Ground Control® Surfaces
Luxury Vinyl Tile & Plank Installation Guidelines (rev. 5.2021)

The purpose of this manual is to provide general installations recommendations based on certain installation types and environments. Read entire installation instruction sheet prior to beginning installation. Improper installation of the flooring or deficiencies related to site conditions may result in failure of the installation and will void the warranty. Owner/installer assumes all responsibility for final inspection and acceptance of product prior to installation. Always refer to manufacturer's current installation recommendations which may be found at www.groundcontrolsurfaces.com.

Material Receiving & Storage

Upon receipt of material, immediately remove any wrapping and inspect for damage.
Verify the material delivered is the correct quantity, style, color and free of any defects. Verify item and lot number are the same for all material to be installed. Any discrepancies must be reported immediately to supplier before beginning installation.
Acclimate flooring and adhesive for a minimum of 48 hours prior to installation in the area where it is to be installed.
Environmental conditions must be maintained at the same temperature and humidity level expected for normal use between 65-85 degrees F, with relative humidity range between 35-55%, before, during and after installation.
Commencement of the installation by the flooring contractor constitutes acceptance of the materials and job site conditions. No labor claim will be honored on material installed with visual defects.

Jobsite Conditions

The environment where flooring is to be installed should be clean, fully enclosed and have a permanent heating, ventilation, and air conditioning (HVAC) system in continuous operation. Temperature must be maintained between 65 - 85°F, with relative humidity range between 35-55% for a minimum of 48 hours prior to installation. HVAC must remain operational during and post installation.
It should be determined that work by other trades will be completed prior to installation, or arrangements made for adequate and continuous protection of installed flooring if other trades will be working at same time or after.

Subfloor Requirements and Preparation

Ground Control Surfaces Luxury Vinyl Tile and Plank may be installed over properly prepared concrete, suspended wood, metal, and some existing flooring types. Flooring contractor should evaluate the suitability of subfloor to receive new flooring. Timely and thorough inspection and preparation of subfloor are required to assure a satisfactory installation.
Subfloor may be conditionally acceptable with requirement for additional preparation to make the surface suitable to receive flooring to include patching, leveling, removal of surface contaminants, moisture mitigation, and alkali concerns.
All subfloors should be level to within 3/16" over a 10-foot radius, smooth, clean, dry, structurally sound and free of dust, dirt, oil or any other contaminant that would inhibit a proper adhesive bond. Use of a quality Portland cement-based patching compound to fill or smooth any irregularities in the subfloor is recommended.
Commencement of installation by the flooring contractor will constitute flooring contractor's acceptance of subfloor and site conditions. Ground Control Surfaces accepts no responsibility for failure of underlayment or subfloor.

Porous Substrate

When installing vinyl plank and tile over a porous substrate, semi-wet set installation with Ground Control Surfaces GCS4500 Flooring Adhesive, ST100 Flooring Adhesive (or equivalent) is recommended using a 1/16" x 1/32" x 1/32" U-notch trowel.

Non-Porous Substrate

When installing vinyl plank and tile over a non-porous substrate, PSA installation with Ground Control Surfaces GCS4500 Flooring Adhesive, ST100 Flooring Adhesive (or equivalent) is recommended using a 1/16" x 1/32" x 1/32" U-notch trowel.

Concrete

New and existing concrete subfloors must meet the requirements of the American Concrete Institute (ACI) Publication 302.1 R-96 Guide for Concrete Floor Slab Construction, and the current version of ASTM F710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
Concrete should be dry, clean and level to within 3/16" over a 10-foot radius. Level low spots with a Portland cement-based leveling compound and grind high spots to ensure subfloor is level.
Concrete shall have a minimum compressive strength of 3500 psi. New concrete slabs must be at least 45 days old and fully cured, free of moisture and must be pH neutral prior to installation.

Moisture levels in concrete should be tested according to the most current version of ASTM F2170 (standard test method for determining relative humidity in concrete floor slabs using in situ probes) with a moisture content not exceeding 5 pounds per 1000 sf; or ASTM F1869 (standard test method for measuring moisture vapor emission rate of concrete subfloor using anhydrous calcium chloride – CM method) with a maximum permissible moisture content of 2.0%. Alkalinity should not exceed a pH level of 9.

NOTE: Subfloor tests cannot predict long-term moisture and alkali conditions of concrete slabs. They are only indicators of conditions at the time the tests are conducted. Ground Control Surfaces does not warrant or guarantee unsatisfactory installations due to the presence of excessive alkali, moisture, or hydrostatic pressure in subfloors.

Suspended Wood Subfloors

Wood subfloors should be smooth, clean, dry, structurally sound, free of vertical deflection, and free of dust, dirt, oil, or any other contaminant that would inhibit a proper adhesive bond. Use of a quality Portland cement-based patching compound to fill or smooth any irregularities in the subfloor is recommended

Wood subfloors shall have at least 18” of well-ventilated space below. The ground under crawl spaces must be covered with 6-mil poly film to reduce moisture vapor transmission. Wood subfloors must be double construction or equivalent, with a minimum thickness of 1”. Wood subfloors must be APA exterior underlayment grade plywood (or equivalent) with a fully sanded face that is free of voids.

NOTE: Wood subfloors such as particle board, OSB or construction grade plywood are not suitable subfloors.

NOTE: Resin coated, rosin coated and cement coated nails, screws, staples, etc. should NOT be used to install plywood underlayment because they can cause discoloration of vinyl flooring. Heads and top surfaces of all fastening devices must be below surface of plywood and covered with suitable, flexible underlayment patch or filler to height of plywood surface.

Existing Resilient Flooring

Ground Control Surfaces Luxury Vinyl flooring may be installed over certain existing resilient floors. Existing floors must be of a single layer, non-cushioned and fully bonded to an approved substrate. Existing flooring must also be structurally sound, dry, clean, free of dirt, dust, oil or other contaminants that would inhibit a proper adhesive bond between existing surface and new flooring.

Any existing resilient flooring that is embossed, textured, irregular or uneven, or has urethane coating, must be coated with high quality embossing leveler according to manufacturer’s instructions to minimize telegraphing. When doubt exists about suitability of existing flooring, it should be removed. The responsibility for determination of suitability of existing resilient flooring rests with the flooring contractor. Installations over existing resilient flooring may be more susceptible to indentations.

WARNING: Existing resilient floor coverings and black asphalt adhesive may contain asbestos, asbestos fiber or crystalline silica. Do not sand, scrape or abrade these materials. If removal of existing resilient floor covering is necessary, be certain that all precautions are taken, and proper procedures are followed. For information regarding proper removal procedures in the US, please refer to “Recommended Work Practices for the Removal of Resilient Floor Coverings” published by The Resilient Floor Covering Institute.

Additional Substrates

Ground Control Surfaces Luxury Vinyl flooring may be installed over properly cleaned and prepared metal, ceramic tile, terrazzo and marble subfloors which are firmly bonded to the substrate, level to within 3/16” over a 10-foot span and structurally sound. Additional subfloor preparation and alternative adhesive may be required for certain substrates.

Contact Ground Control Surfaces for questions related to specific installation requirements for these subfloor types.

Double Stick Installation

Although not required, use of a sound reducing underlayment such as Ground Control Surfaces Sound Check™ is acceptable. Ground Control Surfaces Sound Check underlayment should be firmly adhered to the substrate according to manufacturer’s installation instructions using Ground Control Surfaces GCS4500 Flooring Adhesive, ST100 Flooring Adhesive (or equal). Installation of Ground Control Surfaces Luxury Vinyl over approved sound reducing underlayment should be perpendicular to the direction of the underlayment. Use only manufacturer recommended adhesives for use in double-stick installation of underlayment and flooring.

Layout and Installation

For best results, installation of Ground Control Surfaces Luxury Vinyl Plank and Tile should be started from the center of the room. Measure and mark the center of each end wall. Connect center points with a chalk line. Locate the center and establish a second chalk line at a right angle to the existing line. Carefully place the first tile or plank at the junction of the chalk lines. Continue laying the flooring, making sure each plank or tile is flush against the chalk line or tight against adjoining plank or tile. Be sure flooring is well seated into the adhesive and continue laying in either pyramid fashion or row by row. Planks should be staggered, with minimum of 8” or 25% of the length of the plank between end joint of adjacent planks.

Roll the flooring in both directions with a 75-100 pound 3-section roller immediately after the installation is complete to ensure proper transfer of adhesive.

Expansion Joints

Expansion joints, isolation joints or other moving joints are incorporated into concrete floor slabs in order to permit movement without causing cracks in the concrete. These joints must not be filled with patch, underlayment products or other materials. Floor coverings must not be laid over expansion joints. Expansion joint covering systems should be selected based upon intended use and aesthetic considerations.

Clean Up

Use a clean wet cloth to remove adhesive from the surface of flooring while still wet. Removing adhesive which has dried on the surface of the flooring may require the use of an appropriate solvent, then wipe area clean using pH neutral cleaner
When flooring is initially installed it may be necessary to cover the flooring with protective paper or membrane until other trades have completed work and the area is ready for occupancy.
Initial maintenance should not be conducted for at least 5 days after the installation to ensure adhesive has fully cured as excess moisture and cleaning agents may inhibit a proper adhesive bond
Once adhesive has fully cured, sweep, or vacuum the entire floor to remove dust, dirt, and debris. Clean floor with a pH neutral cleaner specifically formulated for use on resilient flooring. Always follow manufacturer’s instructions for use.

Traffic

Restrict foot traffic to a minimum for 24 hours after installation. Do not allow heavy foot traffic, furniture placement or rolling loads for 72 hours after installation. Additional time may be necessary if the installation is over a non-porous substrate. Allow at least five days following the installation before conducting wet cleaning or application of finish.

Disclaimer

Users should determine the suitability of product for their own particular purpose or application. Ground Control Surfaces assumes no liability for misuse or improper installation of this product.

Ground Control Surfaces is a division of Swiff-Train, LLC, 10850 Train Court, Houston, Texas 77041

Rev. 5.2021