



This document is intended for professional use to provide minimum requirements for substrate preparation, adhesive application, and special installation requirements for a successful installation of these products, each unique application may require additional or further steps to ensure complete satisfaction. We rely on the expertise and professionals that are installing the products to adjust based on site conditions. Refer to the product website to confirm that you have the most current revision of this document as the requirements contained within are essential to maintaining the full system warranty for the product installed. Documentation available at time of installation will be referenced regarding warranty.

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RECOMMENDED ADHESIVES

The adhesives below are the recommended adhesives for installing this product.

Adhesive	Substrate	Installation Method	Recommended Trowel
EN-610	All	Wet-Set	1/8" Saw Tooth Spreader

INSTALLATION CONSIDERATIONS

Our recommendation to utilize the EN-610 Epoxy Nose filler for the installation of Stair Nosings is due to the nature and stress of the installation and the limited bonded area allowed by the product.

Hard setting acrylic adhesives can be used to install Stair Nosings with additional prep to the product, including the sanding the back of the nosings to create a better bonding surface.

We do not recommend and/or guarantee the use of Pressure Sensitive Adhesives or Tapes for the installation of Stair Nosings.

ABRASIVE and/or SMOOTH / RIBBED RUBBER INSERTS

When cutting nosings tight to the stringer they will expand slightly due to **thermodynamics** and the **laws of physics**. When this occurs with the nosing, the strip will buckle in the channel. Therefore, after installing nosings with abrasive or smooth / ribbed rubber inserts, the inserts must be *trimmed 1/16" from the ends on both sides of the nosing*.

Nosings including abrasive or smooth / ribbed rubber inserts should be treated with extra caution. Folding or carrying longer nosings with inserts over the shoulder will cause the inserts to stretch and possibly buckle after installation.

STORAGE, HANDLING, INSTALLATION, SERVICE, & ACCLIMATION ENVIRONMENT

The reported technical data information for these products is based on a formulation that is designed, manufactured, and evaluated to perform at constant temperatures, not fluctuating more than 10° from normal selected service temperatures from the allowable range.

These products are designed for service within environments ranging from 60° F (15° C) - 85° F (26° C) unless otherwise noted in the specific installation section. These products are designed for service within ambient relative humidity between 40% and 60%.

All products must be stored in an indoor, climate-controlled (60° - 85° F) space and protected from the elements.

All products must be stored on a dry, flat, level surface. Carefully stacked, aligned neatly and not on edge. Do not stack pallets and protect products from damage.

Service Environment is defined as the environment in which the materials will be utilized.

Service temperature is defined as the normal setting of the HVAC in the environment in which the material is installed, i.e., typically 70° - 72° F in most commercial applications.

Acclimation of the material is achieved when the following conditions are met within the installation area.

- The facility or **service environment** must be fully enclosed, sealed and weather tight.
- Building HVAC must be up and running in permanent operation prior to installation (if temporary systems or systems other than the permanent HVAC systems are utilized it must be capable of maintaining the same conditions as the permanent HVAC and/or service conditions).
- Maintain all products and adhesives in the installation area at the **desired service temperatures** for a period of 48 hours prior to installation, during the installation and for the service life of the installation.
- **Temperature** must be maintained between 60° F (15° C) - 85° (26° C), preferably at the **desired service temperature**.
- **Relative Humidity** must be maintained between 35% - 65%. Understand that Relative Humidity does not affect the installation of the material, but it can affect the functionality of the adhesives. Outside of the ranges, the stated information regarding open times, flash times, & dry times will vary.

While we understand that most stair nosings are installed in areas that are temperature controlled, there are areas where nosings are installed that are not fully temperature controlled. Stair wells that are not commonly used or only used in certain conditions that do not contain ventilation.

- **In these areas it may be necessary to sand the backs of the nosings for the best performance.**

It is recommended to utilize a cloud-based or similar **data logging system** during installation to provide temperature & humidity data in the event of a warranty issue.

While we do our best to provide quality products and workmanship in our manufacturing facilities, quality installation is the responsibility of the installer. Inspect all material for proper type, color, and matching lot numbers if appropriate. We ask that we are notified of any inaccuracies or defects prior to installation as **we do not pay labor for or material costs on installed materials with visual defects.**

Users are advised to confirm suitability of these products by their own tests and ensure that all adhesives intended for installation meet the requirements of the end user.

If there are concerns regarding this information or the service temperature, substrate temperature or installation environment will not meet these requirements, please contact Technical Services for recommendations prior to installation at solutions@rhctechnical.com, we will be happy to discuss and provide direction or confirmation of the project at that time.

SUBSTRATE PREPARATION

All substrates must be clean, smooth, permanently dry, flat, and structurally sound. At the time of installation substrates must be free of visible water or moisture, dust, paint, sweeping compounds, post placement curing compound residues, residual adhesives, chemical adhesive removers, concrete hardeners or densifiers residues, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material, or foreign matter. If not, consideration should be taken regarding the effects of these conditions and how they can affect the installation.

It is recommended that all substrates have a **flatness tolerance** of 1/8" in 6' or 3/16" in 10'. Substrates that do not meet this requirement shall have a cementitious patch or self-leveling underlayment installed to flatten the installation area, uneven substrates can and will lead to **wavy noses** after installation.

All substrates must have all existing adhesives, materials, contaminants, or bond-breakers mechanically removed via scraping, sanding, grinding, or buffing with a 25 grit DiamaBrush Prep Plus tool prior to adhesive installation. In extreme situations, shot blasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a HEPA approved vacuum and flat vacuum attachment to remove all surface dust. Sweeping without vacuuming will not be acceptable.

Do not use solvent/citrus based or other chemical adhesive removers or oil-based cleaning compounds before installation.

Regarding substrate preparation when mechanical sanding, grinding, shot blasting, and vacuuming always follow the Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesives," and all applicable local, state, federal and OSHA requirements regarding Asbestos and Silica containment regulations.

NON-APPROVED SUBSTRATES

Existing Resilient Stair Tread products or Concrete substrates that have been abated or prepared with chemical adhesive removers, solvents, or chemical cleaners.

Existing **Checker Plate or Diamond Plate** is not recommended for direct installation. These should be prepared appropriately before installation.

CONCRETE SUBSTRATES

All concrete substrates that have an ICRI Concrete Surface Profile (CSP) over 4 shall be smoothed with a self-leveling underlayment or a patch to prevent imperfections from telegraphing through flooring materials.

All **concrete filled metal pans**, the concrete must be well bonded and secure without movement. It must be flush and level with **rolled metal leading edge** of the step.

- When laying a square or straight edge from back to the front of the step, if the concrete is higher than the leading edge the concrete will need to be ground level and flush.
- If the concrete is lower, then a compatible cementitious patch must be used to level out and make flush.
- Make sure that spot welds do not get in the way of the treads along the sides.
- Be sure that concrete is smooth and flat along the sides of the steps where it meets the stringer.

Moisture testing is an essential part of determining the suitability of a concrete substrate to receive a resilient stair covering. Moisture testing should be performed on any concrete substrate that shows signs of an issue or where there are concerns present. Typically, moisture testing is not performed on Stair Tread installations. If testing is performed verify results according to the selected adhesive for application for compatibility.

- All concrete substrates must be evaluated per **ASTM F3191** to confirm **porosity (absorption rate)**. This is utilized to determine the method of adhesive application or how the adhesive will act upon the concrete and determine the application method of the adhesive.
- All concrete substrates must be evaluated for **dew point** before installation. The substrate temperature shall be at least 5° F above the dew point.
- All concrete substrates should be evaluated per **ASTM F3441** to determine **pH** range of the concrete at time of installation.

Concrete substrates containing **radiant heating systems** are suitable for this product. Reduce the setting of the system to 65° F for the acclimation period. 48 hours after installation the temperature can be gradually increased to a maximum setting of 85° F.

WOOD SUBSTRATES

Wood substrates must meet local and national building codes and be prepared appropriately to receive resilient stair treads.

Wood substrates shall be rigid and free of any movement. It shall be structurally sound and designed as a resilient flooring underlayment, smooth enough to prevent telegraphing through the flooring product. At a minimum, existing stripwood plank or any board types that are unacceptable, must be covered with appropriate underlayment grade plywood.

- For stripwood subfloors with a face width of 3" or less and is tongue-and-groove and with a smooth surface, use minimum 1/4" thick approved panel to cover and reduce the potential of board telegraphing.
- For stripwood subfloors with a face width of greater than 3" or not tongue-and-groove, or with a rough surface, use a minimum 1/2" thick approved panel to cover and reduce the potential of board telegraphing.

Countersink nail heads and fill depressions, joints, cracks, gouges, and chipped edges with a good quality Portland cement-based patching compound designed for this purpose.

Fire & Pressure Treated Plywood may serve as part of the installation substrate. Many variations of this product are not designed or finished to ensure smoothness necessary underneath resilient flooring and therefore should either be patched, self-leveled, or covered with appropriate underlayment grade plywood prior to the installation of resilient flooring. Consult appropriate manufacturers regarding the types of products and their application over these substrates. If bonding to it directly, our recommendation is to treat the substrate as non-porous or non-absorptive.

OSB (Oriented Strand Board), particle board, chipboard, lauan, or composite underlayments must not be used directly under resilient stair treads. These should not be used in Commercial applications and in Residential applications they are not typically smooth enough to allow for the installation of resilient flooring products

EXISTING STAIR TREAD SUBSTRATES

With **Terrazzo or Ceramic existing stairs**, ensure existing coverings are a single layer of material and that all materials are clean, dry, sound, solid, well adhered, and free of factory and/or site-applied finishes, waxes and/or contaminants. Remove and repair all loose tiles and utilize a suitable primer and cementitious patch to fill grout lines and other depressions.

Metal substrates must be mechanically sanded/ground/abraded and cleaned of any residue, oil, rust and/or oxidation. The substrate must be smooth, flat and sound before installation. When installing in areas that may be subject to topical water or moisture and/or high humidity, an anti-corrosive coating must be applied to protect metal substrate. Be sure to follow installation procedures and trowel sizes for non-porous/non-absorptive substrates.

We highly recommend the removal of all materials used as stair tread to the original substrate prior to the application of new resilient stair tread products. However, we know there are certain times this cannot be or should not be avoided.

ADHESIVE BOND TEST

An **adhesive bond test** should be performed using actual stair tread and adhesive materials being installed to determine adequacy. Test areas should be a minimum of 36" and remain in place for at least 72 hours prior to evaluation for bond strength to the substrate. This will help to ensure application of the adhesive and the bond achieved is adequate for the project to continue.

INSTALLATION

By covering a substrate, underlayment, or existing surface, you have indicated acceptance of the substrate and installation environment.

If the profile of the step does not match the profile of the nose of the stair nosing and the step cannot be made to conform to the profile of the nose of the stair nosing, continuing the installation is not recommended and will not be covered by the product warranty.

DENATURED ALCOHOL

- Denatured alcohol or similar products should be used to clean the back side of the stair nosings prior to installation to ensure a proper bond.
- In some extreme instances it may be necessary **to sand the back side of the stair nosing to achieve maximum bond** prior to wiping with denatured alcohol.
- Sometimes denatured alcohol is sold as **camping stove fuel or methylated spirits** in areas where "denatured alcohol" is not available.

STAIR NOSINGS INSTALLATION

All stair nosings require the use of the EN-610 Epoxy Nose Filler in the stair nose radius as a filler and as the primary bonding agent of the stair nosing itself on both the horizontal and vertical edges.

When using the first mixing nozzle with the EN-610, expel the first 5 - 6 inches coming from the mixer nozzle. When the cartridge is empty, transfer the nozzle to the next cartridge to continue application. This ensures the mixture is appropriate and cures properly. Dispose of the nozzle at the end of the day and use a fresh one starting the next.

Prior to installing or fitting Stair Nosings, any Stringer material that will be utilized must be installed to ensure the proper installation. Stair nosings which have an **undercut, underlap or flange** must be installed prior to the installation of any adjoining flooring and/or riser material.

- Fit stair nosing to step and scribe material for trimming, then carefully trim material along marked line.
- Confirm that stair nosing fits tightly on step, ensuring material is not over-compressed.
- **Clean the underside of the stair nosing with a clean white rag or towel and denatured alcohol or equivalent.** Continuously change the rag or towel to prevent transferring mold-release after building up in the cleaning rag or towel. Failure to do so may cause bond issues due to mold-release chemical contamination.

In areas which may be exposed to excessive moisture, heavy foot traffic, and/or as a platform edge, lightly sand the back of the stair nosing to improve adhesion. After sanding, clean the underside of the stair nosing with denatured alcohol and a clean white rag.



Stair Nosings

INSTALLATION

- Apply a **1/4" - 1/2"** bead of the **EN-610** to the interior nose of the stair nosing. The amount of material may need to be adjusted. When checking for transfer ensure the bead is being compressed and touching the actual substrate.
- Apply **EN-610** to both the horizontal and vertical bonding surfaces of the stair nosing and spread using a 1/8" saw-tooth spreader.
- Periodically lift material to ensure proper adhesive coverage. **Adhesive should cover 90%** of nosing when rolled into place.
- Using a suitable hand roller, carefully **roll material** to ensure contact with adhesive within 30 minutes of installation.

If the stair nosing has an abrasive or smooth / ribbed rubber inserts, the inserts must be trimmed 1/16" from the ends on both sides of the nosing.

Avoid walking, kneeling, or working on material until adhesive has cured for light foot traffic. To prevent movement and help hold material in place until adhesive is cured the use of a **multi-purpose releasable painters' tape** is recommended.

POST INSTALLATION STAIR NOSING PROTECTION

We recommend that the installation of nosings be performed after all other trades have completed their work. If this is impossible, properly protecting the new nosings is essential to prevent damage. So, the following should be considered immediately following the installation process.

Sweep or vacuum flooring to remove loose dirt, debris, and grit so that it does not become trapped under protection.

Protect newly installed nosings with construction grade undyed kraft paper or protective boards, such as Ram Board, ThermoPLY, 1/8" Masonite panels, or other materials to prevent damage by other trades.

Restrict traffic at least 24 hours.

Do not allow items to be dragged or slid up or down the stair nosings after installation.

Initial cleaning requirements can take place after a minimum of 72 hours after installation is complete.

SUPPORT & ADDITIONAL RESOURCES

Product Support Phone & Email	(800) 633 – 3151 / info@flexcofloors.com
Technical Support Phone & Email	(844) 393 – 4044 / solutions@rhctechical.com
Product Technical Documentation	www.flexcofloors.com
Associated or Related Documentation	Excelsior EN-610 Epoxy Nose Filler Referenced Standards within Technical Documents Technical Bulletin Accessories Care & Maintenance

The contents contained within this Installation Sheet may be utilized or copied into another projected related document. While this original document will remain in effect at the time of product installation, this TDS shall not be supplemented or replaced by the resulting project documentation. Any alterations to the wording or requirements contained in or derived from this document shall void all related warranties. Before accepting this document, refer to the product website to confirm that you have the most current revision. These products are intended for installation by professionals. Prior to use the user must determine the suitability of our products for the intended use. The user alone assumes all risks and liability.