

Section 9
Resilient Flooring
Vinyl Stair Treads

1. Product Identification

Vinyl Stair Treads

2. Company Information

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3. Product Description

3.1 Basic Application

Flexco's "New" Vinyl Stair Treads profiles are designed for use on all interior stairs, including pan-filled concrete steps and wooden steps. Our vinyl stair treads are both affordable and durable, without compromising the good looks and quality you come to expect from Flexco Floors. Flexco vinyl stair treads are also non-conductive and resist scuffing, gouging and most chemicals and common substances. Flexco's vinyl stair treads help in preventing slipping and reduces noise. The color is inherent throughout the thickness of the tread and is available in 15 attractive colors. Select colors of Flexco's Vinyl Stair Treads Colors can contribute to the LEED Green Building Certification System. Flexco's vinyl treads are durable and economical with four new designs including two ribbed designs allowing dirt and liquids to drain off, reducing the chances of slippage. Treads for the visually impaired are available by adding either 2" Ribbed Inserts or 2" Abrasive Strip, which meets Title 24, Part 2-California Building Code, Section 2-3306 Striping for the Visually Impaired when required contrasting colors are used.

3.2 Product Composition and Material

Flexco's vinyl treads are extruded from vinyl chloride compound specifically formulated not to chip, crack, or fade and are solid homogeneous manufactured using first quality virgin raw material and 10% post industrial waste. Special ingredients are added to provide its excellent light stability, chemical resistance, and abrasion resistance. Its hard surface provides excellent abrasion resistance. This resilient, monolithic tread is uniform with respect to color, pattern effect, and composition, throughout the thickness of the tread.

3.3 Product Styles & Dimensions

3.3.1 Flexco Vinyl Ribbed Stair Treads, Vinyl Riser and Stringers

3.3.2 Vinyl Ribbed Design Treads

LVT Light-Duty Square Nose Ribbed Tread - NEW Profile and Color Selections in 2006!

Lengths: 36" (.91m)

42" (1.07m)

48" (1.22m)

54" (1.37m)
60" (1.52m)
72" (1.83m)
84" (2.14m)
96" (2.44m)
108" (2.74m)

Custom orders available up to 144" (3.66m) in length. All lengths are nominal.

Depth: 12 1/2" (31.75 cm) nominal

Thickness: 5/32" (3.968mm) to 5/64" (1.984mm) nominal

Nose Length: 2" (50.80mm) nominal

Nose Thickness: 5/32" (3.968mm) nominal

Colors: Available in 15 colors

Packaging: 10 treads per carton up to 72" (1.83m), 6 treads per carton for lengths greater than six feet 108 Ribbed

Inserts: 2" Ribbed inserts available

Abrasive Strips: Two 3/4", and 2" abrasive strips available

Approximate Weight per linear foot: 1.3 lbs (1.94 kg per linear meter)

LVT Light-Duty Round Nose Ribbed Tread - NEW Profile and Color Selections in 2006

Lengths: 36" (.91m)

42" (1.07m)
48" (1.22m)
54" (1.37m)
60" (1.52m)
72" (1.83m)
84" (2.14m)
96" (2.44m)
108" (2.74m)

Custom orders available up to 144" (3.66m) in length.

All lengths are nominal.

Depth: 12 1/2" (31.75 cm) nominal

Thickness: 5/32" (3.968mm) to 5/64" (1.984mm)

Nose Length: 1" (25.4mm) nominal

Nose Thickness: 3/32" (2.381mm) nominal

Colors: Available in 15 colors

Packaging: 10 treads per carton up to 72" (1.83m), 6 treads per carton for lengths greater than six feet. Ribbed

Inserts: 2" ribbed inserts available

Abrasive Strips: Two 3/4" and 2" abrasive strips available

Approximate Weight per linear foot: 1.2 lbs (1.77 kg per linear meter)

VT Heavy-Duty Square Nose Rib Tread - NEW Profile and Color Selections in 2006

Lengths: 36" (.91m)

42" (1.07m)
48" (1.22m)
54" (1.37m)
60" (1.52m)
72" (1.83m)
84" (2.14m)
96" (2.44m)
108" (2.74m)

Custom orders available up to 144" (3.66m) in length.

All lengths are nominal.

Depth: 12 3/8" (31.43cm) nominal

Thickness: 1/4" (6.359mm) to 1/8" (3.175mm) nominal

Nose Length: 2" (50.80mm) nominal

Nose Thickness: 5/32" (3.968mm) nominal

Colors: Available in 15 colors

Packaging: 6 treads per carton up to 72" (1.83m), 6 treads per carton for lengths greater than six feet. Ribbed In-

serts: 2" ribbed inserts available

Abrasive Strips: Two 3/4", and 2" abrasive strips available

Approximate Weight per linear foot: 2 lbs (2.99 kg per linear meter)

VT Heavy-Duty Round Nose Rib Tread - NEW Profile and Color Selections in 2006

Lengths: 36" (.91m)

42" (1.07m)

48" (1.22m)

54" (1.37m)

60" (1.52m)

72" (1.83m)

84" (2.14m)

96" (2.44m)

108" (2.74m)

Custom orders available up to 144" (3.66m) in length.

All lengths are nominal.

Depth: 12 3/8" (3 1.43cm) nominal

Thickness: 1/4" (6.359mm) to 1/8" (3.175mm) nominal

Nose Length: 1" (24.4mm) nominal

Nose Thickness: 1/4" (6.359mm) nominal Colors: Available in 15 colors

Packaging: 6 treads per carton up to 72" (1.83m), 6 treads per carton for lengths greater than six feet.

Ribbed Inserts: 2" ribbed inserts available

Abrasive Strips: Two 3/4", and 2" abrasive strips available

Approximate Weight per linear foot: 1.7 lbs (2.53 kg per linear meter)

3.3.3 Vinyl Risers

Height: 7" (177.8mm) nominal

Thickness: .085" (2.16mm) nominal

Toe Length: 5/8" (15.88mm) nominal

Length: 50 ft. coils (15.24m) nominal

Packaging: One 50 ft. (1 5.24m) nominal roll per carton Weight per 50 ft. roll: 28 lbs

3.3.4 Vinyl Stringers

Height: 10" (254.0mm)

Thickness: .080" (2.03mm) nominal

Length: 50ft. coils (1 5.24m) nominal roll

Packaging: One 50ft. (1 5.24m) nominal roll per carton Weight per 50 ft. roll: 40 lbs

4. Technical Data

4.1 Meets ASTM F 2169; Standard Specification for Resilient Stair Treads: Type TV; Class 2; Group 1 & 2.

4.2 ASTM E 648 (NFPA 253), Critical Radiant Flux: Class 1, > 1.00 W/cm²

4.3 ASTM E 662 (NFPA 258), Specific Optical Density of Smoke Generated by Solid Materials: Passes, < 450

4.4 UL 992, Surface Flame Propagation: Passes, < 2.0

4.5 ASTM F 925, Resistance to Chemicals: Passes, List of chemicals available

4.6 ASTM D 570, Water Absorption of Plastics: < 0.15%

4.7 ASTM D 2047, Static Coefficient of Friction (Slip Resistance): > 0.6 dry flat surface using Standard Neolite Sensor.

4.8 ASTM F 970, Static Load Limit: 250 psi

4.9 ASTM F 1515, Light Stability: Passes, Delta E < 8.0

4.10 ASTM D 3389: Abrasion Resistance < 1 gram loss; Passes

4.11 FMVSS 302, Title 49, Part 571, Flammability of Interior Materials: Passes

4.12 California State Title 24, Section 3306 (r): Treads for Visually Impaired with 2" carborundum contrasting strip: Conforms

5. Product Limitations/Precautions

Flexco® Vinyl Stair Treads / Nosings must be installed using Flexco 16/86 Multi-Performance Tile and Tread Adhesive, Flexco® 77 Solvent Free Epoxy Flooring Adhesive or FlexTape. All adhesives and FlexTape must be used in conjunction with Flexco® 36 Stair Tread Epoxy Nose Caulking Adhesive. For installations over metal or other defined non-porous and flexing substrates, Flexco® 77 Solvent Free Epoxy Flooring Adhesive must be used. Flexco 16/86 Multi-Performance Tile and Tread Adhesive, Flexco® 77 Solvent Free Epoxy Flooring Adhesive or FlexTape must also be used for the installation of all Flexco vinyl risers and vinyl stringers. Flexco® 36 Stair Tread Epoxy Nose Caulking Adhesive must be applied in the nose of all treads (see below for specific stair tread application details). There must be no gap or space at the nose when installed. The tread nosing must be flush against the step. Allowing the tread nosing to extend past the step or not applying the recommended amount will result in tread cracking. The vinyl stair treads must be installed in accordance with Flexco's recommendations in order for the product warranty to be in effect. Flexco Vinyl Stair Treads can be stained if it is allowed to remain in contact with rubber products that may contain staining ingredients such as tires, casters, walk-off mats, and walk-off residue from asphalt driveways and sealers. Ensure the proper tread is used for the service application with regard to the type and amount of traffic. If the stairs require treads to be longer than the maximum length available, there is no guarantee that the treads will match when butted together. For butting stair treads, the treads must be pre-ordered from the factory specifically noting the treads are to be installed butted, so 90 degree factory ends can be produced. When butting treads, Flexco 77 Solvent Free Epoxy Flooring Adhesive must be applied at least six (6) inches on either side (12" total) of the treads seam (do not apply directly over other adhesives, nose caulk) to ensure an installation failure doesn't occur. Do not use FlexTape for butting tread installations. DO NOT allow any gaps between treads when butting. DO NOT fold treads or distort tread nosing. DO NOT install over painted steps. Fading can occur from extensive exposure to heavy direct or glass-filtered sunlight, or unfiltered ultra-violet rays. Excessive heat from non-environmentally controlled areas, glass-filtered or direct sunlight or unfiltered ultra-violet rays can also have an adverse effect on the adhesives, and should be avoided to prevent adhesive bond failure. Ensure any disinfectant, cleaning agent, dye, floor care product, pesticide, or other chemical (solid, liquid, or gas) that may come in contact with the stair treads will not produce permanent discoloration and/or damage to the treads. If any chemical that may come in contact with the treads is not on the stain resistance chart, the treads must be tested prior to installation. Contact Flexco's Customer Service for a stain resistance chart and for assistance in conducting stain testing. Flexco Vinyl Stair Treads are not to be used in commercial kitchens or in areas exposed to animal fats, greases, oils, solvents, strong detergents, or where there is excessive topical moisture. Flexco Vinyl Stair Treads must not be used in areas that may be subjected to sharp spikes, cleats, sharp wheels, or other objects that could damage the stair treads. DO NOT drag or move objects across the stair treads or drop objects onto the treads that may cause damage to the treads. Use appropriate floor and furniture protection devices. The stair treads are not to come in contact with direct heat, such as radiators, hot ovens, or other heated equipment. Ensure the proper product is used for the service application with regard to type and amount of traffic. Flexco's Vinyl Stair Tread products are for indoor use only with temperatures maintained between 65° F (19 °C) and 85° F (30 °C). Flexco Floors will not be held liable for finishes or sealers applied directly to stair treads causing them to become slippery and/or reducing the stair treads slip resistance! Color selections must be made from actual samples as exact matching of color or shade may vary. Color shade may vary from sample or photographs. Follow all local, state, and federal safety standards and practices.

6. Installation

6.1 General Preparation and Conditioning

Read the literature concerning the product description, product limitations, product installation, adhesives & nose caulking information, product maintenance, and warranty before installing stair treads. All materials are to be delivered to the installation location within 48 hours of installation in its original packaging with labels intact. Store products in a dry area protected from the weather with temperatures maintained between 65° F (19 °C) and 85° F

(30 °C). DO NOT stack pallets. Remove all plastic wrapping and strapping from the pallets in the installation area at least 48 hours prior to installation. Stair Treads must be stored horizontally and placed on a smooth, level, dry surface, which supports the entire width of the stair treads. The installation area, substrate, vinyl stair treads, associated material and adhesives are to be maintained between 65° F (19 °C) and 85° F(30 °C) for at least 48 hours before installation, during installation, and thereafter. Room temperature must be maintained between 65° F (19 °C) and 85° F (30 °C) thereafter to prevent adhesive failure and to prevent distortion or destruction of the vinyl stair treads. In addition, the subfloors temperature range must also be between 65° F (19°C) and 85° F (30°C) prior to installation and maintained thereafter. Inspect all material for proper type and color. Conduct the proper moisture emission and pH testing on the substrate. Proceed with the installation only when the conditions are proper and correct. A bond test using Flexco 16/86 Multi-Performance Tile and Tread Adhesive, Flexco® 77 Solvent Free Epoxy Flooring Adhesive (required for butting treads & must be used over metal and other non-porous substrates) or FlexTape, including Flexco® 36 Stair Tread Epoxy Nose Caulking Adhesive must be conducted throughout the area approximately 50 feet apart and one test must be conducted per flight of stairs, in addition to each connecting landing areas at least one week prior to the scheduled installation to ensure the surface is suitable. After 72 hours, there should be an unusual amount of force to lift the stair treads from the substrate with adhesive/FlexTape and Stair Tread Epoxy Nose Filler bonding to both the stair tread and the substrate. DO NOT proceed with the installation if the concrete subfloor has darkened, if visual moisture is present or if adhesive is still wet. Each is clear indications of subfloor moisture problems. Close the area to traffic during stair tread installation. Install stair treads and accessories after other finishing operations, including painting, have been completed. Prevent the back of the stair treads from becoming contaminated and protect the face from damage. If the back of the stair treads becomes soiled prior to installation, clean with a soft cloth dampened with clean water or denatured alcohol, rinse, and let dry. Warning: Follow all local, state, and federal standards and practices for the proper removal and disposal of flooring, adhesives, or other materials. Follow all local, state, federal, and manufacturer's safety standards for the use of all products and equipment.

6.2 Subfloor/Substrate Inspection and Preparation

6.2.1 All subfloors/substrates must be inspected prior to installation. All substrates must be clean, smooth, permanently dry, flat, and structurally sound. The substrate must be free of moisture, dust, sealers, paint, curing compounds, parting agents, residual adhesives, adhesive removers, hardeners, resinous compounds, solvents, wax, oil, grease, asphalt, gypsum compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, any other extraneous coatings, films, materials and all other foreign matter which might interfere/restrict proper adhesive bonding. DO NOT use sweeping compounds, solvents, citrus adhesive removers, or acid etching to clean the substrate. DO NOT install stair treads or flooring over gypsum-based or plaster based leveling or patching compounds. DO NOT install new floor covering over old floor covering, as the old floor covering may not be adequately bonded, hide possible structural defects, or cause plasticizer migration into the new flooring or stair treads. In renovation or remodel work, remove all existing* adhesive residue so that 100% of the overall area of the original subfloor/substrate is exposed. Follow The Resilient Floor Covering Institute's (RFCI) "Recommended Work Practice for Removal of Existing Floor Covering and Adhesive, and all applicable industry, local, state, and federal standards. Care must be taken to analyze the conditions and correct any problems prior to installation. Follow the manufacturer's recommendations for any patching or underlayment materials, excluding gypsum based or plaster based levelers or patching compounds.

*Some previous manufactured asphaltic "cutback" contained asbestos. For removal instructions, refer to the Resilient Floor Covering Institute's publication "Recommended Work Practices for Removal of Resilient Floor Covering".

6.2.2 Concrete substrates on all Grade Levels must be tested in accordance with ASTM F 1869 to quantitatively determine the amount of moisture vapor emission at least one week prior to the installation. CAUTION: Calcium Chloride test cannot predict long-term moisture conditions of concrete slabs. Moisture testing only indicates moisture conditions at the time the tests are performed. Before conducting a Calcium Chloride test, the installation area must be maintained between for 65° F (19°C) and 85°F (30°C) or at least 48 hours prior to testing, during testing and thereafter. In addition, the concrete's temperature range must also be identical to that of the installation area. Conduct three Calcium Chloride test for the first 1,000 sq. ft. and one additional test for each 1,000 sq/ft. or fraction thereof per grade level (on, below or above grade). For stair treads and landing areas, one test is required per flight of stairs, in addition to each connecting landing areas. The moisture emission shall not exceed 4.0 pounds per 1000 square feet per 24 hours (FlexTape moisture emission limitation must not exceed 3.0 lbs per

1,000 sq/ft per 24 hours). If the substrate does not meet the moisture emission requirement, the stair treads or flooring shall not be installed until the problem has been corrected. DO NOT install stair treads or flooring if there is hydrostatic pressure. Every concrete floor slab on-grade or below grade to receive resilient flooring shall have a permanent, effective moisture vapor retarder installed below the slab. A pH test must be performed to test for excessive alkalinity using a pH pencil or litmus paper and deionized water. A scaly, sandy, or powdery surface is an indication of some form of contaminant, usually excessive alkalis or an alkali-silica residue. A pH reading higher than 8 is an indication of a potential problem and the concrete must be neutralized by rinsing with clear water. Apply clear water with a mop and allow to dry. Re-rinse with clear water, allow to dry and retest to ensure pH level is within acceptable range of 5 to 8 on the pH scale. Continue to neutralize until the pH level is acceptable. The testing of concrete for alkalinity indicates the degree of alkalinity only at the time the test is conducted, and cannot be used to predict long-term conditions. Moisture and alkali salts in the concrete can cause the following problems after installation: adhesive deterioration, bumps, ridges, bubbles, discoloration, mold, mildew, bacteria growth, efflorescence, tile shifting, stair treads releasing, tile peaking, or sheet seam curling. DO NOT install over burnished (slick troweled) concrete to avoid adhesive and underlayment patch or self-leveling bonding problems due to the non-porosity of the concrete finish. Corrective measures such as bead blasting (shot blasting) or scarifying must be performed prior to installation. The concrete slab must be of good quality, standard density concrete with low water/cement ratios consistent with placing and finishing requirements, having a maximum slump of 4", a minimum compressive strength of 3500 psi, and following the recommendations of ACI Standard 302.1R-96 for class 2 or call 4 floors and the Portland Cement Association's recommendations for slabs on ground. Joints such as expansion joints, contraction joints, isolation joints, saw cuts, control joints, grooves or other moving joints shall not be filled with patching compound or covered with resilient flooring. Expansion joint covers designed for use with resilient flooring should be used. Any non-moving surface cracks, depressions, and other irregularities shall be filled and smoothed with a high quality grade Portland cement-based, water resistant, non-shrinking, non-staining, mildew resistant, alkali resistant underlayment having a minimum compressive strength of 3500 psi after 28 days. Some underlayments may fail under excessive weight; an epoxy caulking compound may be required for certain repairs. Mechanically cleaning the substrate by shot-blasting, scarifying, or sanding shall be performed to achieve a flat, smooth, clean surface to prevent irregularities, roughness, or other defects from telegraphing through the new resilient flooring. The surface of the concrete shall be flat to within the equivalent of 3/16" in 10 feet, as described in ACI 117R. The surface shall be cleaned of all loose material by scraping, brushing, vacuuming, or other methods, or a combination thereof, immediately before commencing installation of resilient flooring. Follow the proper safety practices during the preparation and installation. Follow the recommendations of the American Concrete Institute (ACI 302.1R, Guide for Concrete Floor and Slab Construction; ACI 360.R, Design of Slabs on Grade; ACI 223, Standard Practice for the Use of Shrinkage-Compensating Concrete); The American Society for Testing and Materials (ASTM F 710, Standard Practice for Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring), and the American National Standards Institute (ANSI A1 57.1, Recommended Practice for Concrete Floor and Slab Construction) for the preparation of concrete to receive resilient flooring. Refer to 6.2.1.

6.2.3 Wood subfloors should be of double layer construction with a minimum thickness of 1". Crawl spaces underneath wood subfloors shall be in compliance with local building code ventilation practices and have clearance of at least 18" of cross-ventilated space between the ground level and joists. Wood joists should be spaced on not more than 16" centers. Place a moisture retarder; having a maximum rating of 1.0 perm, on the top of the ground under the wood subfloor overlapped at least 8". APA, The Engineered Wood Association, Underlayment Grade plywood, minimum 3/8" thick, with a fully sanded face is to be used. Use APA approved exterior grade plywood if finished floors are subjected to moisture. OSB, lauan, maranti, solid-core mahogany, waferboard, particleboard, chipboard, flakeboard, tempered hardboard, glass mesh mortar units or cementitious tile backer boards, sheathing-grade plywood, preservative-treated plywood, or fire-retardant treated plywood are not recommended as some manufacturers may use resins or other adhesives in the manufacturing of the product that may cause discoloration or staining of the stair treads or flooring. Wood subfloor movement, flexing or instability will cause the flooring installed to release, buckle or become distorted. Do not proceed with the installation until corrective measures have been made. The warranties, performance, installation, and use are the responsibility of the manufacturer and/or contractor. DO NOT use plastic or resin filler to patch cracks. DO NOT use cement or rosin coated nails or staples or solvent-based construction adhesives to adhere the plywood. Installation on a sleeper, a wood subfloor system constructed over the top of concrete, is not recommended. Installation directly over Sturd-I-Floor panels is not recommended. All wood subfloors, single construction plywood floors, single and/or double tongue-

and-groove strip floors, and wood plank floors must be prepared to receive resilient flooring and stair treads in accordance with federal and industry standards. Follow the recommendations of the APA, The Engineered Wood Association, Design/Construction Guide, Residential and Commercial, and ASTM F 1482, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring, for the installation and proper construction of the panels to receive resilient flooring and stair treads. It is the contractor's responsibility to determine if the subfloor is acceptable to receive the flooring. Refer to 6.2.1.

6.2.4 Terrazzo and ceramic floors to be used as subfloors/substrates are to follow the procedures recommended for concrete in 6.2.2. Ceramic tile must be solidly adhered and all loose tiles must be removed and repaired or replaced. Ensure all glazed, sealed, smooth, and/or shiny surfaces are properly sanded and cleaned. Fill all grout lines and other irregularities with a manufacturer's recommended Portland cement-based underlayment with a minimum compressive strength of 3500 psi. The subfloor must be structurally sound. Inspect and ensure there is an adequate bond of the old flooring to the original substrate. Flexco will not warranty the product if there is a bond failure caused by problems relating to the old flooring. Refer to 6.2.1.

6.2.5 Metal floors to be used as subfloors/substrates must be thoroughly cleaned of any residue, oil, rust, and oxidation and properly sanded/grinded to provide a smooth, level, clean substrate to receive the resilient flooring or stair treads. The stair treads and flooring must be installed within 12 hours after sanding/grinding to prevent the metal flooring from re-oxidizing. The metal subfloor shall be structurally sound. Deflection of the metal floor can cause a bond failure between the adhesives, stair tread nose caulk adhesive and the metal substrate. It is the contractor's responsibility to decide the feasibility of the application, and Flexco Corporation will not be held liable for failures caused by flexing or deterioration of metal substrates. On an extremely smooth, non-porous, metal substrate, a longer "tack up" may be required in order to prevent the adhesive from oozing between the seams. Refer to 6.2.1. Caution: The installation of Stair Treads, risers or other flooring material will not prevent deterioration of metal substrates from occurring.

6.3 Adhesive Information

6.3.1 Flexco® 16/86 Multi-Performance Tile and Tread Adhesive

(Must be used with Flexco® 36 Stair Tread Nose Caulking Adhesive)

Flexco® 16/86 Multi-Performance Tile and Tread Adhesive is a solvent free, non-flammable, high strength, acrylic adhesive for the indoor installations of Flexco® Vinyl Stair treads. This adhesive contains antimicrobial protection that protects the dried/applied adhesive from mold, mildew, and bacteria that cause odors and product degradation. Flexco® 16/86 Multi-Performance Tile and Tread Adhesive may be used on dry, porous substrates, below grade, on grade, or above grade. The Flexco® 77 Solvent Free Epoxy Flooring Adhesive must be used for installations in areas subjected to moisture or other liquids, in areas where the substrate or flooring is not maintained within the specified temperature range, and on metal and non-porous substrates and flexing substrates. Butting tread installation must be installed with Flexco 77 Solvent Free Epoxy Flooring Adhesive with a minimum of six inches of epoxy adhesive applied on either side (12" total) of the seam to ensure the seams integrity. Always butt treads tightly together when installing butting treads. Spread surface application coverage using a 3/32" x 3/32" x 3/32" V-notch trowel is approximately 110-135 square feet per US gallon on a smooth substrate. For two surface (substrate and tread) application coverage using the recommended 1/32" x 1/16" x 1/32" V-notch trowel is approximately 90-120 sq/ft per gallon. Coverage will vary according to the type of surface, surface texture, spreading angle, and adhesive temperature. Adhesive is available in 1-gallon and 4-gallon pails. Shelf life is one year stored at 700 F (210C) in an unopened container. Remove wet adhesive with a soft, clean cloth dampened with warm soapy water. Dried adhesive can be removed using a soft, clean cloth dampened with mineral spirits, immediately rinse with clean water. The adhesive is freeze/thaw stable to 5 cycles at 00 F; however, it is recommended to protect all adhesive products from freezing. If frozen, DO NOT stir until material has completely thawed. Label information is in English and Spanish. Read all of the product and MSDS literature. Flexco® 16/86 Multi-Performance Tile and Tread Adhesive Calculated VOC's according to California Rule #1168: 0 grams per liter of coating.

6.3.2 Flexco® 77 Solvent Free Epoxy Flooring Adhesive

(Must be used with Flexco® 36 Stair Tread Nose Caulking Adhesive)

Flexco® 77 Solvent Free Epoxy Flooring Adhesive is a solvent free, non-flammable, high performance epoxy adhesive for indoor installations over porous, metal and other non-porous or flexing substrates, on grade, below

grade, or above grade. Flexco® 77 Solvent Free Epoxy Flooring Adhesive must be used for installations in areas where the stair treads will be subjected to lateral shear stresses and/or rolling loads, installed over metal, other non-porous substrates, flexing substrates, in areas subjected to topical moisture or other liquids, in areas where the substrate or flooring is not maintained within the specified temperature range 65° F (19 °C) and 85° F (30 °C). In addition, Flexco 77 must be used when butting treads (do not leave a gap between treads when butting) with a minimum of six inches of epoxy adhesive applied on either side of the seam to ensure the seams integrity Spread coverage using the 1/32” deep x 1/16” wide x 1/32” “U” notch trowel is approximately 185 - 245 square feet (Part A & B Mixed) per US gallon on a smooth substrate. Coverage will vary according to the type of surface, surface texture, spreading angle, and adhesive temperature. Note: Over extremely porous or rough concrete, a 1/16”x 1/16” x 1/16” Square notch trowel may be required (125 - 185 sq/ft/gal). Caution: If too much adhesive is applied, air-bubbles, oozing and telegraphing may occur along with adhesive displacement when the floor is rolled or exposed to rolling loads resulting in loose and unsightly areas. Therefore, test trowel size and flooring prior to installation to avoid the above noted potential problems. Adhesive is available in 1-quart and 1-gallon pails. Shelf life is one year @ 70° F (21°C) in an unopened container. Although the adhesive components are non-freezing, the adhesive must be allowed to stabilize to ambient temperature before mixing. Any adhesive on the surface of the tiles or surrounding area must be removed immediately with a clean cloth dampened with warm soapy water or denatured alcohol. DO NOT allow the adhesive to cure on the surface of the stair tread or flooring. A bond failure will occur if the adhesive is not properly mixed. Read all of the product and safety information concerning the adhesive and any other chemicals or cleaning agents prior to installation. Flexco® 77 Solvent Free Epoxy Flooring Adhesive Calculated VOC's according to California Rule #1168: Flexco 77 Part A: < 30 grams per liter of coating. Flexco 77 Part B: < 30 grams per liter of coating.

6.3.3 Flexco® FlexTape™

(Must be used with Flexco® 36 Stair Tread Nose Caulking Adhesive)

Flexco® FlexTape™ is a double-coated high-tack modified polyacrylate adhesive with polyester thread protected with a heavy-duty treated paper liner for easy release. The reinforcements add dimensional stability and tensile strength to the adhesive. This tape is non-flammable with no known toxicity and may be disposed of as household waste. This product is for the indoor installation of Flexco® Vinyl Stair Treads with or without risers. Does Not use for butting tread installations. Flexco® FlexTape™ may be used on dry, dust, clean, porous, and some non-porous substrates on grade or above grade. Flexco 36 Stair Tread Nose Caulking Adhesive must be used in conjunction with FlexTape. Do not use FlexTape for the installation of butting stair treads. Do not use over existing adhesive residue of any kind. Nominal roll dimensions: 9.45” wide by 164 linear feet and 1” wide by 164 linear feet. Use one linear foot of tape for every linear foot of tread and riser. The entire backing of Square Nose Stair Treads must be completely covered with FlexTape, excluding the 1/2” area of the stair nosing which receives the nose caulk adhesive (1/2” nose caulk bead required). FlexTape is also to be applied on the remaining downward portion of the Square Nose stair treads nosings to ensure a secure bond with the riser. When installing stair nosing directly over risers with FlexTape, the riser portion being covered by the stair nosing must be cleaned first with denatured alcohol to ensure a successful bond). When applying nose caulking to Round Nose Stair Treads, apply nose caulk approximately 1/2” inch from the top curvature of the stair nosing completely covering the entire backing of the nosing to achieve a successful bond directly to the steps nosing. Shelf life is two years stored at 70° F (21°C) in an unopened box. FlexTape™ is freeze/thaw stable to 5 cycles at 0° F. If frozen, DO NOT use until it has completely thawed. FlexTape™ is for indoor use only within the specified temperature range 65° F (19°C) and 85° F (30°C). Use only in dry areas. Thoroughly clean the backing of each tread, riser and stringer with Denatured Alcohol and allow to dry completely before installing. Always conduct a bond test with FlexTape prior to installing to determine if a successful bond is being achieved between both the back of the tread, risers and stringers and the substrate before proceeding with the installation. Exposure to water, cleaning solutions, sealers, floor finishes or other liquids will cause an adhesive/double-coated tape failure. Moisture vapor emission when utilizing FlexTape must not exceed 3 pounds per 1,000 square feet per 24 hours when tested in accordance to ASTM F 1869 and the pH is not to exceed 7. Read all of the product and MSDS literature.

6.3.4 Flexco® 36 Stair Tread Epoxy Nose Caulking Adhesive

Flexco® 36 Stair Tread Epoxy Nose Caulking (stair tread nose filler) is a solvent free, non-flammable, high performance epoxy nose caulking adhesive used for indoor installations of vinyl and rubber stair treads over porous and non-porous substrates on grade, below grade, or above grade. This adhesive is required for the installation of all Flexco stair treads, providing support to the “nose” area, particularly on stairs that are badly worn or irregularly

shaped. When applying nose caulking to Square Nose Stair Treads, a 1/2" bead of Flexco® 36 Stair Tread Nose Caulking Adhesive must be applied to the inner radius of the stair tread so that all voids are filled when the tread is placed into position. Spread rate using the 13.5 oz. dual cartridge applicator with the required 1/2" bead for the installation of Square Nose stair treads is approximately 25 linear feet. Spread coverage is approximately 200 linear feet per US gallon on a smooth substrate. When applying nose caulking to Round Nose Stair Treads, apply nose caulk approximately 1/2" inch from the top curvature of the stair tread completely covering the entire backing of the nosing to achieve a successful bond directly to the steps nosing. Coverage will vary according to the type of surface, surface texture, and adhesive temperature. Adhesive is available in 1-quart and 1-gallon pails and in 13.5 ounce dual cartridges. Shelf life is one year @ 70° F (21 °C) in an unopened container. Although the epoxy components are non-freezing, the adhesive must be allowed to stabilize to ambient temperature before mixing. Any adhesive on the surface of the tiles or surrounding area must be removed immediately with a clean cloth dampened with denatured alcohol or mineral spirits. DO NOT allow the adhesive to cure on the surface of the tile. A bond failure will occur if the epoxy is not properly mixed to one consistent color. Read all of the product and MSDS literature. Flexco® 36 Stair Tread Epoxy Nose Caulking (Stair Tread Nose Filler) Calculated VOC's according to California Rule #1168: Epoxy Nose Caulking Part A: < 30 grams per liter of coating. Flexco 36 Part B: < 30 grams per liter of coating.

6.4 Adhesive Application and Product Installation

6.4.1 Flexco® 16/86 Multi-Performance Tile and Tread Adhesive

(Must be used with Flexco® 36 Stair Tread Nose Caulking Adhesive)

Read all installation, product limitations/precautions, and maintenance literature before proceeding. Must have adequate ventilation. Repair worn or damaged steps with a manufacturer's approved Portland cement based underlayment with a minimum compressive strength of 3500 PSI to ensure a smooth, level, structurally sound substrate. Stair tread and risers must be trimmed to fit each step and dry laid prior to applying adhesive. It is the installer's responsibility to inspect and dry lay each product to make sure there are no imperfections, irregularities, or color variations prior to installation. If any imperfections are found, it is the installer's responsibility not to proceed with the installation and contact the appropriate authority. Since each step can vary slightly in width, depth and squareness, each individual stair treads and riser must be cut only for the step/rise to which it is being applied. For both individual stair tread and riser installations, first measure the width of the step and mark the center point with a pencil on riser indicating the center of the step. Then measure the length of the stair tread and mark the center point at the where the tread meets the riser. Caution: An adjustment to the tread centerline may be necessary to compensate for length required to ensure proper pattern match. Before cutting the treads, check to ensure the proper pattern match is acceptable. Tightly position the stair tread on the step with the right hand side fitted against the stringer. Using a set of dividers, extended the pointers across the two centerline marks previously made and increase the dividers length no more than 1/16" to allow for an expansion area. Next, move to the right hand side of the step. Place one pointer tightly against the stringer and the pointer on the tread or nosing. Starting at the back edge of the tread, pull the dividers forward, keeping the pointer tightly in contact against the stringer while pushing downward force to scribe the tread. Use either a utility or linoleum (hook blade) knife to cut the tread. Reposition the tread on the left hand side of the step and follow the exact same procedures to trim the left side of the tread or nosing. After both the left and right hand sides of the tread have been trimmed and fitted, fit the tread to the depth of the step, set scribe to width of a two-by-two board. For best results use a divider or bar scribe. Put the two-by-two board inside the nose of the tread with the bottom of tread down toward the step and push firmly against the nose of the step. When scribing the tread, ensure the scribe is perpendicular to the riser or other surface to which the tread is being scribed. Cut the tread along the scribe mark. Make all cuts so that the bevel of the cut is to the inside. Dry fit the tread, and then make any necessary adjustment. Caution: Cutting the tread too long and/or too deep for the step will cause buckling of the tread nosing and/or the tread nose to protrude beyond the step nosing, which will cause nose cracking. For installing risers, follow the same instructions listed for stair tread installations. The riser's height should be cut to under-lap the tread nose and should be approximately 1/4" from the top of the steps nosing. DO NOT allow the riser to extend above the steps nosing, as this will cause the stair tread's nose to extend beyond the nose of the step resulting in cracking of the tread nose. Risers and treads should be installed on an alternating basis, first a riser, then a tread, starting with the bottom riser on the first of steps. Flexco stair treads are not recommended for end butting, unless specifically ordered. For installations requiring butting treads, the treads must be specially order from the factory. Flexco will make the necessary manufacturing changes to ensure butting installation requirements. Butting tread installation must be installed with a minimum of six inches of epoxy applied on either side of the seam (12" total) to ensure the seams integrity. DO NOT leave any seam gaps

when butting tread. DO NOT flex or bend treads with carborundum strips. Cut carborundum strips at least 1/8" from edge of treads. If stringers are being installed, first measure the width of the step and use a non-staining building felt to make a pattern for the stringer. Pre-cut and fit the stringers and risers prior to installing with Flexco® 16/86 Multi-Performance Tile and Tread Adhesive since each step on a staircase can vary in width, depth, and squareness. If it is required to adhere the tread nosing to the under step, ensure the inside of the nosing and the respective portion of the riser are sanded and clean. On adjustable nose treads, a high quality contact adhesive can be used on the inside nose face and riser interface to secure the nose at the proper angle. Pre-cut and fit the treads prior to spreading adhesive. Scribe and fit treads to the proper step depth and length. DO NOT use fans to expedite the drying of adhesive. Apply Flexco® 16/86 Multi-Performance Tile and Tread Adhesive onto the substrate using a 3/32" x 3/32" x 3/32" V-notch trowel. For two-surface applications (substrate and tread) apply adhesive to both the back of the tread and step using a 1/32" x 1/16" x 1/32" "U"- notch trowel. Coverage will vary according to the type of surface, surface texture, spreading angle, and adhesive temperature. Starting 1/4" from the step nose, spread the adhesive evenly using the recommended trowel notch noted in the adhesive section, leaving no puddles of adhesive. DO NOT allow Flexco® 16/86 Multi-Performance Tile and Tread Adhesive to come in contact with the portion of the step nosing where Flexco® 36 Stair Tread Nose Caulking Adhesive will be applied. Caution: Spreading adhesive on a large number of steps and treads could possibly allow the adhesives to cure or setup before the treads are installed which would result in a bond failure. For porous substrates, allow the adhesive to "flash off" for approximately 10 minutes before installing the tread, however do not allow adhesive to dry or skin-over. On non-porous substrates, allow the adhesive to flash-off longer, but do not allow adhesive to dry or skin-over. Caution: Open time and curing characteristics will vary upon the type of substrate, substrate temperature, ambient temperature, humidity, and proper conditioning of the adhesive. Allowing the adhesive to remain open too long will result in a bond failure. Flexco® 36 Stair Tread Nose Caulking Adhesive consists of two units, Part A (epoxy resin) and Part B (hardener). DO NOT mix partial units of this adhesive, because the ratio of Part A to Part B is not 1:1. Open the two units and pour all of Part B into Part A. Mix the combined parts with the furnished paddle using a rotary motion while at the same time lifting from the bottom. A slow speed, 200 RPM maximum drill with an attached mixing paddle may also be used. Mix thoroughly 4 minutes, ensuring that the adhesive is uniform in color with no streaking. If utilizing Flexco® 36 Stair Tread Nose Caulking Adhesive dual cartridges simply remove cap and insert the special mixing and applicator tip. No hand or drill mixing is required. Caution: Higher mixing speeds and/or longer mixing time will reduce the open time and can cause premature curing of the adhesive; however, if not mixed long enough, the adhesive will not properly cure. Once mixed, the epoxy nose caulking must not be allowed to remain in the mixing container since the chemical reaction will be hastened, causing the adhesive to prematurely cure or set up which would render the adhesive unusable. Immediately after mixing, pour the epoxy adhesive on cardboard or similar material and apply the adhesive to the tread nose before the epoxy sets up. Whether using a spatula or dual cartridge applicator, apply a 1/2" bead of Flexco® 36 Stair Tread Nose Caulking Adhesive to the inner radius of Square Nose Stair Treads so that all voids are filled when the tread is placed into position. When applying nose caulking to Round Nose Stair Treads, apply nose caulk approximately 1/2" inch from the top curvature of the stair tread completely covering the entire backing of the nosing to achieve a successful bond directly to the steps nosing. Notice: The use Flexco® 36 Stair Tread Nose Caulking Adhesive dual-cartridge and disposable mixing nozzle with Flexco's recommended applicator gun is recommended so that the premature curing of the epoxy prior to application to the nose is virtually eliminated. When cartridges are utilized, no additional mixing is necessary, since all the mixing is done within the special applicator nozzle. Any remaining epoxy in the cartridge, that is not used, can be saved for use at a later date by removing the disposable nozzle and capping the cartridge. Caution: The nose caulking is not to be buttered on the step or riser. This is extremely important on treads with adjustable noses. After the adhesive and nose caulking have been applied, place the tread nose onto the step nose using even pressure. The nose of the tread is to fit tightly against the nose of the step. Place the remaining portion of the tread into the adhesive on the step. After the first tread has been put into place, remove the tread and inspect the step nose for adequate adhesive transfer to ensure that the 1/2" bead (required for Square Nose Treads) or the entire stair nosing (required for Round Nose Treads) is sufficient to fill all voids and irregularities along the step nosing and to ensure a successful bond. If there are missing or light spots of adhesive along the step nosing, increase the amount of nose caulking until all voids are filled. Replace the first tread after applying additional nose caulking in the inner radius of tread nose for Square Nose Treads, and the entire nosing for Round Nose Treads. If all step nosings have the same wear, the same amount of nose caulking should be used on the remaining treads. Forcing incorrectly sized treads into smaller areas will cause buckling of the tread and/or the tread nose to protrude beyond the step nosing, which will result in nose cracking. Work off the treads to avoid shifting and to also not track adhesive onto the surface of the treads. Caution: DO NOT kneel on or

against the tread nosings. Immediately remove excessive wet adhesive with a soft, clean cloth dampened with mineral spirits. Follow the recommended safety practices. Periodically, lift the tread to check for proper adhesive transfer. There should be at least 100% coverage of stair tread adhesive on the back of the tread and 100% coverage of the epoxy nose caulking in the tread nosing. Observe the stair tread adhesive and the epoxy nose caulking adhesive to ensure that the adhesives have not surpassed their open time and have not begun to cure. Roll and cross roll each tread against the step substrate with a J-type roller within 15 minutes after the tread has been installed. Caution: DO NOT roll the tread nose. Rolling the tread nose will squeeze out the epoxy nose caulking. The rolling time may need to be adjusted to climatic conditions. Conduct a visual inspection during the rolling process to ensure there has been no shifting of the treads and that there is no adhesive on the surface of the tread. DO NOT wait until the entire installation is completed before rolling as the adhesive may have surpassed the open time and be cured. Roll and cross roll a second time with a J-type roller approximately 30 minutes after the initial rolling. Notice: If the tread slips forward causing an air space at the nose, cracking at the nose will eventually occur. At the top of the stairs, cut the final tread off along the back of the design and dry fit it on the landing. Ensure that the color match of the tread and landing tile is acceptable. If needed, install Flexco's Sub-Floor Leveler on the landing and butt it up to the end of the tread to ensure that the tile on the landing and the top stair tread will be the same level where they meet. If necessary, sand the final tread from the back to create a smooth, level fit with the landing tile. Install the final tread and landing tiles. There is to be no foot traffic on the treads for at least 48 hours and no wheeled conveyances for at least 3 days. Do not clean stair treads or other associated products for 72 hours. Allowing traffic on the treads before the adhesive hardens will cause the treads to slip forward creating an air space at the nose, which will cause cracking of the nose at a later date. Protect treads against marks, indentations and other damage. Do not flood the stair treads during cleaning, which will have an adverse effect on the adhesive and nose filler used resulting in a failure.

6.4.2 Flexco® 77 Solvent Free Epoxy Flooring Adhesive

(Must be used with Flexco® 36 Stair Tread Nose Caulking Adhesive)

Read all installation, product limitations/precautions, and maintenance literature before proceeding. Flexco® 77 Solvent Free Epoxy Flooring Adhesive and Flexco 36 Epoxy Nose Caulking Adhesive for either individual or combination installations of both Vinyl Stair Tread & Riser. Flexco® 77 Solvent Free Epoxy Flooring Adhesive is a solvent free, non-flammable, high performance epoxy adhesive for indoor installations over porous, metal and other non-porous or flexing substrates, on grade, below grade, or above grade. Flexco® 77 Solvent Free Epoxy Flooring Adhesive must be used for installations in areas where the stair treads will be subjected to lateral shear stresses and/or rolling loads, installed over metal, other non-porous substrates, flexing substrates, in areas subjected to topical moisture or other liquids, in areas where the substrate or flooring is not maintained within the specified temperature range 65° F (19 °C) and 85° F (30 °C). In addition, Flexco 77 must be used when butting treads (do not leave a gap between treads when butting) with a minimum of six inches of epoxy adhesive applied on either side of the seam to ensure the seams integrity Spread coverage using the 1/32" deep x 1/16" wide x 1/32" "U" notch trowel is approximately 185 - 245 square feet (Part A & B Mixed) per US gallon on a smooth substrate. Coverage will vary according to the type of surface, surface texture, spreading angle, and adhesive temperature. Note: Over extremely porous or rough concrete, a 1/16" x 1/16" x 1/16" Square notch trowel may be required (125 - 185 sq/ft/gal). DO NOT mix partial units of this adhesive, because the ratio of Part A to Part B is not 1:1.

Flexco® 77 Solvent Free Epoxy Flooring Adhesive is packaged in two separate containers marked Part A (epoxy resin) and Part B (polyamide resin hardener). Remove the lids and add all of Part B into Part A. Mix the combined parts with the furnished paddle using a rotary motion while at the same time lifting from the bottom. A slow speed, 200 RPM maximum, drill with an attached mixing paddle may also be used. Mix 4 minutes. After mixing, there should be no streaking. Caution: Higher mixing speeds and/or longer mixing time will reduce the open time and can cause premature curing of the adhesive. Adhesive will not cure if not properly mixed. DO NOT allow the mixed adhesive to stand in the container. Immediately after mixing, pour the contents onto the porous substrate and immediately spread the adhesive evenly using a 1/32" x 1/16" x 1/32" square "U" notch trowel, being careful to leave no puddles of adhesive. Note: Over extremely porous or rough concrete, a 1/16" x 1/16" x 1/16" Square notch trowel may be required. Caution: If too much adhesive is applied, oozing at seams, air-bubbles and telegraphing may occur along with adhesive displacement when the tread is rolled or subjected to rolling loads resulting in loose or unsightly areas. If the substrate has been shot blasted, a rough underlayment has been applied, or the substrate is extremely porous, additional adhesive may have to be purchased to ensure proper adhesive coverage. Caution: Spreading adhesive on a large number of steps and treads could possibly allow the adhesives to cure or setup before the treads are installed which would result in a bond failure. Caution: Allowing the adhesive to remain open

too long will result in bond failure. When installing stair treads, use a kneeling board, or for best results, work off the stair treads whenever possible to avoid shifting and to also not track the epoxy adhesive onto the flooring. For Flexco 36 Stair Tread Nose Caulking Adhesive application instructions for both Round Nose and Square Nose Stair Treads, including riser installation instructions and cautions, refer to section 6.4.1 for complete details before proceeding.

6.4.3 ADA Installation Instructions

For ADA or specified installations requiring stair tread nosing and risers to be scribed for a flush fit, first follow all installation guidelines, instructions and cautions noted within this document. Starting with the first riser on the flight of steps, first trim both the stair tread and riser and position the nose directly over the riser. Then carefully scribe a line on the riser using the stair nosing as a guide. Once scribed, trim the riser so it butts directly against the stair treads nosing for a tight fit. Continue scribing the stair treads nosing and risers for the remaining steps. Use the appropriate adhesive and required Flexco® 36 Stair Tread Nose Caulking Adhesive only over recommended substrates listed in this document. Flexco Color-Matched Caulk is available to coordinate with colors in FlexTones color matching system, which is ideal for touch-ups. If unsure the desired appearance attempting is being achieved (overlap nosing/riser vs. scribed fit), first check with the facility owner, general contractor or architect before proceeding. Follow all state and local guidelines.

7. Product Maintenance

7.1 Initial Maintenance

7.1.1 Liquid/Solution Cleaning

These procedures only apply to Flexco Vinyl Stair Treads. Please choose the correct procedure/procedures pertaining to your specific installation. Treads from other manufacturers are likely to have different composition. Read the manufacturers recommendations, procedures and cautions before applying. Always test a small area first to ensure the desired results are achieved before proceeding. The first month after the installation of Flexco Vinyl Stair Treads should be used as a test period to assess the best procedure for continued maintenance. Insufficient cleaning and maintenance will reduce the wear life and appearance of the Stair Treads. DO NOT scrub or mop the treads for at least 72 hours after the installation is complete to allow Flexco's recommended adhesives, FlexTape and #36 Epoxy Caulking Compound to properly cure. Remove any covering that may have been used to protect the floor. For initial maintenance, first vacuum then use a mild, neutral (pH 7 to 8) cleaner like Spartan Chemical's Damp Mop or Spartan Chemical's Green Solutions Neutral Disinfectant Cleaner (800-537-8990 or www.spartanchemical.com) to clean the Stair Treads. Follow the manufacturer's recommendations for dilution and use. DO NOT use highly alkaline, highly acidic, or solvent-based cleaners. Apply the diluted cleaning solution to the Stair Treads with a soft-bristled deck brush (required for textured and raised design treads) or nylon mop for smooth surfaces. DO NOT flood the floor or scratch during application. Allow the cleaning solution to stand for approximately 10 to 15 minutes; however, DO NOT allow the solution to dry or work its way beneath the Stair Treads resulting in an adhesive and ECC Epoxy Nose Caulking failure. Scrub the stair treads in both directions with a soft-bristled deck brush or a hand-held 175-RPM maximum scrubbing machine with an attached soft-bristled nylon brush (required for textured and raised design treads) or nylon mop for smooth surfaces. Rinse with clean, cool water, remove the water, and allow the stair treads and flooring to dry thoroughly, normally 3 to 4 hours before exposing to traffic. Ensure the deck brush or scrubbing machine does not scratch the stair treads or flooring and do not heel the scrubbing machine. Follow the manufacturer's recommendation for dilution, use and special precautions and warnings. Do not allow solution to dry or the scrubbing machine or brush to scratch the Stair Treads or damage the abrasive strips. Abrasive strips should only be dry brushed and/or vacuumed, and no sealer, water or finish of any kind is to come in contact with the abrasive strips. DO NOT flood the Stair Treads when cleaning and do not allow the cleaning solution, sealer or water to work its way beneath the Stair Treads which can result in either/or an adhesive and ECC Epoxy Nose Caulking failure. Wet vacuum or mop up the residue. Rinse with clean, cool water, remove the water utilizing a wet vacuum or mop, and allow the Stair Treads to dry thoroughly. Caution: When wet, stair treads and flooring will become slippery; therefore, use the appropriate warning signs on the floor to eliminate foot or other traffic.

7.1.2 Dry Buffing

DO NOT dry buff the Stair Treads for at least 48 hours after the installation is complete to allow the recommended Flexco's adhesives, FlexTape and #36 Epoxy Caulking Compound to properly cure. Dry buffing should be performed on a routine basis to maintain the surface luster. DO NOT dry buff until the treads have been thoroughly

cleaned and allowed to completely dry. Hand buff with a soft polishing brush or use a single disc 175 - rpm maximum hand-held buffing machine, designed for use on stair treads (polishing brushes required for textured and raised design treads) with an attached soft polishing brush or a 3M 4100 White Super Polish Pad for smooth surfaces. Polish treads in both directions. Ensure the polishing brushes do not scratch the stair treads, flooring or damage abrasive strips. DO NOT heel the buffing machine. Abrasive strips should only be dry brushed and/or vacuumed.

7.2 Regular Maintenance and Optional Sealer or Floor Finish Application

7.2.1 General Information

Insufficient cleaning will reduce the wear life and the appearance of the stair treads. The amount of maintenance required is directly related to the amount and type of traffic and type of particulates deposited on the floor. There are several alternative maintenance systems available from Spartan Chemical (800/537-8990) if a sealer, satin sheen or high gloss finish is desired. Spartan Chemical currently recommends Dura Prime for sealing or Dura Gloss or Green Solutions Floor Seal and Finish. When applying either sealers or finishes, product must be applied in both directions when applying to textured or raised design treads. Caution: Applying sealers or finishes will darken the stair treads original color. When applying sealers or finishes always check first for compatibility, bonding and stair tread color darkening on a scrap piece of stair treads to ensure the desired results and appearance is achieved. The floor care product manufacturer will assist you in determining the best maintenance program. DO NOT use highly alkaline, highly acidic, or solvent-based cleaners. Caution: Some germicides, disinfectants, cleaning agents, floor maintenance products, and pesticides may stain or damage the surface of vinyl stair treads; therefore, test the products to ensure they will not stain or damage the tile. Spills of any type must be removed immediately to help prevent staining or permanent damage. Contact Flexco Customer Service to obtain information concerning stain resistance to various chemicals and products. DO NOT use sweeping or cleaning agents containing oil or solvents. DO NOT use treated mops and thoroughly clean new mops before use. DO NOT use kerosene, gasoline, naphtha, or other solvents on vinyl stair treads or vinyl flooring. DO NOT use varnish, shellac, paste wax, paint, or other substances that could discolor or damage the stair treads or flooring. Caution: The use of floor finishes or sealers may reduce the slip resistant properties of the stair treads and flooring. Flexco Floors will not be held liable for finishes or sealers applied directly to stair treads causing them to become slippery and/or reducing the stair treads slip resistance! Caution: When wet, stair treads and flooring will become slippery; therefore, use the appropriate warning signs on the floor to eliminate foot or other traffic. After a period of time, the build up of floor finish or sealer will need to be removed. Currently, Spartan Chemical recommends LOE Stripper or Green Solutions Floor Finish Remover. Caution: Contact Spartan Chemical before applying products to verify recommendations for stripping vinyl stair treads or flooring. Some strippers may have an adverse effect on vinyl stair treads and flooring. Always test first to ensure the treads are not effected and the desired results can be achieved prior to applying strippers of any kind.

7.2.2 Liquid/Solution Cleaning

Sweep, dust mop, or vacuum the stair treads and flooring to remove dirt and other particulates. Use a mild, neutral (pH 7 to 8) cleaner such as Spartan Chemical's Damp Mop or Spartan Chemical's Damp Mop Green Solutions Neutral Disinfectant Cleaner to clean the stair treads and flooring. Follow the manufacturer's recommendations for dilution and use. Apply the diluted cleaning solution to the Stair Treads with a soft-bristled deck brush (required for textured and raised design treads) or nylon mop for smooth surfaces. DO NOT flood the floor. Allow the cleaning solution to stand for approximately 10 to 15 minutes; however, DO NOT allow the solution to dry. Scrub the stair treads in both directions with a soft-bristled deck brush or a hand-held 175-RPM maximum scrubbing machine with an attached soft-bristled nylon brush (required for textured and raised design treads) or nylon mop for smooth surfaces. Ensure the brush does not scratch the stair treads or flooring. Wet vacuum or mop up the residue. Rinse with clear, cool water, remove the water, and allow the stair treads and flooring to dry thoroughly, normally 3 to 4 hours before exposing to traffic.

8. Technical Services

8.1 Technical Assistance

Technical service information and assistance may be obtained by calling Flexco® Customer Service or by visiting www.flexcofloors.com.

8.2 Samples

Samples may be obtained by calling Flexco® Customer Service or by visiting www.flexcofloors.com.

9. Availability and Cost

Products are available through Flexco® distributors. Contact Flexco® Customer Service or visit www.flexcofloors.com for a list of distributors.

10. Limited Warranty

Flexco® Floors manufactures and markets its product under the trade name Flexco Vinyl Stair Treads is warranted for a period of one (1) year from date of installation to be free of defects in material and workmanship and a five (5) year limited wear warranty if installed, maintained, and used strictly in accordance with Flexco's written instructions and installed with the recommended Flexco 16/86 Multi-Performance Tile and Tread Adhesive or the Flexco® 77 Solvent Free Epoxy Flooring Adhesive and Flexco® 36 Stair Tread Epoxy Nose Caulking Adhesive. This Limited Warranty only applies to Flexco Vinyl Stair Treads / Nosings subjected to normal wear, less than 0.004" of stair tread / nosing material worn away per year, and traffic conditions and used in the conditions for which they are designed. Flexco will not warranty Vinyl Stair Tread products against fading or discoloration when exposed to direct sunlight or indirect sunlight. This Limited Warranty only applies to Vinyl Stair Treads which has been installed, maintained, and used strictly in accordance with Flexco's written instructions and is valid only under normal wear and traffic conditions in a use for which it was designed. Instructions may be obtained from a Flexco Authorized Distributor or by writing Flexco®, Attention: Sales Service Manager, P.O. Box 553, Tusculum, Alabama, 35674. Notice of any defect must be made in writing to Flexco within thirty (30) days after buyer learns of the defect. No merchandise is to be returned prior to Flexco's inspection and written approval. Buyer's sole and exclusive remedy for breach of this Limited Warranty shall be a pro rata credit, based on the period remaining in this Limited Warranty, toward the purchase of new Vinyl Stair Tread, or in the event Vinyl Stair Treads are not available, other similar or equal Flexco Vinyl Stair Treads. Replacement credit shall be equal to the proportion of Limited Warranty time remaining multiplied by the current price of Vinyl Stair Tread or the last price if Vinyl Stair Treads are not available. In no event shall Flexco be liable for incidental or consequential damages, even if some other provision of this Limited Warranty is unenforceable. Buyer waives all other claims, and remedies against Flexco, whether statutory, based in common law or in equity, and including, but not limited to, direct, indirect, special, incidental, and consequential damages. In order to use this Limited Warranty, Buyer must present this Limited Warranty and proof of time of purchase to Buyer's Flexco representative. Flexco shall have no liability whatsoever to Buyer in the event the goods become defective if such defect is caused in whole or part by cuts, tears, vandalism, fire, willful destruction, improper installation, or improper maintenance, accident or act of God. This Limited Warranty is valid only if Vinyl Stair Treads are installed pursuant to the Limited Warranty, using Flexco's recommended adhesives and nose caulking. These warranties are expressly in lieu of any other warranties expressed or implied, including, but not limited to any implied warranty of merchantability or fitness for a particular purpose. By retaining Flexco's merchandise for more than five (5) days after receipt of such merchandise, Buyer agrees that it accepts the terms of this Limited Warranty and that there are no warranties or rights beyond those contained herein. Vinyl Stair Tread are not designed for use in or near commercial kitchens. Read the Vinyl Stair Tread Data information concerning Product Limitations, Installation, and Maintenance available from a Flexco Distributor or Flexco Customer Service Representative.