

### Product Description

The Natural Elements Luxury Vinyl Tile Stone collection features a natural stone look. Its rugged construction, including a 28 mil wear layer topped with a UV cured ceramic bead finish permits maximum durability ensuring long lasting beauty without the use of a floor finish. Natural Elements LVT Stone resists the development of mold and bacteria and has excellent resistance

to abrasion, chipping, cracking and indentation. Natural Elements LVT Stone provides heavy-duty performance while remaining flexible, for fast and economical installations. The surface includes an embossed surface to mimic the unique texture of stone, while adding slip resistance qualities to the tile. Precision cutting allows for easy installation with tight seams while the composition ensures a 100% recyclable product.

#### Ideal For:

**Retail:** Restaurants, retail stores, retail service facilities.

**Hospitality:** Hotel/motel corridors and rooms, convention areas, clubs.

**Assisted Living Facilities:** Hallways, rooms, eating areas, congregation areas.

**Multi-Level Housing:** Apartment complexes, student housing, short-term residences.

### Features

- **100% Recyclable**
- **100% Pure Virgin Material**
- **Easy To Maintain**
- **C-Shield UV Cured Ceramic Bead Finish**
- **Excellent Indentation Resistance**
- **Excellent Chemical Resistance**
- **Excellent Slip Resistance**
- **Qualifies for LEED® Credits**
- **FloorScore® Certified**

### Technical Data

Nominal Dimensions: **18" x 18" x 3mm tile**

**12" x 24" x 3mm tile**

Weight Per Tile: **~ 2.25 lbs. (18" x 18")**

**~2 lbs. (12" x 24")**

Quantity Per Carton: **16 tiles (18" x 18")**

**18 tiles (12" x 24")**

Finish: **Embossed**

Wear Layer Thickness: **28 mil (.028")**

LEED v2009 IEQ Credit 4.1: **Qualifies**

LEED v2009 IEQ Credit 4.3: **Qualifies**

ASTM F1700 – Solid Vinyl Tile: **Class III, Type B**

ASTM E648 - Critical Radiant Flux: **Class I, >.45 W/cm2**

ASTM E662 - Smoke Density: **Passes, <450**

CAN/ULC-S102.2 – Surface Burning: **30 FSR, 250 SDC**

ASTM D2047 - Slip Resistance: **> 0.60**

ASTM F970 - Static Load Limit: **Passes, > 250 PSI**

ASTM F970 (Modified) - Max Weight: **2000 PSI**

ASTM F925 – Chemical Resistance: **Excellent (chart available)**

ASTM F1515 – Light Stability: **Passes**

ASTM F1914 Residual Indentation: **Passes**

ASTM F2199 Dimensional Stability: **Passes**

Acclimation Time: **48 Hours**

Storage & Acclimation Temperature: **65° - 85° F**

### Additional Information

#### Approved Adhesives

SP-500 Acrylic Aerosol Pressure-Sensitive Adhesive

AP-520 Acrylic Roll-On Pressure-Sensitive Adhesive

AW-510 Acrylic Wet-Set Adhesive

MS-700 Modified Silane Wet-Set Adhesive

EW-710 Epoxy Wet-Set Adhesive

#### Availability, Cost & Samples

Flexco products are sold through distribution. To locate the nearest distributor, visit [flexcofloors.com](http://flexcofloors.com) or send an e-mail to [info@flexcofloors.com](mailto:info@flexcofloors.com).

#### Technical Documents & Support

Additional product resources and technical documents are available online at [flexcofloors.com](http://flexcofloors.com). For additional technical support, send an e-mail to [solutions@rhctechanical.com](mailto:solutions@rhctechanical.com).

### 1. PRE-INSTALLATION CHECKLIST

- Consult all associated product literature concerning adhesive installation, maintenance and warranty prior to installation of flooring.
- Allow all trades to complete work prior to installation.
- 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.
- Ensure that all adhesives intended for installation are approved for use with flooring material.
- Ensure installation area and material storage temperatures are between 65° F (19° C) and 85° F (30° C) for at least 48 hours before, during and after installation.
- Ensure HVAC system is operational and fully functioning at normal operating conditions.
- 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.
- Do not proceed with installation until all conditions have been met.

### 2. PRODUCT LIMITATIONS

Do not install materials over LVT, cushioned vinyl, hardwood flooring, cork, rubber, or asphaltic materials. Do not install flooring materials in outdoor areas and in or around commercial kitchens. Do not install in areas that may be subjected to sharp, pointed objects, such as stiletto heels, cleats or spikes. Do not allow product to be directly exposed to extreme heat sources, such as radiators, ovens

or other high-heat equipment. May be susceptible to staining from rubber tires, casters or rubber-backed walk-off mats, as well as harsh disinfectants, cleaning agents, dyes or other harsh chemicals – ensure all chemicals and materials that may come in contact with flooring surface will not stain, mar or otherwise damage the flooring material prior to use.

### 3. SUBSTRATE PREPARATION

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, grinding or buffing with a 25 grit Diamabrush Prep Plus tool prior to adhesive installation. In extreme situations, shotblasting may be required. Mechanical preparation must expose at least 90% of the original substrate. Following cleaning and removal, all substrates must be vacuumed with a flat vacuum attachment or damp mopped with clean, potable water to remove all surface dust. Sweeping without vacuuming or damp mopping will not be acceptable.

All porous substrates must be tested per ASTM F3191 to confirm porosity. Use a pipette or equivalent to conduct three tests by placing a .05 mL (1/4" wide) droplet of clean, potable water onto the surface. If the substrate absorbs water within 60 seconds, the substrate is considered porous. Conduct 3 tests for the first 3000 sq. ft. and one for each additional 2000 sq. ft., at least one per room. All other 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 flooring is being installed directly over concrete, concrete surfaces that have an ICRI Concrete Surface Profile (CSP) over 4 should be smoothed with a self-leveling underlayment (such as the Excelsior SU-310) or a cementitious patch (such as the Excelsior CP-300) to prevent imperfections from telegraphing through flooring materials. On or below grade concrete must have a permanent, effective moisture vapor retarder installed below the slab.

New or existing concrete substrates on all grade levels must be tested in accordance with ASTM F2170, using in situ Probes, to quantitatively determine the amount of relative humidity no more than one week prior to the installation.

#### Adhesive RH Limits

SP-500 Acrylic Aerosol:	<b>90% RH</b>
AW-510 Acrylic Wet-Set:	<b>90% RH</b>
AP-520 Acrylic Roll-On:	<b>80% RH</b>
MS-700 Modified Silane:	<b>95% RH</b>
EW-710 Epoxy Wet-Set:	<b>90% RH</b>

In addition to ASTM F2170 Relative Humidity Testing, existing concrete that

has previously had floor covering installed on all grade levels must be tested in accordance with ASTM F1869, using Calcium Chloride test kits, to quantitatively determine the Moisture Vapor Emissions Rate (MVER) of the concrete.

#### Adhesive MVER Limits

SP-500 Acrylic Aerosol: **9 lbs.**

AW-510 Acrylic Wet-Set: **6 lbs.**

AP-520 Acrylic Roll-On: **6 lbs.**

MS-700 Modified Silane: **10 lbs.**

EW-710 Epoxy Wet-Set: **6 lbs.**

If ASTM F2170 or ASTM F1869 test results exceed the prescribed limits, a moisture mitigation product, such as Excelsior MM-100 Moisture Mitigation, must be installed prior to proceeding with installation. Do not install flooring until moisture testing has been conducted per the appropriate standard and/or moisture mitigation has been installed and is dry to the touch. Do not install flooring in below grade areas when hydrostatic pressure is visible or suspected.

#### 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. Ensure to follow installation procedures and trowel sizes for non-porous substrates.

#### GYP SUM BASED SUBSTRATES

Gypsum-based substrates must have a minimum compressive strength of 3500 PSI. Gypsum substrates that do not meet this requirement must have one coat of the Excelsior MM-100 or equivalent installed to improve the tensile/pull-off strength of the substrate. Substrate must be structurally sound and firmly bonded to subfloor. 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 a sealant or primer. Follow all manufacturer's

recommendations regarding preparation for resilient flooring installation.

#### WOOD SUBSTRATES

Wood substrates must be prepared in accordance with ASTM F1482. Wood subfloors should be of double layer construction with a minimum thickness of 1". Crawl spaces beneath wood subfloors shall be in compliance with local building ventilation codes and have at least 18" of cross-ventilated space between the ground and the joists. Wood joists should be spaced on not more than 16" centers. Prior to installation, moisture retardant sheeting with a maximum rating of 1.0 perm must be installed beneath the wood subfloor, overlapped at least 8". For standard installations, use Underlayment Grade plywood with a minimum thickness of 1/4" thick and a fully sanded surface. When floors may be subjected to moisture, use an APA approved exterior grade plywood.

Other wood subfloor materials, such as OSB, lauan, particleboard, chipboard, fiberboard or cementitious tile backer boards, are not acceptable subfloors. Avoid preservative-treated and fire-retardant plywood, as some may be manufactured with resins or adhesives that may cause discoloration or staining of the flooring. Do not install flooring directly over solid or engineered hardwood flooring without first installing plywood or a suitable cementitious repair product at a minimum thickness of 1/4" over the hardwood flooring.

Wood subfloor deflection, movement, or instability will cause the flooring installations to release, buckle or become distorted. As such, do not use plastic or resin filler to patch cracks. Do not use cement or rosin coated nails and staples or solvent-based construction adhesives to adhere the plywood. Do not install on a sleeper system (wood subfloor system over concrete) or directly over Sturd-I-Floor panels.

#### 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 flooring material 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. Ensure to follow installation procedures and trowel sizes for non-porous substrates.

#### EXISTING FLOORING SUBSTRATES

The suitability of existing flooring as a substrate depends on the specific requirements of the adhesive being used to install the material. As such, refer to the adhesive requirements for existing flooring substrates and ensure all adhesive requirements and guidelines are followed.

#### RADIANT HEATING SUBSTRATES

When installing flooring over a substrate that contains a radiant heating system, ensure the radiant heat is turned off 48 hours prior to installation and remains off during the entire installation. 48 hours after installation, the radiant heat may be gradually increased over the course of 24 hours, until normal operating temperature is reached. Ensure the temperature of the radiant heating system does not exceed 85° F (29.5° C) and avoid making abrupt changes in radiant heating temperature.

#### 4. CRACKS, JOINTS & VOIDS

All cracks, joints and voids, as well as the areas surrounding them, must be clean and free of dust, dirt, debris and contaminants. All minor cracks and voids 3/64" wide or less may be repaired with a suitable cementitious patch.

Due to the dynamic nature of concrete slabs, manufacturer cannot warranty installations to cover expansion joints, cracks or other voids (such as control cuts, saw joints and moving cracks or voids) wider than 3/64". Do not install flooring directly over any expansion joints or cracks wider than 3/64".

All expansion joints should have a suitable expansion joint covering system installed

to allow expansion joint to freely move. To treat expansions joints where an expansion joint covering system can't be installed or to treat through cracks (depth at least 75% of the thickness of the concrete), chase joint or crack with a suitable saw or grinder and open to a minimum width of ¼". Be sure to clean all dust, dirt and debris from crack. Joints and cracks should then be sealed with a suitable, elastomeric caulk (such as Ardex Ardiseal Rapid Plus, Mapei P1 SL or equivalent) designed for use in expansion joints. Install a closed-cell backer rod at prescribed depth and follow caulk manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

To treat other cracks and voids (such as control cuts, saw-cut joints and surface cracks) over 3/64"; chase joint or void with a suitable saw or grinder and clean all dust, dirt and debris from crack. Fill entire crack with a rigid crack filler (such as Ardex Ardifix, CMP CM10 or equivalent) designed for use in control or saw-cut cuts. Follow material manufacturer's instructions for installation. Ensure surface is troweled flush with surface of concrete.

**Consult a structural engineer prior to treating any crack or joint, especially those that may affect structural integrity (such as expansion joints). Review all manufacturer installation instructions and/or consult manufacturer technical staff for all crack or joint filling products prior to treating joints and cracks.**

## 5. FLOORING INSTALLATION

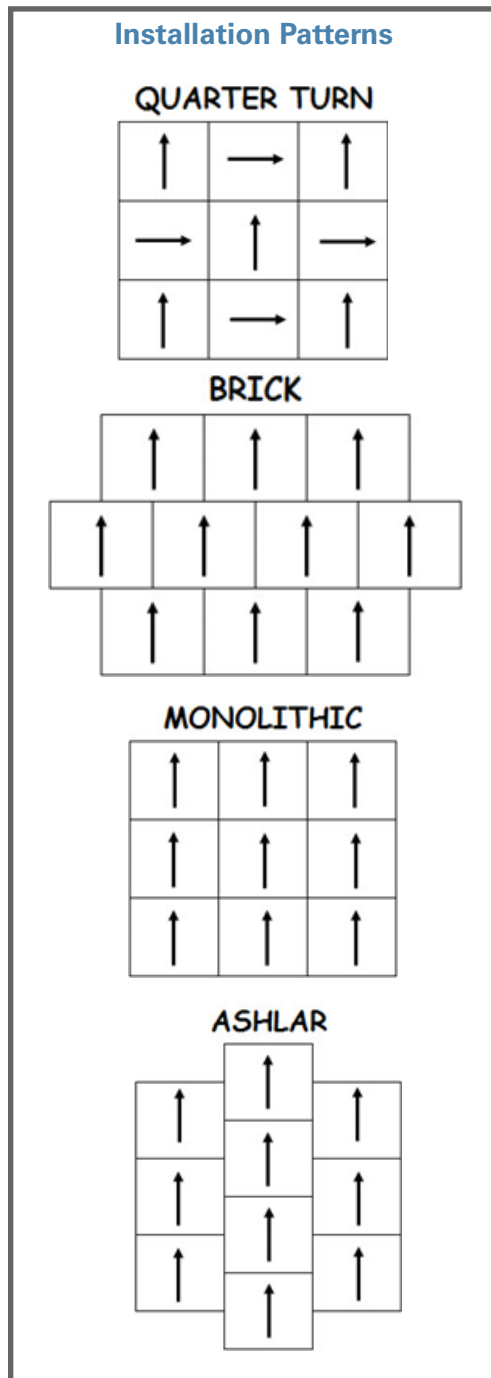
Ensure substrate is suitably prepared prior to installation, as manufacturer is not responsible for substrates that have not been properly prepared and tested for moisture. Ensure adhesive is approved for use with flooring material and the proper trowel type and size is used, as manufacturer is not responsible for any and all adhesion issues related to improper adhesive selection or usage.

Prior to installation, confirm material installation pattern and direction per design specifications or work order. Inspect all tiles before installing or during installation to verify that there

are no visible defects, damages or excessive shading variations. Blend materials from several cartons to ensure consistent appearance and color or shade variation. Some flooring products, colors and textures have latent and acceptable color and shade variations. If there are concerns regarding shade or color variation, do not install material and consult representative and manufacturer's technical staff.

Ensure substrate is clean, dry, flat and sound prior to installation. Ensure the room is square using the 3-4-5 squaring rule or similar method to ensure acceptable installation. Dry-lay several pieces of material in order to determine ideal room layout. Ensure material around perimeter is 1/8" from wall or less, depending on depth of wall base or trim. Ensure all end seams are a minimum of six inches apart.

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



Adhesive Coverage Rates (Per Gallon)		
Adhesive	Porous	Non-Porous
SP-500	100 sq. ft. / unit	
AW-510	160 sq. ft.	N/A
AP-520	320 sq. ft.	400 sq. ft.
MS-700	160 sq. ft.	235 sq. ft.
	Brushed & Rough Porous	Smooth Porous & Non-Porous
EW-710	135 sq. ft.	150 sq. ft.

Replace trowels at recommended intervals to maintain proper trowel ridge and spread rate. Observe directional arrows on back of tile to ensure arrows are installed in the same direction, unless installing in a specific and pre-determined design, such as a quarter-turn or ashlar design. Use a pyramid layout when installing tiles to eliminate run-off.

When installing into adhesive using a wet-set method, avoid walking or working on material until adhesive has cured for light foot traffic. Pay close attention to open times to avoid adhesion issues. This may require installing material in smaller sections.

Use a nail-down guide or equivalent along starting row to expedite wet-set installation. Periodically lift material to ensure proper adhesive transfer and ensure adhesive has not surpassed the open time - adhesive should cover 90% of tile. Clean excessive adhesive or adhesive residue from the surface of the



material using a clean cloth or mop and a solution of warm water and 1 pH neutral cleaner, do not use abrasive or solvent based cleaners.

Roll material with a 3 section, 100 lb. roller within 15 minutes after installation of tile section, crossing in a perpendicular direction after initial roll. Use a hand roller in areas that cannot be reached with larger roller. Do not wait until completing the entire installation before rolling as the adhesive may have surpassed the open time and cured. Roll and cross roll a second time approximately 30 minutes after the initial rolling.

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

**6. 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 flooring to remove any dirt, dust or debris.

Mix 2-4 ounces of Excelsior NC-900 Neutral Cleaner per gallon of clean, potable water and clean floor using an Auto Scrubber with 3M 4100 White Super Polish Pads. In smaller or difficult to reach areas, use a clean mop to apply cleaning solution to floor. If flooring is heavily soiled, an additional cleaning may be required.

Use an auto-scrubber, 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. Ensure flooring area is clean and that all cleaning residue has been removed (this may require additional rinsing).

Do not use detergents, abrasive cleaners or "mop and shine" type products, as they will dull the finish and sheen of the flooring 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.

Do not allow cleaning solutions to stand on flooring materials for extended periods of time, as the solutions could permeate beneath the flooring and cause adhesive issues. When wet, flooring will become

<b>Adhesive Traffic Limits</b>	
<b>SP-500 Acrylic Aerosol</b>	
Foot Traffic:	Immediate
Heavy / Rolling Traffic:	Immediate
Maintenance:	>48 Hours
<b>AW-510 Acrylic Wet-Set</b>	
Light Foot Traffic:	24 Hours
Heavy / Rolling Traffic:	48 Hours
Maintenance:	72 Hours
<b>AP-520 Acrylic Roll-On</b>	
Foot Traffic:	Immediate
Heavy / Rolling Traffic:	Immediate
Maintenance:	72 Hours
<b>MS-700 Modified Silane</b>	
Foot Traffic:	8-12 Hours
Heavy / Rolling Traffic:	24-48 Hours
Maintenance:	48 Hours
<b>EW-710 Epoxy Wet-Set</b>	
Foot Traffic:	8-12 Hours
Heavy / Rolling Traffic:	24-48 Hours
Maintenance:	48 Hours

slippery; therefore, use the appropriate caution tape and/or warning signs on the floor to eliminate traffic in cleaning area.

**For further information regarding daily or routine maintenance as well as heavy cleaning, please consult the product maintenance document.**

**7. FLOORING PROTECTION**

Protect newly installed flooring with construction grade paper or protective boards, such as Masonite or Ram Board, to protect flooring from damage by other

trades. Do not slide or drag pallets or heavy equipment across the new flooring. Limit usage and foot traffic according to the adhesive's requirements. When moving appliances or heavy furniture, protect flooring from scuffing and tearing using temporary floor protection.

All furniture casters must be made of a soft material and must have a contact point of at least 1" in width to limit indentation and flooring damage. All rolling chairs or seating must have a resilient flooring chair pad installed over the finished floor to protect floor covering. All fixed furniture legs must have permanent felt or soft rubber floor protectors installed on all contact points and to reduce indentation. Floor protectors must have a flat contact point of at least 1 sq. in. or 1 in. diameter and must cover the entire bottom surface of the furniture leg.

Ensure all furniture castors and chair legs are clean and free of any and all dirt and debris. Routinely clean chair castors and furniture legs to ensure that dirt or debris has not built up or become embedded in castors or floor protectors. Replace chair castors and floor protectors 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.

**8. WARRANTY**

Flexco provides a 30 Year Limited Residential Warranty and a 20 Year Extended Commercial Warranty. For additional information, see associated warranty documents.

**FOR PROFESSIONAL USE ONLY. PLEASE CONSULT ALL ASSOCIATED TECHNICAL DATA SHEETS, SAFETY DATA SHEETS, MAINTENANCE DOCUMENTS, WARRANTY INFORMATION PRIOR TO INSTALLATION.**