.

### GENERAL SUBFLOOR GUIDELINES

1. Before beginning installation, read all subfloor guidelines for the correct subfloor type. Proper subfloor preparation is the responsibility of the installer and one of the most important components of the durability of any floor.
2. Subfloor must be level, flat, clean, dry, and structurally sound. Subfloor flatness must be within 3/16" in 10' or 1/8" in 6' in all directions.
3. Glue down luxury vinyl flooring such as Knockout will eventually conform to the subfloor in a way that may telegraph subfloor imperfections. Therefore a smooth and aesthetically pleasing texture in the subfloor will ensure the long term beauty of Knockout.
4. Subfloor must be free of any dust, solvent, wax, asphalt sealing compound, and other material that may compromise the backing of the flooring or inhibit the free floating of the floor after installation. Unevenness and obstructions may compromise the locking mechanism and cause it to disengage.
5. Any patching or leveling compound used to achieve a flat subfloor needs to meet subfloor alkalinity and moisture standards. Eastern Flooring Products recommends the use of a water resistant, non-shrinking, Portland leveling compound with a compressive strength of at least 3,000 psi.
6. Eastern Commercial Flooring Adaptable adhesive installation instructions contain additional subfloor standards. Be sure to consult all related instructions prior to installation.
7. Prior to installation, conduct and document a bond test ensuring your subfloor is suitable for the Eastern Flooring Product™ adhesive. It is necessary to conduct multiple tests in different areas if conditions differ from room to room or from one area to another. Proper adhesion is necessary for the long term success of the installation.

# Knockout

## INSTALLATION & MAINTENANCE

8. Knockout is waterproof, but it is not a vapor barrier. Subfloor moisture can still cause mold, mildew, and other moisture-related issues, unrelated to Knockout. It is the responsibility of the installer to ensure the subfloor is not improperly emitting moisture prior to installation.
9. Acceptable subfloor types include:
  - a. Concrete slab meeting updated ASTM F710 guidelines
  - b. APA rated plywood underlayment meeting updated ASTM F1482 guidelines
  - c. Underlayment grade particleboard, when properly prepared
  - d. Securely fastened hard surface floors including hardwood, ceramic tile, or one layer of non-cushion backed resilient sheet or tile. Must be clean, smooth, flat, free of deflection, and securely adhered or fastened. Properly prepared resilient tile may need to be stripped of any wax or coating that could inhibit the adhesive's bond.
  - e. Properly prepared and sealed gypsum cement with a dry density exceeding 90 pounds per cubic foot.
  - f. Eastern Flooring Products recommends AMB2000 for installations requiring assistance in moisture mitigation, bonding, or acoustical performance. AMB2000 can be loose laid and have Knockout glued to it in non-rolling load bearing applications. For rolling loads or heavy commercial applications Eastern Flooring Products requires a double glue application. See AMB2000 documentation for more details.
10. Unacceptable subfloor types include, but are not limited to:
  - a. Crumb rubber underlayment, as it may interact with the flooring, chemically.
  - b. Existing floating flooring or cushion back products of any kind. Soft layers of flooring under Knockout may compromise the installation integrity and resistance to indentation.
  - c. Ceramic tile with grout joints. Grout joints must be filled with an acceptable patching compound, previously described.
  - d. Carpet of any kind
  - e. Wood adhered to concrete, including sleeper construction subfloors
  - f. Unapproved underlayment with or without express designation as being acceptable for LVT installations. If an underlayment is not expressly mentioned in this installation guideline, you can request guidance from Eastern Flooring Products by emailing [info@easternflooringproducts.com](mailto:info@easternflooringproducts.com) prior to installation.

### CONCRETE SUBFLOOR GUIDELINES

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1. Concrete subfloors must meet the updated ASTM F710 guidelines, prior to installation.
2. New and existing concrete subfloors require the installer conduct moisture and pH testing prior to installing any floor to limit liability. Ensuring acceptable moisture levels and retaining test records for Knockout are the responsibility of the installer. Eastern Flooring Products is not liable for moisture-related claims that do not meet the stated installation standards of the recommended adhesive.
3. New concrete floors should be fully cured prior to installation. Concrete slabs must have no visible moisture.
4. All concrete floors must be dry, clean, smooth and structurally sound. They shall be free of any foreign materials that might prevent proper absorption, including, but not limited to dust, dirt, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, incompatible sealers, fire-retardant chemicals, fungicides, release agents, alkaline salts, excessive carbonation, laitance, mold, mildew, and curing, sealing, hardening or parting compounds, or unapproved admixtures.
5. Eastern Flooring Products Assurance™ can also be used as an encapsulator for concrete floors with well-bonded cutback adhesive, or well-bonded residue from multipurpose, latex, or pressure sensitive adhesives. Follow all related instructions related to that product during installation.
  - a. If cut-back adhesive residue is present, but not well bonded it must be removed by safe methods such as mechanical removal or wet scraping. Contact a professional to remove these adhesives as breathing crystalline silica or asbestos fibers can cause cancer and is a severe respiratory hazard. Refer to the Resilient Floor Covering Institute's guide "Recommended Work Practices for Removal of Resilient Floor Coverings" for more information on safe removal of resilient flooring.

### WOOD SUBFLOOR GUIDELINES

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1. Wooden subfloors must be structurally sound, installed to their manufacturer's guidelines, and meet the updated ASTM F1482 guidelines, prior to installation.
2. Be certain the floor joists do not impede the floor flatness as required. Floors must be sufficiently rigid to avoid excess deflection. An additional layer of APA rated 1/4" thick underlayment is recommend to aid rigidity where unacceptable conditions exist.
3. Crawl spaces and basements must be dry. The bottom of wooden subfloor joists must be a minimum of 18" above ground surface. 6 mil or greater black polyethylene sheeting must be in place covering 100% of the ground and overlapping a minimum 6" at seams acting as a moisture barrier. This polyethylene sheeting must run up the walls no less than 6". Air venting must be open on all sides and open no less than 1.5% of the total crawlspace area.
4. Plastic sheeting is not recommended over wood subfloors.

### RADIANT HEAT GUIDELINES

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1. Embedded radiant heating elements are acceptable in the subfloor provided they are a minimum of 1/2" from Knockout in final installation.
2. Material covering embedded radiant heating elements should still meet subfloor standards.
3. To install Knockout over radiant heating systems, the system should be running and operational for at least 2 weeks prior to installation. 24 hours before, during, and after installation, system should be turned off. Failure to do so will shorten the working time of the adhesive. After installation, increase temperature in increments of 5°F per hour to avoid overheating. Once installed, the floor temperature should never exceed 85°F.

### INSTALLATION INSTRUCTIONS - RESIDENTIAL

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#### Installation Notes

1. It is the responsibility of the installer to ensure the installation environment meets the subfloor requirements previously stated. Eastern Flooring Products is not responsible for floor failures resulting from unsatisfactory subfloors.
2. Eastern Flooring Products is not responsible for installation related costs when visibly defective planks are installed.
3. Measure and designate the middle of each wall. Strike a chalk line between the center of each wall in a square or rectangular room to determine the center of the room. Layout the room with the longest side of the plank perpendicular to the longest wall in the room, or parallel to incoming sunlight in square rooms. Both the first and last row should be greater in width than 1/2 the width of the plank, so you may need to adjust the center point of your installation pattern and/or rip the planks for these rows.
4. Dry-fit several rows to ensure the desired fit and finish and confirming the starting and ending pieces of each row are no less than 1/4 of the length of the total plank or tile.

#### Installation Steps

1. Working from multiple cartons, dry lay several rows of material to ensure desired aesthetic.
2. Consult the Eastern Commercial Flooring Adaptable adhesive's recommended trowel size and spread rate. Spread adhesive based on how much area can be installed within the working time using the required tools, described herein.
3. Eastern Flooring Products recommends using Adaptable adhesive on porous or non-porous

floors:

- a. For a pressure sensitive installation, follow the following steps:
    - i. Wait 30-60 minutes after adhesive is spread to allow it to dry, the adhesive will darken to visually cue the preparedness.
    - ii. Be sure to install the material within the working time for the adhesive. While the time will vary based on temperature and humidity, it can be up to 12 hours.
  - b. For a semi-wet set installation on porous floors, follow the following steps:
    - iii. Wait 20-30 minutes after adhesive is spread to allow it to skin over.
    - iv. Working time is around 20-30 minutes.
4. Begin installation in the center of the room for best results. Based on your layout from the pre-installation notes, install the first pieces adjacent to your center line. Lay each adjacent piece, ensuring a tight fit to the previous.
  5. Lay each adjacent piece, ensuring a tight fit to the previous. Each piece will have an arrow on the back side of the product confirming the direction of installation. Make sure each arrow is pointing the same direction to avoid differences in perceived color or sheen of the product.
  6. After laying all rows of material, roll the floor with a 75–100-pound roller to ensure proper adhesive transfer.
  7. Install trim over exposed subfloor or unsightly cuts to ensure a beautiful, finished floor.

## INSTALLATION INSTRUCTIONS - COMMERCIAL

### Installation Notes

1. It is the responsibility of the installer to ensure the installation environment meets the subfloor requirements previously stated. Eastern Flooring Products is not responsible for floor failures resulting from unsatisfactory subfloors.
2. Eastern Flooring Products is not responsible for installation related costs when visibly defective planks are installed.
3. Measure and designate the middle of each wall. Strike a chalk line between the center of each wall in a square or rectangular room to determine the center of the room. Layout the room with the longest side of the plank perpendicular to the longest wall in the room, or parallel to incoming sunlight in square rooms. Both the first and last row should be greater in width than  $\frac{1}{2}$  the width of the plank, so you may need to adjust the center point of your installation pattern and/or rip the planks for these rows.

4. Dry-fit several rows to ensure the desired fit and finish and confirming the starting and ending pieces of each row are no less than  $\frac{1}{4}$  of the length of the total plank or tile..

### Installation Steps

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2. Consult the Eastern Commercial Flooring Adaptable adhesive's recommended trowel size and spread rate. Spread adhesive based on how much area can be installed within the working time using the required tools, described herein.
3. Eastern Flooring Products recommends using Adaptable adhesive on porous or non-porous floors:
  - a. For a pressure sensitive installation, follow the following steps:
    - i. Wait 30-60 minutes after adhesive is spread to allow it to dry, the adhesive will darken to visually cue the preparedness.
    - ii. Be sure to install the material within the working time for the adhesive. While the time will vary based on temperature and humidity, it can be up to 12 hours.
  - b. For a semi-wet set installation on porous floors, follow the following steps:
    - i. Wait 20-30 minutes after adhesive is spread to allow it to skin over.
    - ii. Working time is around 20-30 minutes.
4. Begin installation in the center of the room for best results. Based on your layout from the pre-installation notes, install the first pieces adjacent to your center line.
5. Lay each adjacent piece, ensuring a tight fit to the previous. Each piece will have an arrow on the back side of the product confirming the direction of installation. Make sure each arrow is pointing the same direction to avoid differences in perceived color or sheen of the product.
6. After laying all rows of material, roll the floor with a 75–100-pound roller to ensure proper adhesive transfer.
7. Install trim over exposed subfloor or unsightly cuts to ensure a beautiful, finished floor.

### INSTALLATION INSTRUCTIONS - LOOSE LAY

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#### Installation Notes

1. It is the responsibility of the installer to ensure the installation environment meets the subfloor requirements previously stated. Eastern Flooring Products is not responsible for floor failures resulting from unsatisfactory subfloors.
2. Eastern Flooring Products is not responsible for installation related costs when visibly defective planks are installed.
3. Measure and designate the middle of each wall. Strike a chalk line between the center of each wall in a square or rectangular room to determine the center of the room. Layout the room with the longest side of the plank perpendicular to the longest wall in the room, or parallel to incoming sunlight in square rooms. Both the first and last row should be greater in width than  $\frac{1}{2}$  the width of the plank, so you may need to adjust the center point of your installation pattern and/or rip the planks for these rows.
4. Dry-fit several rows to ensure the desired fit and finish and confirming the starting and ending pieces of each row are no less than  $\frac{1}{4}$  of the length of the total plank or tile.

#### Installation Steps

1. Working from multiple cartons, dry lay several rows of material to ensure desired aesthetic.
2. Consult the Eastern Commercial Flooring Adaptable adhesive's recommended trowel size and spread rate. Spread adhesive based on how much area can be installed within the working time using the required tools, described herein.
3. Eastern Flooring Products recommends using Adaptable adhesive on porous or non-porous floors:
  - a. For a pressure sensitive installation, follow the following steps:
    - i. Wait 30-60 minutes after adhesive is spread to allow it to dry, the adhesive will darken to visually cue the preparedness
    - ii. Be sure to install the material within the working time for the adhesive. While the time will vary based on temperature and humidity, it can be up to 12 hours.
  - b. For a semi-wet set installation on porous floors, follow the following steps:
    - i. Wait 20-30 minutes after adhesive is spread to allow it to skin over.
    - ii. Working time is around 20-30 minutes.



4. Begin installation in the center of the room for best results. Based on your layout from the pre-installation notes, install the first pieces adjacent to your center line.
5. Lay each adjacent piece, ensuring a tight fit to the previous. Each piece will have an arrow on the back side of the product confirming the direction of installation. Make sure each arrow is pointing the same direction to avoid differences in perceived color or sheen of the product.
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### AFTER INSTALLATION

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1. All vinyl floors can be scratched in abusive situations. To avoid scratching your floor:
  - a. All furniture must be equipped with felt pads to avoid scratching the floor. Heavy furniture and appliances must be equipped with non-staining large surface floor protectors. Furniture with wheeled castors should only have 2” or wider castors no less than 4” in diameter.
  - b. Regularly sweep or vacuum floors to keep your floor free of debris, debris can become trapped in shoes, castors, or other acceptable contacts with floor and create scratches. Do not use vacuums with beater bar attachments on.
  - c. Avoid sliding things across the floor that could have rough edges or trap debris.
  - d. Avoid high heeled shoes as they can create pressure of over 500PSI which may scratch or indent floors.
  - e. Keep pets’ nails trimmed.
2. Eastern Flooring Products recommends equipping all office chairs with soft, roller blade style wheels to avoid damaging the floor. Do not use ball-type castors.
3. Furniture should be moved onto the newly installed floor using an appliance hand truck only after Adaptable adhesive’s recommended waiting period for heavy rolling traffic. Furniture should be moved onto the newly installed floor using an appliance hand truck only after Adaptable’s recommended waiting period for heavy rolling traffic.
4. Oil or petroleum-based products can result in surface staining. Do not track asphalt driveway sealer or other oil-based products on the floor.

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5. Furniture should be moved onto the newly installed floor using an appliance hand truck only after Adaptable adhesive's recommended waiting period for heavy rolling traffic. For floating installations, use hardboard runways under the appliance hand truck. (For Loose Lay)
6. Use walk-off mats at entrances to prevent dirt, grit, and staining substances from damaging the floor. Use mats with non-staining backs, as rubber may discolor the floor.
7. Keep an appropriate amount of attic stock of your material to allow for repairs of the floor should you damage it or an environmental issue arise.
8. Eastern Flooring Products does not recommend the use of steam cleaning devices of any sort, abrasive cleaners, harsh chemicals, detergents, or "mop and shine" products. If you have a question about care and maintenance, consult the Knockout Care and Maintenance Guide.

## REPORTING A PROBLEM

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1. If you think there is something wrong with your floor that is covered by this warranty, immediately contact the company you purchased the floor from within 48 hours of noticing the problem. Subsequent damage to the floor is not covered by the warranty.
2. Do not walk or roll anything over the affected area of the floor until the problem is identified or resolved.
3. If the company you purchased the product from determines there is a warranted issue with the floor, they will contact Eastern Flooring Products® to file a claim. They are the only party that can file a claim or inquire as to the status of that claim.
4. Eastern Flooring Products® has the unimpeachable right to decline a claim if not given the opportunity to inspect the floor in a timely manner. Floors that have been repaired, replaced, or permanently covered without manufacturer inspection will not be eligible to file a claim or receive compensation.

**WARNING:** Existing resilient floor coverings and black asphalt adhesive may contain asbestos. Improper removal procedures could release asbestos fibers into the air. Asbestos fibers, when inhaled, could cause serious bodily harm. Do not sand or dry scrape these materials. If removal of existing floor coverings is necessary, be certain that all precautions are taken and proper procedures are followed. For information regarding proper removal procedures in the U.S.A., please consult the Resilient Floor Covering Institute (966 Hungerford Drive, Suite 12-B, Rockville, MD 20850) for a pamphlet, "Recommended Work Practices for the Removal of Resilient Floor Coverings."