

## TECHNICAL DATA

ASTM F2169 – Resilient Stair Treads: **Type TS, Class 1 & 2, Group 1 & 2, Grade 1**

ASTM E648 (NFPA 253) - Critical Radiant Flux: **Class I, > 0.45 W/cm<sup>2</sup>**

ASTM E662 (NFPA 258) - Smoke Density: **Passes, <450**

CAN/ULC-S102.2 - Surface Burning: **Flame Spread Rating (FSR) 115, Smoke Developed Classification (SDC) 275**

ASTM F925 - Chemical Resistance: **Passes (chart available from [solutions@rhctechical.com](mailto:solutions@rhctechical.com))**

ASTM D2047 - Slip Resistance: **> 0.6**

Recommend Storage, Acclimation & Service Temperature: **65° - 85° F**

Acclimation Time: **48 Hours in Service Conditions**

## SUSTAINABILITY

**FloorScore®** Certificate Available, **HPD** Available, **NSF 332** Gold, Qualifies for **LEED** Credits

Technical Support: [solutions@rhctechical.com](mailto:solutions@rhctechical.com)

## APPROVED ADHESIVES

**Excelsior TP-620 Pressure-Sensitive Tape Adhesive** - A solvent free, pressure-sensitive tape based adhesive designed for use with indoor installations of stair treads, risers, stringers and cove fillet sticks.

**Excelsior AW-510 Acrylic Wet-Set Adhesive** – An acrylic adhesive used for the permanent installation of dimensionally stable vinyl, rubber and quartz flooring, wall base and stair tread products over porous and non-porous substrates in indoor applications.

**Excelsior C-630 Water Based Contact Adhesive** - A water-based contact adhesive used for the permanent installation of vinyl and rubber resilient flooring, stair treads, wall base, flash coving and accessories in horizontal or vertical installations over porous and non-porous substrates in indoor applications.

**Excelsior EW-710 Epoxy Wet-Set Adhesive** – A non-flammable two-part urethane-modified epoxy adhesive used for the permanent, indoor installation of vinyl, rubber and quartz flooring products over porous and non-porous substrates in both indoor and outdoor applications.

**Excelsior U-705 Urethane Wet-Set Adhesive** – A premium water resistant, single component urethane adhesive used for the permanent installation of resilient flooring products, including recycled or crumb rubber flooring products over porous and non-porous substrates both indoors and outdoors.

**Excelsior EN-610 Epoxy Nose Filler** - A two-component, solvent free epoxy caulk adhesive designed for use as nose filler and adhesive with indoor installations of stair treads and stair nosing as well as an adhesive for accessories.

## Accessory Items Required for Installation

Denatured alcohol or similar product should be used to remove the 'mold-release' from the back side of the treads prior to installation to ensure a proper bond.

When installing 1701 & 1900, one-piece tread & riser products, #195 Fillet strip (Cove Stick) is needed. This is used to create a consistent radius at the junction of the tread & riser and provide support when the area is kicked to prevent breaking or puncturing.

### Butting Treads & Pattern Alignment

Wider stairwells and stairwells that require pattern alignment will require additional planning and dry fitting prior to installation. We recommend ordering treads the next size up to achieve these layouts and installations. Our treads are manufactured to be trimmed on each end of the length and the depth of the tread.

Adhesive Coverage Rates, Curing Times, and Traffic Limits					
Coverage Rates (per gallon)			Traffic Limits		
Adhesive	Porous	Non-Porous	Foot Traffic	Heavy Foot Traffic	Maintenance
AW-510	160 sq. ft.	200 sq. ft.	24 Hours	48 Hours	72 Hours
EN-610	25-50 lin. ft. / cartridge		8 Hours	24 Hours	48 Hours
TP-620	164 lin. ft. / roll		Immediate	Immediate	Immediate
C-630	20-40 lin. ft. / pail		Immediate	Immediate	48 Hours
U-705	160 sq. ft.	235 sq. ft.	8-12 Hours	24 Hours	24 Hours
Brushed & Rough Porous		Smooth Porous & Non-Porous			
EW-710	135 sq. ft.	150 sq. ft.	8 Hours	24 Hours	48 Hours

## SUBSTRATE, INSTALLATION & MAINTENANCE INFORMATION

### 1. PRODUCT LIMITATIONS

- Prior to acceptance of this document refer to web-site [www.flexcofloors.com](http://www.flexcofloors.com) to confirm that you have the most current revision.
- This is a commercial product intended for use in Commercial applications.
- Product is **not** intended or designed for use **outdoors**, including covered walkways or areas not completely enclosed.
- Product is not intended or designed for use in areas subjected to sharp spikes, cleats, and/or other items that will cut and/or damage treads.
- Long term, extended or excessive exposure to Sunlight & UV Heat can cause discoloration or other undesirable effects, so use caution and/or window treatments in these areas.
- Not to be used in direct contact with heat sources
- As rubber stair treads age, color will darken with exposure to environmental conditions; some shading should be expected with repairs from attic stock materials.
- Dragging or improperly moving furniture or equipment across the surface of the rubber stair tread can cause permanent damage
- Any references to open times, working times, etc. are subject to job site conditions including variations in porosity, surface finish and/or flatness of substrate

as well as ambient conditions such as air temperature, relative humidity and substrate temperature. Actual times will vary with these conditions.

- Flexco cannot accept responsibility for any loss or damage that may result from the use of this information, site conditions, and/or workmanship outside our control.

### 2. PRE-INSTALLATION

- Products must be stored indoors and protected from elements prior to installation.
- Do not bend or flex Rubber Stair Treads, especially treads with inserts as the inserts could wrinkle and/or release.
- Trim inserts back 1/16" from ends after installation to prevent buckling of the insert
- Rubber Stair Treads should be trimmed on both edges to align design
- One-Piece Tread combinations require the use of the #195 Cove Stick at the junction of the tread and riser to provide support for the bend
- In stairwells that are subject to intense or direct sunlight, product must be protected during the

acclimation, installation and adhesive curing times by covering the light source.

- Deliver all materials to the installation location in its original packaging with labels intact. Do not stack pallets to avoid damage. Remove any plastic and strapping from product after delivery. Inspect all material for proper type, color and matching lot numbers if appropriate.
- Protect installation area from extreme temperature changes, such as heat and freezing, as well as direct sunlight for at least 48 hours before, during and after installation.
- Ensure all substrate preparation and moisture testing requirements have been performed, read and/or understood by all interested parties.
- Allow all trades to complete work prior to installation.
- We manufacture our products with quality materials and craftsmanship. A quality installation is the responsibility of the installer.
- It is the responsibility of the installer to verify the material is checked for damage, defects, and acceptable color match as well as the correct product as ordered. Installation of these materials constitutes acceptance. Notify an appropriate distribution or Flexco representative of any discrepancies prior to installation.

### 3. STORAGE, ACCLIMATION & SERVICE ENVIRONMENT

- Ensure material is adequately stored at temperatures between 65° F (19° C) and 85° F (30° C) prior to installation.
- This product is designed, manufactured and tested to perform at constant temperatures, not fluctuating more than 4° from normal selected service temperatures from the allowable 65° F (19° C) - 85° F (30° C) range.
- During acclimation, the material must be in the installation area with the HVAC system functional and operating at desired service temperatures for a period of 48 hours prior to installation, during the installation and for the service life of the installation afterwards.
- It is recommended maintaining an ambient relative humidity between 40% and 60% for a period of 48 hours prior to installation, during the installation and for the service life of the installation afterwards.
- If the material will be installed outside of the above acclimation and service temperature ranges contact Technical Services for more detailed installation recommendations.
- Do not proceed with installation until all conditions have been met.

### 4. SUBSTRATE PREPARATION

*In regards to 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 in regards to Asbestos and Silica containment regulations.*

All substrates must be prepared according to ASTM F710, as well as applicable ACI and RFCI guidelines.

Substrates must be clean, smooth, permanently dry, flat, and structurally sound. Substrates must be free of visible water or moisture, dust, sealers, paint, sweeping compounds, curing compounds, residual adhesives and adhesive removers, concrete hardeners or densifiers, solvents, wax, oil, grease, asphalt, visible alkaline salts or excessive efflorescence, mold, mildew and any other extraneous coating, film, material or foreign matter. All substrates must have any and all existing adhesives, materials, contaminants or bond-breakers mechanically removed via scraping, sanding or grinding. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a flat vacuum attachment to remove all surface dust. Sweeping without vacuuming will not be acceptable. All substrates must be tested per ASTM F3191 to confirm porosity. All substrates that do not meet this requirement are considered non-porous. Ensure that all non-porous substrates are not contaminated with any aforementioned contaminants.

It is recommended that all substrates have a floor flatness of FF32 and/or a flatness tolerance of 1/8" in 6' or 3/16" in 10'. Substrates that do not meet this requirement should have a compatible cementitious patch (such as the Excelsior CP-300) or self-leveling underlayment (such as the Excelsior SU-310) installed to flatten the installation area. Do not use solvent/citrus based adhesive removers prior to installation. Follow The Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesive", and all applicable local, state, federal and industry regulations and guidelines. When removing asbestos and asbestos containing materials, follow all applicable OSHA standards.

#### CONCRETE SUBSTRATES

All concrete must have a minimum compressive strength of 3500 PSI and be prepared in accordance with ASTM F710. When stair treads are installed directly over concrete, surfaces that have an ICRI Concrete Surface Profile (CSP) over 4 should be flattened with a patching compound to prevent imperfections from telegraphing through stair tread materials.

### CONCRETE FILLED METAL PAN STEPS

When treads are installed over these steps, the concrete must be well bonded and secure without movement. The concrete also 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.

### GYPSUM BASED SUBSTRATES

Gypsum-based substrates must have a minimum compressive strength of 3500 PSI. Gypsum substrates that do not meet this requirement may have one coat of the Excelsior MM-100 installed to improve the top layer bonding strength of the substrate. Substrate must be structurally sound and firmly bonded to the subfloor below. Any cracked or fractured areas must be removed and repaired with a compatible patch or repair product. Follow instructions for installation over a gypsum substrate. New or existing gypsum substrates may require the substrate has a primer or sealer applied just prior to finished floor being installed. Follow all manufacturers' recommendations regarding preparation for resilient flooring installation

### WOOD SUBSTRATES

Wood substrates must be constructed per federal, state and/or local building codes. These should be fastened firmly and flat. All holes from fasteners should be countersunk and filled. Joints, cracks, gouges, and worn edges should be filled with a good quality Portland cement based product. Solid or engineered wood flooring should have a multiply underlayment grade plywood at a minimum thickness of 1/4" over the hardwood flooring. Solid or engineered wood flooring should not be covered with cementitious coatings; the moisture from the coating could cause curling. Other wood materials, such as OSB, lauan, particleboard, chipboard, fiberboard or cementitious tile backer boards, are not acceptable substrates.

### TERRAZZO AND CERAMIC SUBSTRATES

Ensure the substrate is free of all sealers, waxes and/or other contaminants. Remove and/or replace all loose tiles and clean the grout lines. Fill all depressions and grout lines with a good quality Portland cement based product.

### RESINOUS SUBSTRATES

When installing directly over a resinous products, such as the Excelsior MM-100 or an epoxy coating, ensure that coating is dry to the touch and has cured for the prescribed length of time.

Substrate must be clean, dry, sound and free of contaminates. Resinous substrates are considered non-porous – make sure adhesive can be used over non-porous substrates and follow all installation instructions and flash times for non-porous substrates.

### METAL SUBSTRATES

Metal substrates must be thoroughly sanded/ground and cleaned of any residue, oil, rust and/or oxidation. Substrate must be smooth, flat and sound prior to 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. Contact a local paint or coating supplier for coating recommendations. Install stair treads within 12 hours after sanding/grinding to prevent re-oxidation. Any deflection in the metal floor can cause a bond failure between the adhesive and the metal substrate. Be sure to follow installation procedures and trowel sizes for non-porous substrates.

***Installing over Checker plate or Diamond plate is not recommended.***

### EXISTING STAIR TREAD SUBSTRATES

Do not install over existing resilient rubber stair treads, vinyl stair treads, or other resilient flooring products.

## 5. ADHESIVE BOND TEST

Perform an adhesive bond test using an actual stair tread and adhesives being used prior to installation to determine adequacy.

## 6. STRINGER INSTALLATION PATTERN SCRIBE METHOD

All stringers should be installed prior to treads.

Using builders felt or equivalent, carefully scribe a template using the height, width and length of steps. Carefully trim template to match step, riser and step nose.

Place the stringer template over the stringer material and mark cut lines, and rough cut the stringer material. Make final adjustments prior to installing adhesive. Stringer should be flush with all step surfaces.

Apply adhesive according to instructions for specific product in use. Be sure to follow instructions based on substrate porosity (porous or non-porous).

Carefully position stringer to ensure that stringer material is flush with steps. Roll material with a hand roller or equivalent within 30 minutes of installation to ensure adhesive transfer.

Visually inspect installation to ensure that material has not shifted and that adhesive has not been squeezed out of joints or compressed onto surface.

## 7. STAIR TREAD & RISER INSTALLATION

The predominant step being used in construction today is the metal formed frame with a pan filled with concrete,

having a nose radius of 1/2" maximum as spelled out in the ADA guidelines. When installing Stair Treads on these substrates, either new construction or remodel, they do not require the use of the EN-610 Epoxy Nose Filler. Fitting the tread properly to the step and creating a tight fit to the substrate will ensure proper installation and performance of the Stair Tread.

For installations that occur on other substrates (worn metal, wood, existing approved flooring types), the EN-610 Nose Filler may be required to ensure proper fit to the substrate. These substrates need to be verified for uneven wear and corrected appropriately using the best means available. One of these means is the EN-610 Epoxy Nose Filler. It is our recommendation to check for gaps between the radius in the nose of the tread and the substrate. If a gap greater than 1/4" is present, it is required to use the EN-610 Epoxy Nose Filler. If a gap of 1/2" or greater is present, the substrate should be prepared using other methods.

Of course, with any Stair Tread installation it is acceptable to utilize the EN-610 Epoxy Nose Filler.

### THREE SIDE SCRIBE METHOD

If stringers are installed, protect with tape prior to scribing treads.

Determine the center of the stairwell and mark a center line on the riser portion of each step. Determine the center of each stair tread and mark a center line on the back edge of the tread for alignment during trimming and installation.

Align the stair tread to the right side of the step and set divider to the distance between the center mark on the step riser and the center mark on the stair tread. While applying firm pressure to the stringer material with divider, mark the stair tread with the divider to determine scribe line. If using a One-Piece Tread & Riser, scribe the riser portion of the tread as well. Use a suitable knife to trim stair tread along scribe mark and create a slight undercut to ease final installation.

Once the right side of the tread is scribed and trimmed, reposition the stair tread to align to the left side of the step. Reset the divider to the distance between the center mark on the step riser and the center mark on the stair tread. Use divider to scribe stair treads as before and trim stair tread along scribe mark, creating a slight undercut. Ensure that stair tread fits step snugly against stringers without over-compressing tread material.

To aid in scribing and trimming the back edge of stair treads, a spacer (such as a carpenters level, 1" x 2" wood or equivalent) is required to set the depth of the tread. Prior to cutting the back edge of the stair tread, measure the depth of the step and the thickness of the spacer. Rough cut stair treads to be at least 1/4" deeper than the step but no deeper than the width of the spacer.

Once the back edge has been rough cut, align stair tread to the back of the step riser above. Insert the spacer

between the leading edge of the stair tread and the step nose, ensuring that the spacer and stair tread fit snugly against the step. Set the divider to the exact width of the spacer and scribe the back edge of the stair tread to the step riser. Trim the back edge stair tread along scribe mark, creating a slight undercut to ease installation. Ensure that all sides of the stair tread fit snugly to step while avoiding over-compressing material.

Once the initial step has been scribed and trimmed, the riser should be scribed and trimmed to accommodate imperfections in the step stringers using the Two Side Scribe Method.

### SCRIBING RISERS

Prior to trimming risers, ensure that the stair tread below has been trimmed and fits snugly on the step beneath the riser. Use the previous center mark used when trimming the adjoining stair treads as the center of the stairwell, ensuring that center mark is visible while trimming risers. Repeat the process above to scribe both ends of the riser to the stairwell.

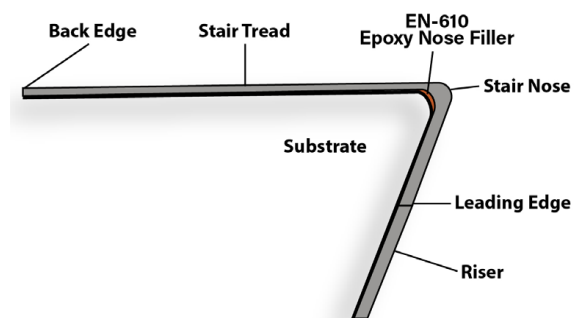
### HOW TO HANDLE THE NOSE & RISER INTERSECTION

The seam between the leading edge (nose) of the stair tread and the riser should be treated using one of the following methods.

#### BUTTING or SCRIBED SEAM METHOD

When butting stair tread and riser seams using the Scribed Seam Method, ensure that the stair tread above and below the riser, as well as the riser itself, have been trimmed and fit the step snugly.

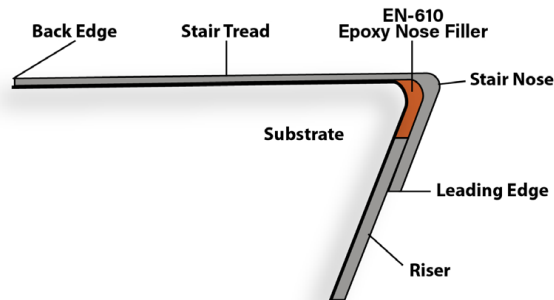
Ensure the stair tread below the riser is in place prior to scribing the riser to ensure a tight fit to the leading edge of the stair tread above.



Overlap the stair tread above the riser with the riser while ensuring that riser toe is not over-compressed. Using the leading edge of the stair tread as a guide, a divider or a marking tool is needed to scribe the riser. Use a suitable knife to trim riser along the scribe mark.

### OVERLAPPING SEAM METHOD

When overlapping stair tread and riser seams, ensure that the stair tread and riser have been trimmed and fit the step snugly. Risers do not normally require trimming on the top edge prior to installation when overlapping seams. However, if the top edge of the riser extends up to or over the height of the step, trim riser to 1/4" - 1/2" from the top of the step to allow space for the EN-610 Epoxy Nose Filler Adhesive if needed.



### CONTINUING THE INSTALLATION

When using the Excelsior TP-620 Pressure Sensitive Tape Adhesive or the C-630 Contact Adhesive, be sure to clean dusty and/or cementitious substrates with a damp mop or sponge prior to installation to remove dust, dirt and debris.

**Clean the underside of the stair tread with a clean rag or towel and denatured alcohol or equivalent solvent adhesive remover. Failure to do so may result in bond issues due to mold-release chemical contamination.**

Apply adhesive according to instructions for specific product in use. Be sure to follow instructions based on substrate porosity (porous or non-porous).

When installing adhesive on steps, be sure to leave a 1/2" - 3/4" space on either side of step nose to accommodate the Excelsior EN-610 Epoxy Nose Filler Adhesive, if needed, to avoid adhesive cross-contamination.

All leading edges (noses) must be adhered to the either the riser or riser substrate when installing stair treads.

Roll material with a hand roller or equivalent within 30 minutes of installation to ensure that material has not shifted and that adhesive has not been squeezed out of joints or compressed onto surface.

After installing treads with either abrasive or rubber inserts, trim the inserts back 1/16" from the ends on both sides of the tread.

### 8. ONE-PIECE TREAD AND RISER INSTALLATION

Follow information listed above for the fitting and placement of One-Piece Tread and Risers.

The following is additional information recommended for installation of these products.

Prior to installing one-piece tread and risers, the Flexco #195 Cove Stick Fillet must be installed at the joint where the back of the step meets the step riser. Install the Cove Stick Fillet using the Excelsior TP-620 1" Tape or the Excelsior C-630 Contact Adhesive. All one-piece tread & risers must be installed with Cove Stick Fillet. Failure to do so may result in premature wear and damage to the tread and or riser.

To ease one-piece tread & riser installation, we recommend the use of the Excelsior TP-620 Pressure Sensitive Tape Adhesive to install material. Use 1" TP-620 tape to adhere tread nose, 4" TP-620 tape to install riser portion and 9 1/2" TP-620 tape to install tread portion. Install TP-620 directly stair treads to ease installation.

To install stair treads, remove protective paper from TP-620 on the tread nose and stair tread portion of the one-piece tread & riser and install treads onto step. Once the tread and tread nose are properly placed, remove the protective paper from the TP-620 on the riser portion of the one-piece tread & riser and form riser material up the step rise, ensuring there is full contact with the cove stick. If riser does not make full contact with cove stick, the cove area of the one-piece tread & riser could become damaged over time.

After installing treads with either abrasive or rubber inserts, trim the inserts back 1/16" from the ends on both sides of the tread.

### 9. EXTENDED WIDTH STAIRWELLS

Wider stairwells that require butting two treads together will require additional planning and dry fitting prior to installation.

We recommend ordering treads the next size up to achieve these layouts and installations. Treads with VI or Abrasive strips may require mixing and matching to achieve the desired installation result.

Flexco stair treads have an acceptable level of thickness variation from tread to tread. For this reason, stair treads that are intended to be butted together may need to be sanded, undercut, or shimmed in order match the thickness of adjacent treads. Treads should be trimmed so that the center of the pattern or profile is at the seam.

Once butting seams are cut and patterns are aligned the use of the Excelsior EW-710 Epoxy or the U-705 Urethane adhesive should be used at the seams to help adjust for slight height variations and to hold the seam tight.

### 10. TOP STEPS AND MID-LANDINGS

When installing a full size tread on the top step or landing and it will be butted up to flooring materials on

the upper floor or landing, always check the thickness of the two materials. Due to the way treads are manufactured the gauge of the material can vary depending on where they are cut to butt up to the tiles. Patching, shimming or sanding of the treads may be required to match the two materials in thickness for a flush installation. This is especially true on open landings where the tile will have to wrap around the side of the tread.

### **11. INITIAL MAINTENANCE**

Ensure that adhesive has cured for recommended period of time prior to conducting initial maintenance. Remove any protective coverings prior to cleaning. Sweep, dust mop and/or vacuum stair tread to remove any dirt, dust or debris.

Mix 2-4 ounces of Excelsior NC-900 All-Purpose Neutral Cleaner per gallon of clean, potable water. Use a clean mop to apply cleaning solution to floor and let stand for 5-10 minutes. Use a 22 gauge soft bristled deck brush to scrub stair treads in order to remove dirt, debris and any remaining mold release chemicals. If stair tread is heavily soiled, additional cleaning may be required.

Use a wet vacuum or clean mop to remove any and all excess cleaning solution. Rinse area with clean, cool water and allow floor to dry entirely.

Do not use detergents, abrasive cleaners or “mop and shine” type products, as they will dull the finish and sheen of the stair tread material. Do not use vacuums that have a beater bar or electric brooms with hard

plastic bottoms or no padding, as this may cause discoloration, scratching and loss of sheen.

For further information regarding daily or routine maintenance, please consult the product care & maintenance document or the associated product technical data sheet.

### **12. FLOORING PROTECTION**

Protect newly installed stair treads, risers and stringers with construction grade paper, such as Ram Board, to protect material from damage by other trades. Do not slide or drag heavy equipment across the new stair treads. Limit usage and foot traffic according to the adhesive's requirements. When moving appliances or heavy furniture, protect stair treads from scuffing and tearing using temporary floor protection.

Ensure all castors that may come in contact with stair treads are clean and free of any and all dirt and debris. Routinely clean castors to ensure that dirt or debris has not built up or become embedded in castors. Replace castors at regular intervals, especially if they become damaged or heavily soiled. Place walk-off mats at outside entrances. Ensure mats are manufactured with non-staining backs to prevent discoloration.

### **13. WARRANTY**

Flexco provides a 5 Year Limited Warranty on all Heavy Duty Stair Treads and a 25 year limited warranty on all Extra Heavy Duty Stair Treads. For additional information, see associated warranty documents.

### **FOR PROFESSIONAL USE ONLY**

**PLEASE CONSULT ALL ASSOCIATED INSTALLATION INSTRUCTIONS and TECHNICAL DATA, SAFETY DATA SHEETS, MAINTENANCE DOCUMENTS, AND WARRANTY INFORMATION PRIOR TO INSTALLATION.**