Best Practices

evoke®

INTRODUCTION

At Metropolitan, we manufacture our flooring products with an obsessive attention to detail and quality, with full-time Quality Assurance and Quality Control oversight throughout the manufacturing process to ensure we are meeting our commitments to environmental compliance, product performance and sustainability.

Our company has over 30 years of hands-on experience in product development, service support and project management. In that time we have had the opportunity to participate in thousands of successful projects, from single and multi-family residential developments to large-scale heavy-duty commercial installations in a variety of industry sectors.

We have also witnessed some completely preventable installation failures that could have been avoided with proper adherence to standard industry practices.

> The purpose of this document is to share some of the experience and expertise we have gained over the years to help you and your team deliver a successful installation and to avoid some of the common, costly problems we have seen in the past.

The fiscal responsibility and legal liability for the installation ultimately lie with the contractor; following our best practices and published installation guides will provide a very solid measure of protection against the most common problems.

Our objective is to provide a mutually successful product installation that will satisfy for years to come.

Please have your team review this document and contact us with any questions. Throughout this document, you will see reference to more in-depth technical information available on our website at **metrofloors.com**. Our Technical Services team is always at your service to provide advice, information and support at **techserv@metrofloors.com**.

We look forward to working with you.

METROPOLITAN

SINCE 1992

THE FLOOR FACTOR

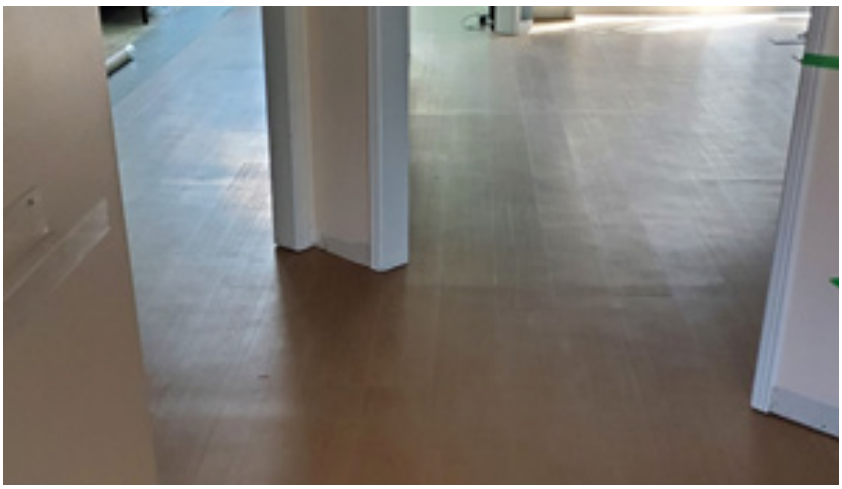
As a flooring manufacturer, we're naturally preoccupied with that aspect of any building project. But the fact is that a flooring failure is one of the most costly problems to correct, especially if it happens post-occupancy. In a multi-family project, failures often affect multiple units, increasing the cost and inconvenience for all. In a commercial building, it can mean disruption to the business. So it is in everyone's interest to ensure a successful installation and work proactively to prevent common problems.

Common causes of installation failures or disappointed clients.

Floating floor has buckled and lifted
Cause: Floating laminate floor was installed with improper expansion space and/or relative humidity levels

Floating floor has buckled and lifted
Cause: Floating floor installed under cabinetry

Floating vinyl floor has buckled and lifted
Cause: Temperature levels higher than manufacturer's recommendations



Subfloor imperfections telegraphing through the vinyl flooring
Cause: Improper subfloor preparation

MOST COMMON REASONS FOR FLOORING FAILURE

- Improperly stored materials
- Excess moisture in the subfloor
- Subfloor flatness not to specification
- Failure to follow recommended installation procedures
- Insufficient acoustic assembly performance
- Trade damage after installation
- Improper heat and humidity levels

> As ***National Wood Flooring Association (NWFA)*** and ***North American Laminate Fooring Association (NALFA)*** -accredited Flooring Inspectors, our Technical Services team has been called to inspect many job sites with flooring problems. In virtually all cases, the problems resulted from poor or improper installation practices, not faulty products, and required remediation at the contractor's expense.

In the following pages, we'll provide information and best practices on how to avoid these common pitfalls along with recommendations to help ensure a successful project.

It is very important to thoroughly read through and understand the installation instructions for the product you are installing. If you have any questions please don't hesitate to ask our Technical Services team; we are there to help. Email them at **techserv@metrofloors.com**.

PRE-INSTALLATION

Some important information should be collected during the preparation of the bid as it may significantly affect your choice of materials and their cost.

PRODUCT SELECTION

When selecting the actual flooring product, there are several factors that should be considered in addition to visual appearance and usage patterns.

Wood-based products like Evoke Laminate and Surge will expand and contract with changes in humidity. Conditions for these products must be maintained with the temperature between 60-80°F (15- 26°C) and the relative humidity at 30-50% before, during and at all times after the installation.

Vinyl flooring will expand and contract with temperature changes. For Evoke Rigid Core conditions must be maintained between 60-80°F (15- 26°C); for Evoke Luxury Vinyl temperature must be maintained between 65-85°F (18-29°C) before, during and after the installation.

DELIVERY & ACCLIMATION

Site conditions vary from job to job and are seldom ideal for material storage. Damp, unheated parkades and garages are not suitable storage areas and any damage to the product resulting from improper storage is not covered by the product warranty.

For specific storage and acclimation requirements for Evoke products, consult the Installation Instructions, but generally:

Wood-based products like Evoke Laminate and Surge must be stored at a temperature between 60-80°F (15-26°C) and relative humidity at 30-50%.

Rigid Core products must be stored in dry conditions with temperature between 60-80°F (15- 26°C); for Evoke Luxury Vinyl, 65-85°F (18-29°C).

We recommend arranging a site meeting prior to materials delivery so that the site supervisor and flooring contractor can determine a suitable location for delivery and storage of the materials.

ACOUSTICS

In recent years noise pollution has become a growing concern as more and more people live in multi-family buildings. The trend toward hard surface flooring has also brought this topic to the forefront. Many new multi-family projects now routinely require floor assemblies to meet very specific – and often unrealistic – acoustic performance specifications. The flooring industry has responded by publishing unrealistic and often wildly inflated ratings on their products.

There is a significant liability in supplying acoustic materials that fail to perform to the published specification, as several lawsuits in the US have shown. If the project you are supplying does have an acoustic specification for the flooring assembly, we recommend you do some homework. Simply providing a low-cost underlay that boasts an unsubstantiated claim of a high rating is not an effective or responsible approach.

When evaluating acoustic materials, ask for confirmation of the test used for claimed IIC ratings. Compare the tested installation against your plans and for added assurance, have your proposed flooring assembly reviewed by a qualified acoustic technician and approved by the developer.

Research your materials and find out not only what the published IIC rating is, but how it was obtained. Have your proposed flooring assembly reviewed and approved by a qualified acoustic technician. Metropolitan has a wealth of expertise in this area and can provide support and guidance in developing an effective acoustic solution. For more information, visit **metrofloors.com/acoustics-101** or contact your Metropolitan representative.

INDOOR AIR QUALITY (IAQ)

Evoke has long been a leader in indoor air quality standards. All Evoke flooring products, including our laminate, vinyl composite core and luxury vinyl flooring, are produced as CA Section 01350 compliant, the standard recognized by LEED and other green building programs as contributing to good indoor air quality. CA Section 01350 is a voluntary air quality standard developed by the State of California. It is a stricter and more comprehensive IAQ standard than the more famous formaldehyde-only emissions regulations like CARB, TSCA and CANFER which govern only floors made with composite wood product cores. In comparison, CA Section 01350 covers all our flooring products, testing the complete, finished product of any construction type and evaluating the emissions from a multitude of VOCs. We comply with CA 01350 through UL's GREENGUARD Gold certification standard. This standard incorporates and then exceeds the strict requirements for CA 01350 compliance. In UL's words, GREENGUARD Gold is "designed to define low-emitting materials suitable for environments where people, particularly children and sensitive adults, spend extended periods of time, in particular schools and healthcare facilities." For more on Evoke's IAQ program, visit **evokeflooring.com** or consult your Metropolitan representative.

LEED

Leadership in Energy and Environmental Design (LEED) is a certification program originally developed by the U.S. Green Building Council (USGBC) which is now used worldwide. It considers the design, construction, operation, and maintenance of buildings, homes, and neighborhoods to help builders and occupants to be environmentally responsible and use resources efficiently.

To achieve LEED certification, a project earns points in credit categories that address carbon, energy, water, waste, transportation, materials, health and indoor environmental quality. Depending on the number of points achieved, the project will be certified Silver, Gold, or Platinum status.

Metropolitan can support LEED projects in a variety of ways, especially in the "indoor environmental quality, low emitting materials" credit categories. On a LEED project, the flooring contractor may be required to specify products (flooring, underlayment and adhesives) that are certified as low emitting. As noted above, virtually all of Metropolitan's products can contribute in this category and we encourage bundling materials for maximum impact. We may also be able to support other credit targets.

When bidding on a new project, it is essential to confirm if the plans include LEED certification as it may have a significant impact on what materials we will recommend for the job.

And a note: should a supplier offer to provide you with a LEED Certified product, proceed with caution; no such thing exists - only buildings can be LEED Certified. For more on LEED, visit **https://www.usgbc.org/leed**.

SUBFLOOR PREPARATION

Improperly constructed or prepared subfloors can result in many performance problems. Subfloor problems are also usually very costly to correct after the product has been installed.

The flooring contractor is responsible for ensuring that substrate construction and surface conditions meet or exceed the specifications laid out in the product installation instructions. The general guidelines are that all subfloors must be flat, clean, dry, structurally sound, free of squeaks and protruding fasteners. The subfloor must be flat to within 3/16" over 10 feet, or 1/8" in 6 feet radius.

We recommend arranging a site inspection with the site supervisor prior to installation to inspect the construction and condition of the subfloor(s), including moisture content testing, to ensure they meet the required specifications.

If the conditions are appropriate for installation, as an added measure of insurance, use your cameraphone to record the temperature and moisture content of the subfloor, the flooring product and the room itself, and file them.

If the conditions are not appropriate for installation, the general contractor must correct the problems before the flooring is installed. Remember, once installed, the responsibility for the performance of the floor falls with the flooring contractor.

Plywood or OSB subfloors should be constructed with the appropriate combination of panel thickness and truss/joist spacing to provide adequate support and minimize deflection. Subfloor moisture content must not exceed 12%.

Concrete subfloors must be fully cured (a minimum 30 days) and have been tested for moisture content to ensure they meet one of the following specifications:

> **ASTM F1869** (Calcium Chloride Test): moisture vapor emissions rate (MVER) should not exceed 3 lbs/1000 sq/ft per 24 hours.
>
> **ASTM F2170** (RH Probe Test): relative humidity within the slab should not exceed 75%.

> It is the responsibility of the General Contractor to pay for moisture testing; the installer is responsible for test verification and results, including jobsite documentation.

We recommend that your project bid specify both the material make-up of the substrate and the required flatness tolerances and moisture content levels to be met. This will provide some insurance should you be faced with a slab that doesn't meet the spec and requires costly levelling work prior to installation.

For complete information on required standards for substrate construction and surface preparation, including recommended methods for measuring surface flatness and moisture testing, refer to the installation instructions at **evokeflooring.com**.

INSTALLATION

Read and follow all Evoke's materials installation instructions. If for some reason you intend to deviate from the instructions, you must obtain written permission in advance. As always, our Technical Services team is prepared to answer questions or provide support at any time.

PRODUCT INSPECTION & VISUAL APPEARANCE

It is the responsibility of the installer and/or customer to ensure that the Evoke product meets or exceeds their expectations for visual appearance and manufacturing quality. The installer is the supervising tradesperson performing or overseeing the installation. The customer is the original purchaser of the flooring from the Evoke dealer.

Evoke flooring is manufactured to highest standards of product quality, but occasional manufacturing defects may occur in the product. It is the sole and joint responsibility of the installer and customer to conduct a quality inspection of all pieces of Evoke flooring before installation. Any pieces of flooring that appear to contain a manufacturing defect should not be installed. Flooring that has been installed will be deemed to have been inspected and accepted by the installer and customer, even if the customer is not present at the time of installation. If the product appears to have an unacceptable number of defects (in excess of 5% of the total quantity), please contact your Evoke dealer.

It is the sole responsibility of the flooring installer to ensure that the job site, subfloor and installation and materials meet or exceed all applicable industry standards. Evoke accepts no responsibility for problems arising from incorrect or improper site preparation or installation procedures.

Customers reject complete, finished jobs because they "don't like the way it looks". Have the customer or customer's representative (e.g., Site Supervisor) inspect the material and confirm that it meets or exceeds their expectations for visual appearance and manufacturing quality. If the material is unacceptable to them for any reason, it should not be installed.

As it says in the disclaimer above, 'Flooring that has been installed will be deemed to have been inspected and accepted by both the installer and customer, even if the customer is not present at the time of installation. We highly recommend having your customer's approval before you commence the installation.

PRODUCTION DATE

Subject to project size and scope, Metropolitan's quality commitment includes supplying project material made in a single production run to ensure color, milling and gloss consistency. In the event we supply material from different production runs, we recommend coordinating production dates wherever possible to ensure visual continuity and minimize possible discrepancies in the finished installation.

RADIANT HEAT SYSTEMS

Prior to installation, ensure that the radiant heat system is in full working order and has been fully tested and running for a minimum of two weeks. The system should be turned off for 24 hours prior to installation in the install zone. After installation, Evoke recommends that the surface temperature of the floor never be allowed to exceed 82°F/28°C and that changes in temperature be moderated in increments of 5°F/2°C per day to avoid 'shocking' the floor.

Where possible, we recommend the use of a data logger to monitor and record temperature and humidity conditions; this provides a record of the environmental conditions and may also help take preventive measures where conditions are outside of recommended levels.

FLOATING INSTALLATION

The majority of Evoke flooring products are designed for floating installation. Floating installations are very common in single family homes, commercial areas and multi-family work partly because they are quick to install. However, the push for efficiency often encourages a couple of bad practices.

Choice of underlay is critical to a good floating installation. Many products come with an integral underlay; for those that do not, follow Evoke's guidelines or contact us for guidance. An inappropriate underlay can lead to joint failure, floor movement and other problems. Some situations may require the installation of an additional vapor barrier in addition to the underlay.

In a floating installation, our instructions require transitions to be used in certain situations to preserve the integrity of the flooring assembly. (Specific requirements are included in the installation instructions.) We acknowledge that transitions take time to install and may compromise the appearance of the finished product, but they are necessary. Omitting transitions where they are required will void the product warranty. Should you or your customer wish to obtain an exemption from this requirement, please consult your Metropolitan representative or email **techserv@metrofloors.com**.

> Omitting transitions where they are required will void the product warranty.

Floating floors must not be installed under cabinetry, kitchen islands or any other fixtures. Doing so will void the warranty. Refer to the installation instructions for more information.

EXPANSION SPACE

All Evoke floating floors will expand and contract with changes in temperature and or humidity. To allow for this, during installation expansion space must be left around the entire perimeter of the floor, between the flooring and the walls. Also leave expansion space where the flooring will meet any vertical obstruction, such as stairs, pipes, door sills, tiles, cabinets etc.

POST-INSTALLATION

On any new construction project but especially in multi-family situations, a significant challenge comes after installation is complete. A strict post-installation policy will keep the floors clean, protected and well-maintained until the unit is delivered to the homeowner.

INSPECTION & SIGN OFF

On completion of the installation, ensure any excess adhesive has been cleaned off the surface. Adhesive residue left on the surface for extended periods of time may degrade the finish. Follow the glue manufacturer's instructions for cleaning procedures.

Sweep or vacuum the surface to remove any dust and debris. Give the surface a light cleaning with Pro Series Therapy by Metropolitan or other cleaner approved for use on prefinished vinyl and laminate floors. Do not use general household cleaners, oils or waxes on the flooring.

> On completion, inspect the floor with the Site Supervisor and have them sign off on the work.

Inspect the flooring with the Site Supervisor and or homeowner and have them sign off on the work. As an added measure of insurance, take photographs of the floor and file them with the customer's signed approval.

FLOOR PROTECTION

Given that a completed unit may sit for months before occupancy, we recommend using a Metropolitan-approved floor protection membrane until delivery so the floor can be presented in mint condition.

We recommend that the flooring installation be performed as one of the last steps in the construction process after all 'wet work' has been completed and allowed to cure. In multi-family projects, this frequently doesn't happen for reasons of scheduling. If additional construction and finishing work is planned after the flooring installation, a flooring protector is a must. Repairing trade damage and cleaning up construction debris is time-consuming, challenging and costly for everyone. If you are not contracted to cover the floor after installation, take photographs of the completed installation and job site conditions before you leave as proof of your performance, should you need it in future.

> Repairing trade damage and cleaning up construction debris is time-consuming, challenging and costly for everyone.

If you are using floor protection after installation, ensure that the floor surface is covered with a breathable membrane to prevent moisture buildup on the floor surface. Ensure the entire surface is covered as sunlight may alter the color of the floor of exposed areas. Use a low adhesion tape to secure the edges to the wall, baseboards or shoe moldings only. Do not tape the floor protection to the finished floor.

Remind the customer that the membrane should be removed before an in-floor radiant heating system is turned on.

HEAT & HUMIDITY

All Evoke flooring products will react to temperature changes, and wood-based products like our Laminate line are also sensitive to humidity levels. To minimize the effects:

- Ensure the heat and humidity levels are maintained at recommended levels for the product before, during and at all times after installation.
- Avoid installing Evoke flooring in close proximity to direct sources of heat such as woodstoves and fireplaces.
- Avoid prolonged exposure of the flooring to direct intense sunlight which can generate significant heat. Protect flooring near large windows or patio doors with blinds or shades.

A particular problem with many multi-family and large commercial projects is the so-called “greenhouse effect”, in which finished units or office areas are left unoccupied for weeks or months after the flooring goes in, often with the HVAC systems turned off. Heat and humidity can build up and cause a variety of problems including cupping, buckling, gapping, crowning, delamination and more.

> Coordinate a plan with the Site Supervisor to keep temperature and humidity regulated at all times.

As the flooring contractor, it may be difficult to monitor and control the conditions on the jobsite after you have left it, but it is essential that you and the Site Supervisor coordinate a plan to ensure conditions are maintained at recommended levels in order to protect your work and their investment.

EXTRA MATERIAL

There is often demand for “attic stock” at the conclusion of a job, so we recommend making a provision for this when you place your order, especially for custom products. The extra material should be protected with a moisture-proof wrapping and stored in a warm, dry location and not in any unconditioned area in the home (i.e. basement crawl space or garage).

HOMEOWNER DOCUMENTS

Most builders present their customers with an information package when they take occupancy. We recommend you instruct them to include a copy of the installation instructions and care and maintenance guide for the flooring you’ve installed. These are all available in PDF format at **evokeflooring.com**.