2TRZO™ | LVT

Technical Data & Installation

Product Overview

AVA 2TRZO is a premium, glue down Luxury Vinyl Tile (LVT) product that features a full line of unique terrazzo visuals that provide a wide range of design options for many applications. 2TRZO is constructed with a durable wear layer and topped with our proprietary AMP polyurethane finish, making it an ideal flooring product for corporate offices, retail spaces, hospitality and a variety of other commercial environments. 2TRZO glue down is the perfect long term solution for heavy traffic areas, including areas with heavy rolling loads. 2TRZO is FloorScore certified, GreenGuard Gold certified, Declare labeled, REACH compliant and has published Environmental and Health Product Declaration Forms (EPDs & HPDs), making it a sustainable product selection in the LVT category.

Product Information

Overall Thickness:	**2.5mm**
Wear Layer Thickness:	**22 mil (0.55 mil)**
Product Type:	**Glue Down Luxury Vinyl Tile**
Dimensions:	**36 in. x 36 in.**
Finish:	**AMP Polyurethane Coating**
Surface:	**Embossed w/ Straight Edge**
Residential Warranty:	**Lifetime**
Heavy Commercial Warranty:	**20 Years**
Carton Quantity:	**6 Pieces (54 sq. ft.)**
Carton Weight:	**48.51 lbs.**
Cartons / Pallet:	**36**

Technical Information

Product Construction Code:	**CN LVT 2.5mm (0.55 wl, 1X)**
ASTM F1700 - Solid Vinyl Tile Specification:	**Class III, Type B**
ASTM F2055 - Size:	**Passes, ± 0.4 mm**
ASTM F387 - Thickness of Resilient Flooring:	**Passes, ± 0.13 mm**
ASTM F410 (commercial ≥ 0.020 in.) / EN 24340 (± tolerance)	**Passes, 0.022 in. (0.55 mm/22-mil)**
ASTM F2055 - Squareness:	**Passes, ± 0.25 mm**
ASTM F1914 - Residual Indentation:	**Passes, ≤ 0.2 mm**
ASTM F137 - Flexibility:	**Passes, 25.4 mm mandrel**
ASTM F2199 - Dimensional Stability:	**Passes, < 0.5 mm / lin. ft.**
ASTM F925 - Chemical Resistance:	**Passes ASTM F1700 requirements**
ASTM F1514 - Resistance to Heat:	**Passes, < ΔE 8**
ASTM F1515 - Resistance to Light:	**Passes, < ΔE 8**
ASTM F970 - Static Load (Modified):	**Passes, ≤ 0.4 mm indent, 1200 lbs.**
ASTM D2047 - Static Coefficient Friction:	**Passes, > 0.5 SCOF**
ASTM E648 (NFPA 253) - Critical Radiant Flux:	**Passes, Class 1, > 0.45 W/cm²**
ASTM E662 (NFPA 258) - Smoke Density:	**Passes, < 450**
ASTM E492 / E989 - Impact Insulation Class:	**IIC 56* (w/ F-22-SCU)**
ASTM E90 / E413 - Sound Transmission Class:	**STC 50* (w/ F-22-SCU)**
ASTM E2179 - Delta Impact Insulation Class:	**ΔIIC 25* (w/ F-22-SCU)**

* 6" concrete

Disclaimer: All unit values presented herein represent standard specification values. Values shown in parentheses are mathematical conversions provided solely for informational purposes and are not recognized as standard. Results were independently tested, using material from standard production, in accordance with product specific standard test methods. Physical and performance testing may vary, within tolerances, depending on the testing apparatus and/or production lot used. Be sure to use the most recently published versions of all reference documents, specifications, and test methods.

General Information

Important Information: The current version of all associated technical documents, including technical data sheets, installation instructions, maintenance guides and warranties (especially exclusions), must be read, understood and followed prior to and during installation. For a complete list of suitable applications and installation environments, refer to the Material Usage Guide. For guidance regarding wet areas, please see all applicable technical bulletins. Ensure that all subfloor and substrate preparation, including any required moisture testing, has been completed, reviewed, and understood by all involved parties before installation. Do not proceed until all conditions are met. **Site-related issues, such as those caused by substrate, installation and site-conditions, are not covered under warranty.**

Do not install outside or expose the flooring to direct sunlight, prolonged UV/IR radiation or high heat sources, such as self-cleaning ovens, as these can lead to fading, damage, or excessive product movement. Avoid installing in areas where sharp or pointed footwear or objects (such as stiletto heels or cleats) may be present, as they may damage the product. Do not use rubber wheels, rubber casters, or rubber-backed mats directly on the flooring, as they may cause permanent stains. Allow all other trades to complete their work before installation begins. All ASTM standards referenced in this document can be purchased at www.astm.org.

Warning: All local, state, and federal regulations must be followed - this includes the removal of in-place asbestos flooring and adhesive and lead-containing materials. When appropriate, follow the Resilient Floor Covering Institute's (RFCI) Recommended Work Practice for Removal of Existing Floor Covering and Adhesive. Do not use solvent or citrus-based adhesive removers. Follow all Occupational Safety and Health Administration (OSHA) guidance regarding exposure limits for respirable crystalline silica. Always wear safety glasses and use respiratory protection or other safeguards to avoid inhaling any dust. All liquid spills must be cleaned promptly - allow the floor covering to dry before allowing foot traffic.

Receiving Material & Initial Storage: The floor covering and accessories must be stored in dry indoors conditions between 40°F to 90°F (4°C to 32°C). Do not store outside, even in containers, and do not stack pallets. Remove all plastic and strapping from the product after delivery. Confirm that the flooring product, color, and quantity are correct. Carefully check all materials for shipping damage and note all damage on the bill of lading before accepting the delivery. **Material accepted with visible shipping damage that is not reported on the bill of lading is not covered under warranty.**

Check all product lot numbers: If more than one lot is onsite, mark the pallets or boxes of each lot to ease identification and lot management. While mixing materials from different lots will not affect performance, it may lead to noticeable visual differences in shade or texture. As such, ensure differing lots are installed in separate areas. If mixing lots is intended, compare different lots under various lighting conditions before installation and ensure customer approval. **Observable visual variations due to mixing production lots are not covered under warranty.**

Recommended Tool List:

- Safety Glasses
- Safety Shoes
- Dust Mask
- Cut-Resistant Gloves
- Knee Pads
- HEPA-Filtered Vacuum
- 6-foot and 1-foot Straight Edge or Level
- Utility Knife with New Blades
- Tape Measure
- Pencil
- Speed Square
- Chalk Marking Line
- Non-Contact Infrared Thermometer
- 1/32 x 1/16 x 1/32 U-notch (FFA) Adhesive Trowels or Blades
- 100 lb. Three Section Roller
- Oscillating Multi-Tool or Hand Saw (for door jambs)
- Appropriate Substrate Preparation Tools

Approved Adhesives:

- Novalis NV-GLU+
- Gold Series MW-3012

These instructions are specifically for approved adhesives only and shall not to be used with any other adhesive. NV-GLU+ is available in 1-gallon and 4-gallon units and has an expected coverage rate 175 – 200 sq. ft. per gallon when using a 1/32 x 1/16 x 1/32 U-notch trowel (FFA), depending on the substrate and trowel angle. Replace trowels after every 4 gallons to ensure even coverage—do not re-notch trowels. Using any unapproved adhesive may allow flooring to excessively gap, dome, or curl as a direct result of environmental and/or subfloor conditions. **All issues associated with unapproved adhesives will not be covered under warranty.**

Documentation: Record and/or photograph all site conditions, test results, and corrective measures taken. All relevant pre-installation documentation, as well associated product sales invoices, shop drawings and/or project information, must be stored for the entire warranty period. In the unlikely event of a claim, these documents may be required to identify the product and validate compliance with all associated technical documents. A wireless, cloud-based monitoring system is recommended to monitor and track site conditions, especially when the site is unoccupied and/or permanent HVAC is not

operational.

Substrate & Subfloor Preparation

Substrate Flatness: All substrates must be checked for flatness prior to installation. Substrates should have a maximum flatness deviation of 1/8 inch (3.18 mm) over 6-feet (1.83m), and/or 1/32 inch (0.8 mm) over 1-foot (305 mm), when measured using an industry-recognized method. All substrates that do not meet this requirement must be corrected using a suitable repair product prior to installation. Failure to correct flatness issues may affect the warranty – be sure to get customer or end-user acceptance or approval prior to installation.

Concrete Moisture Requirements

Novalis NV-GLU+

- **Above-grade:** All concrete surfaces must be visibly dry prior to and during installation.
- **On and/or Below-grade:** All concrete substrates that are in direct contact with ground must comply with one of the following options prior to installation.
  1. Concrete must have a **confirmed, effective vapor retarder** installed directly beneath the slab, that is compliant with the ASTM E1745 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slab.
  2. Concrete must be tested for relative humidity within 3-weeks of flooring installation, following the ASTM F2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes. **ASTM F2170 test results must not exceed 90% RH.**
  3. Install a surface applied **concrete moisture mitigation system** that complies with the ASTM F3513 Standard Practice for Single Component, Fluid-Applied Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings or the ASTM F3010 Standard Practice for Two-Component Resin Based Membrane-Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings, following the product manufacturer's instructions.

Gold Series MW-3012

- All subfloors and substrates requirements and limitations shall be followed, as detailed within all related technical documents.

Concrete Substrate & Subfloor Requirements: All concrete must be at least 28 days old, structurally sound, stable and have a minimum compressive strength of ≥ 3000 PSI prior to installation. The concrete must be clean, dry, and free of contaminants, such as dust, residual adhesives, solvents, wax, oil, grease, mold, mildew, asphalt, and visible alkaline salts prior to installation to ensure proper adhesion and long-term performance. If site conditions are inadequate or if there is any evidence of water, hydrostatic pressure or chemical adhesive removers on the concrete, do not proceed with the installation and contact the Novalis technical department for guidance.

To treat dormant construction joints and cracks, first remove all debris, dust, and dirt from the cracks. Next, fill cracks with a rigid crack treatment designed for construction joints, ensuring the surface is troweled flush with the surrounding concrete. Use an appropriate expansion joint covering system over all expansion joints to manage concrete expansion and contraction.

If needed, flatten or smooth the surface with a moisture-resistant, commercial-grade leveling or patching compound, following the product manufacturer's instructions.

Gypsum/Lightweight Substrate Requirements: Lightweight or gypsum substrate must be dry as per the product manufacturer's specifications and have a minimum compressive strength of 2000 PSI when installed over wood, or 3000 PSI when installed over concrete. The substrate must be installed and prepared in accordance with the ASTM F2471 Standard Practice for Installation of Thick Poured Lightweight Cellular Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring or the ASTM F2419 Standard Practice for Installation of Thick Poured Gypsum Concrete Underlayments and Preparation of the Surface to Receive Resilient Flooring, respectively. New or existing substrates may require a sealant or primer before installing resilient flooring. Follow the product manufacturer's instructions for appropriate preparation. Substrates must be firmly bonded to a structurally sound subfloor. Any cracked or damaged areas must be removed and repaired using a compatible repair product.

Wood Substrate & Subfloors Requirements: All wood substrates must be structurally sound, stable, and free from deflection, movement, or instability. Sleepers and sleeper systems must not make direct contact with concrete foundations. The moisture content percentage (MC-%) of the wood must also meet the requirements for the specific region to ensure proper performance, stability and durability. Wood subfloors and substrates must be compliant with and, if necessary, prepared in accordance with the ASTM F1482 Standard Practice for Installation and Preparation of Panel Type Underlayments to Receive Resilient Flooring. Wood substrates must consist of a double-layer construction with a recommended total thickness of at least 1 inch, adhering to all local, state, and federal building codes. For standard installations, the top layer must be American Plywood Association (APA) rated underlayment grade plywood or an equivalent material, with a minimum thickness of 1/4 inch. The plywood must be fully acclimated, smooth, free of knots or voids, and fully sanded. When floors may be subjected to moisture, use an APA-rated exterior grade plywood or an equivalent material.

Resinous Coating Requirements: When installing directly over resinous coatings, such as epoxy coating or a moisture

mitigation system, ensure the coating is clean, free of contamination, structurally sound, smooth, dry and properly cured per manufacturer's instructions.

Metal Subfloor Requirements: Metal substrates must be clean, dry, structurally sound smooth and free of oil, rust and/or oxidation. When installing in areas that may be subject to topical water, moisture and/or high humidity, an anti-corrosive coating should be applied to protect the metal substrate. Contact a local paint or coating supplier for coating recommendations.

Other Subfloor & Substrates: Installing over existing resilient vinyl flooring is not recommended. However, it may be possible over some materials, such as vinyl composition tile (VCT), quartz tile, solid vinyl tile, sheet vinyl or linoleum, as well as existing hard surface flooring substrates, such as terrazzo, porcelain or ceramic tile. Ensure subfloor is dry, existing flooring is clean, dry, sound, solid and well adhered. All loose material must be removed and repaired or replaced. All imperfections must be flattened and smoothed with a suitable repair product. **Electing to install over existing floor covering releases the manufacturer from all liability related to suitability and continued performance of the existing product, including all subsequent effects on the new floor covering.**

Radiant Heating Requirements: When installing flooring over a substrate that contains a radiant heating system, ensure that none of the heating elements make direct contact with the flooring material. Ensure radiant heat is no higher than 70° F (21° C) 8-hours prior to and during the entire installation. After installation, the radiant heat may gradually be 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.

Sound Control Substrates: AVA LVT products may be installed over Novalis Sound Control Underlayments but may not be installed with any other sound control products, such as cork, foam or rubber underlayments.

Labor costs associated with unapproved third-party materials will not be covered under warranty. For additional information, please see the AVA Sound Control technical bulletin.

Unsuitable Subfloors: These include but are not limited to: Floating or loose floor coverings, vinyl asbestos tile (VAT), hardwood, carpet, cushioned vinyl, rubber, cork, foam, asphalt tile, additional acoustical underlayments and any substrate with visible mold, mildew, or fungi and any substrate in wet areas, such as inside showers and saunas. Do not install over substrates that have been coated with varnish or an oil-based, enamel, paint, primer, primer-sealer or stain-blocker. Do not install over any substrate made of Masonite™, chipboard, wafer board, fiberboard, particleboard, construction-grade plywood, CDX, OSB (including AdvanTech™), Lauan, cement board or any non-underlayment grade panels – if present, cover with an APA-rated underlayment-grade plywood. Do not use pressure-treated plywood. If using fire-retardant plywood, confirm adhesion using the Mat Bond Evaluation detailed below. Do not install directly over any adhesive or adhesive residue of any kind. Do not install in recreation vehicles, campers, boats. If installing in fully enclosed and weatherproof three-season rooms, sunrooms and other areas that do not comply with the Site Conditions, contact the technical department for specific instructions before proceeding. All issues associated with the use of unsuitable substrates and subfloors will not be covered under warranty.

Mat Bond Evaluation: If the compatibility of an otherwise suitable substrate or any other products is in question, perform a mat bond evaluation following the ASTM F3311 Standard Practice for Evaluation of Performance and Compatibility for Resilient Flooring System Components Prior to Installation.

Flooring Installation

Site Conditions: The prepared installation area must be fully enclosed and weatherproof. Maintain steady site conditions (within ± 5°F) using an HVAC system set to the normal, post-installation operating temperature and humidity conditions (In-Service Conditions) for at least 48 hours before, during, and 48 hours after installation. In-Service Conditions must be between 60°F (16°C) and 80°F (27°C) and between 35% and 65% relative humidity. Additionally, In-Service Conditions must be ≥ 10°F above dew point. Once all required site-conditions are met, the flooring product may be delivered to the installation area in its original packaging with all labels intact. During installation, block any direct sunlight using window treatments or other protective methods.

Failure to meet the site condition requirements may impact adhesive performance. If the required conditions cannot be met, contact the technical department for specific instructions before proceeding.

Product Acclimation: Before installation, confirm that the flooring is acclimated to within ± 2°F of the in-service conditions using a non-contact infrared (IR) thermometer. If these conditions are not met, delay the installation until the flooring temperature is within the acceptable ranges.

Layout: Confirm the installation pattern and direction according to the design specifications or work order. Planks should be installed in a random pattern, ensuring all joints are spaced ≥ 8-inches apart. Avoid creating "H" joints, "stair-stepping" patterns and obvious pattern repeats. Tiles should be installed in a brick-bond or 1/3 offset pattern.

Grouting: If the flooring has a micro-beveled edge, it can be grouted. During installation, ensure a consistent gap is left around all four sides of each tile or plank using appropriate tile spacers. The gap should be 1/16-inch, 1/8-inch, or 3/16-inch wide. Remove the spacers before rolling and grout the joints with a flexible grout designed for vinyl flooring. Follow the grout manufacturer's instructions for application and cleaning.

Note: Any grout residue left on the surface may impact maintenance and is not covered under warranty.

Note: Any grout residue left on the surface will affect product maintenance and is not covered under the warranty.

General Preparation: Undercutting all wooden door jambs, using an Oscillating Multi-Tool, is recommended. Ensuring the door jamb cut height matches the thickness of the floor covering. Thoroughly clean the area with a HEPA-filtered vacuum prior to flooring installation.

Inspect all material prior to and during installation to verify that there are no visible defects, damage, excessive shading, sheen or texture variations. Blend materials from multiple cartons within the same lot to ensure a consistent appearance. Some flooring products, colors and textures have acceptable color and shade variations. If there are concerns regarding defects, shade, sheen or texture variation, do not install material and consult a sales or technical representative. **Labor and associated costs with materials installed with obvious visual defects and/or mixing production lots is not covered under warranty.**

Starting Line: Measure the width of each end of the installation area, then calculate the width of the final row. If the width of the final row is less than half the width of the flooring, adjust the width of the first row to compensate. Measure and mark the starting line using a chalk line.

Adhesive Application: After the substrate that has been prepared, apply the adhesive slowly and evenly to the substrate using a 1/32 x 1/16 x 1/32 U-notch (FFA) adhesive trowel at a ~45° angle. Avoid skips, puddles or sharp trowel turns. Allow the appropriate open time for the adhesive - trowel ridges should still be pliable and tacky when pressed, with slight adhesive transfer to fingertips (~15 – 30 minutes, depending on substrate and site conditions). Only apply adhesive that can be covered within the working time (up to 4 hours, depending on substrate and site conditions). If adhesive ridges are firm and there's no transfer to fingertips, do not install flooring and contact the technical department.

Note: Alternate trowel sizes may be required, depending on the product, underlayment, associated Technical Bulletins or specific guidance from the technical department.

Flooring Installation: Carefully install the flooring following the starting line, keeping all joints tight without pressure fitting. Make sure all arrows on the back are pointed in the same direction. Ensure the starting row is straight - the acceptable straightness tolerance is within 1/16 inch for lengths over 20 feet or 1/32 inch for lengths under 20 feet. Within the working time of the adhesive, roll the installed flooring slowly, first width then length, using a 100 lb. three-section roller. Failure to roll correctly may result in issues that are not covered under warranty. Remove any wet adhesive from the surface of the flooring immediately using a damp, clean cloth.

Cutting: Using a speed square as a guide, carefully score along the cut line at least twice with a utility knife and a new blade. Snap the piece downwards to complete the cut. Alternatively, a suitable guillotine cutter may be used. When cutting across the length of the material, use a suitable length straight edge or the factory edge of a piece of flooring. As necessary, a jigsaw with a carbide blade may be used for complicated cuts, following the tool's safety instructions.

Post-Installation: Visually inspect the installation to ensure that the appearance is uniform and straight, that all seams are tight and correctly staggered/spaced. Remove any dried adhesive from the surface of the flooring using 70% Isopropyl Alcohol and a clean cloth, do not apply abrasive or solvent-based cleaners or magic erasers directly to the surface of the floor covering. Take photographs and have any required documentation signed and filed following completion.

Do not place, slide or drag heavy objects across the floor. When moving appliances, heavy furniture or equipment, protect the flooring with appropriate, hard surface furniture sliders or 1/2" plywood. Casters, glides and feet of all furniture or equipment must have a flat contact point that is at least 1 sq. in. or 1.125 in. in diameter to limit indentation and flooring or finish damage. To avoid maintenance-related issues, do not use nylon/hard plastic wheels, glides or casters. **Prior to final use, ensure the customer or end-user reviews the Floor Protection & Maintenance document.**

Provide the customer or end-user with three or more extra pieces of floor in the original packaging as attic stock, to be kept for the lifetime of the floor. **In the unlikely event of a product issue, attic stock can play a crucial role in product identification, color matching, warranty claim verification and possible repairs.**

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