

# PROSERIES™ LVF GLUE DOWN INSTALLATION INSTRUCTIONS



## RESILIENT / PROSERIES LVF

### GLUE DOWN LVF INSTALLATION INSTRUCTIONS

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**Daltile ProSeries** resilient/LVF (luxury vinyl flooring) is recommended for a variety of residential and commercial applications, including educational, institutional, healthcare, retail, office, hospitality and multifamily environments and may be installed over most properly prepared substrates, making it suitable for installation on all grade levels where moisture conditions do not exist.

## SUBSTRATE & TESTING REQUIREMENTS

All substrates to receive resilient flooring shall be dry, clean, smooth, and structurally sound. They shall be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, curing, sealing, hardening, or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, and other foreign materials that might prevent adhesive bond. All substrates to receive moisture sensitive floor covering must be tested for moisture.

**ASBESTOS WARNING! DO NOT MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVES OR OTHER ADHESIVES.**

Previously installed resilient floor covering products and the asphaltic or cutback adhesives used to install them may contain either asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of asbestos or crystalline dust is a cancer and respiratory tract hazard. Smoking by individuals exposed to asbestos fibers greatly increases the risk of serious bodily harm. Unless positively certain that the previously installed product is a non-asbestos containing material, you must presume it contains asbestos. Regulations may require that the material be tested to determine asbestos content and may govern the removal and disposal of material. See current edition of the Resilient Floor Covering Institute (RFCI) publication "Recommended Work Practices for Removal of Resilient Floor Coverings" for detailed information and instructions on removing all resilient covering structures.

## FLEXIBLE GLUE DOWN LVF INSTALLATION TOOLS REQUIRED FOR INSTALLATION

- Tape Measure
- Square Ruler
- Utility Knife
- Chalk Line
- Rubber Mallet
- Standard PPE
- Hand Roller
- 100 lb Roller
- U Notch Trowel 1/16"x1/32"x1/32" Dry Back
- U Notch Trowel 1/16"x 1/16"x 1/16 Attached Pad

## STORAGE & HANDLING

Acclimate the flooring for a minimum of 48 hours before installation in the area where it will be installed. Conditions between 65°F and 85°F (18°C and 29°C) are required before, during and after installation. Cartons should be evenly stacked no more than five high on a flat surface and away from any heating/cooling ducts or direct sunlight.

## FLOOR PREPARATION

Floor must be clean, smooth, flat and dry. Remove all foreign substances, such as wax, grease, dirt, construction marks and contaminants, and any substance or chemical that would interfere with a good bond. Avoid using sweeping compounds. Do not install over substrates that have been chemically cleaned. Wood subfloor or underlayment must be flat, not to exceed variation of 1/4 inch in 10 feet (1/2 cm in 3 m). The flatness of concrete subfloors must meet or exceed the requirements of ACI FF25. Fill all holes and cracks with a latex fortified portland cement based patching compound. Daltile recommends priming extremely porous floors with an acrylic latex primer to prevent over absorption of adhesives, for dust containment, and to ensure a better bond of the adhesive to the subfloor or underlayment.

Suitability: Regardless of the type of concrete or cement-like material used as a base for Daltile LVF flexible glue down products, the responsibility for its use or suitability rests with that product's

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manufacturer or specifier and not with Daltilo. Moisture Testing: It is the responsibility of the flooring contractor and the installer to test all concrete substrates, both old and new, for moisture transmission using the Calcium Chloride Moisture Test according to ASTM F1869. Moisture vapor transmission should not exceed the recommended levels of 8 lbs. or less per 1,000 sq. ft. in 24 hours. This test should be performed and documented prior to installation. Also test for relative humidity in concrete floor slabs using in-situ probes, which should be no more than 90% RH per ASTM F2170 before, during and after installation. These acceptable moisture readings are only applicable when using Daltilo's ProSeries Universal Pressure-Sensitive Adhesive.

## ACCEPTABLE SUBSTRATES

### CONCRETE SUBSTRATES

New and existing concrete subfloors should meet the guidelines of the latest edition of ACI 302 and ASTM F 710, "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring" available from the American Society for Testing and Materials.

- Never use liquid adhesive remover or solvent cleaners for removing old adhesive residue or other substances on the substrate; their use will cause failure.
- On or below-grade slabs must have an effective vapor retarder directly under the slab.
- Wet curing 7 days is the preferred method for curing new concrete. • Curing compounds (DO NOT USE). If present they can interfere with the bond of the adhesive to the concrete.
- Remove curing compounds 28 days after placement, so concrete can begin drying.
- Concrete floors shall be flat and smooth within the equivalent of 1/32" in 12" and 3/16" in 10 feet.
- F-Number System: Overall values of FF 36/ FL 20 may be appropriate for resilient floor coverings.

- Glossy or waxed floors may require a higher value FF 75/ FL 50 to prevent telegraphing issues. Relative Humidity (RH) – Tests must be performed per the latest edition of ASTM F 2170 - IRH (Internal Relative Humidity Test). Three tests should be conducted for areas up to 1000 SF. One additional test should be added for each additional 1000 SF. pH – Concrete floors must be tested per the latest edition of ASTM F 710.

- pH reading must not exceed 11.0.

- Readings below 7.0 and in excess of 11.0 affect resilient flooring and adhesives.

- Rinsing the surface with clear water is the best way to lower alkalinity "DAMP MOP".

### LIGHTWEIGHT CONCRETE

All recommendations and guarantees as to the suitability and performance of lightweight concrete under resilient flooring are the responsibility of the lightweight concrete manufacturer. The installer of the lightweight product may be required to be authorized or certified by the manufacturer. Correct onsite mixing ratios and properly functioning pumping equipment are critical. To ensure proper mixture, slump testing is recommended.

- Lightweight aggregate concretes having densities greater than 90 lbs. per cubic foot may be acceptable under resilient flooring.

- Concrete slabs with heavy static and/or dynamic loads should be designed with higher strengths and densities to accommodate such loads.

- **Relative Humidity (RH)** – Tests must be performed per the latest edition of ASTM F 2170 or manufacturer's recommended moisture test procedures. Three internal relative humidity tests should be conducted for areas up to 1000 SF. One additional test should be added for each additional 1000 SF.

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## GYPCRETE .

Prior to floor-covering installation, a moisture test of underlayment is highly recommended. When testing the underlayment for dryness, use ASTM F2659. The moisture content should not exceed 5%. If the Gyp-Crete Basic underlayment pour is greater than 2", test using ASTM F2170. That RH should not exceed 80%. Do not install floor goods until those limitations are met. If the flooring manufacturer specifies more stringent moisture limitations, they must be followed.

## WOOD SUBSTRATES

- A moisture test is required using a pin-type moisture meter. The moisture content must not exceed 15%.
- Wood subfloors must be structurally sound and in compliance with local building codes.
- Double-layered APA rated plywood subfloors should be a minimum 1" total thickness, with at least 18" well-ventilated air space beneath. Insulate and protect crawl spaces with a vapor barrier.
- It is recommended that your chosen APA underlayment grade panels be designed for installation under resilient flooring and carry a written warranty covering replacement of the entire flooring system. Any failures in the performance of the underlayment panel rests with the panel manufacturer and not with DalTile.
- Underlayment panels can only correct minor deficiencies in the subfloor while providing a smooth, sound surface on which to adhere the resilient flooring.
- Always follow the underlayment manufacturer's installation instructions.
- Wood subfloors directly fastened to concrete, or sleeper construction, are not recommended.
- APA rated Sturdi-I-Floor panels are designed as combination subfloor/underlayment, but exposure

to construction conditions including weather may necessitate installation of a 1/4" underlayment panel prior to resilient flooring installation.

- DalTile resilient flooring is not recommended directly over fire-retardant treated plywood or preservative treated plywood. The materials used to treat the plywood may cause problems with adhesive bonding. An additional layer of APA rated 1/4" thick underlayment should be installed.

## RESILIENT FLOOR COVERING

- Must be single layered, non-cushion backed, fully adhered, and smooth.
- Show no signs of moisture or alkalinity.
- Wax, polish, grease and grime must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.

**Note:** The responsibility of determining if the existing flooring is suitable to be installed over rests solely with installer/flooring contractor on site. If there is any doubt as to suitability, the existing flooring should be removed or an acceptable underlayment installed over it. Installations over existing resilient flooring may be more susceptible to indentation.

## POURED FLOORS (EPOXY, POLYMERIC, SEAMLESS)

- Must be totally cured and well bonded to the concrete.
- Must be free of any residual solvents and petroleum residue.
- Wax, polish, grease and grime must be removed.
- Cuts, cracks, gouges, dents and other irregularities in the existing floor covering must be repaired or replaced.

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- Texture must be smooth.
- Show no signs of moisture or alkalinity.

## STRIP – PLANK WOOD FLOORING

Due to expansion and contraction of individual boards during seasonal changes, DalTile recommends 1/4" or thicker APA rated underlayment panels be installed over subfloors if product will be glued down.

## OLD ADHESIVE RESIDUE

If the adhesive residue is asphalt-based (cut-back) or any other type of adhesive is present, it must be dealt with in one of two ways:

1. It may be mechanically removed using methods such as bead blasting or scarifying.
2. A Portland-based self-leveling underlayment may be applied over it. **Check with the underlayment manufacturer for suitability, application instructions, and warranties.**

Note: **NEVER** use solvents or citrus adhesive removers to remove old adhesive residue. Solvent residue left in and on the subfloor will affect the bond between the new adhesive and the new floor covering.

## VCT

Well bonded; on and above grade; in absence of waxes or sealers **CERAMIC** Well bonded and properly prepared **TERRAZZO** Well bonded and properly prepared **SELF-LEVELING AND PATCHING COMPOUNDS**

**RESILIENT** One layer; well bonded; non-cushioned

## UNACCEPTABLE SURFACES

- Cushion backed vinyl
- Laminate
- Interflex and any perimeter bonded products
- Carpet
- Cork
- Any floating floor system

\*DalTile will not warrant or accept responsibility of any kind for flooring failures related to the use of unacceptable substrates and surfaces.

## JOB SITE CONDITIONS

It is recommended that resilient floor covering installation shall not begin until all other trades are completed.

- Areas to receive flooring shall be clean, fully enclosed, with the permanent HVAC set at a uniform temperature range of 65°F to 85° F and maintained following the installation.
- Areas to receive flooring should be adequately lighted during all phases of the installation process.
- Working and open times vary based on job conditions, substrate, temperature, and humidity.

## TEMPERATURE - AMBIENT

- Controlled environments are critical for testing and installation. Fully operational HVAC systems are the best way to ensure temperature and humidity control.

Do not install resilient flooring products until the work area can be temperature controlled. Minimum installation temperature is 65° F with a maximum installation temperature of 85° F, and the humidity below 65% for 48 hours or prior to, during, and after pre-installation testing. **DO NOT INSTALL FLOORING IF MOISTURE TEST RESULTS EXCEED RECOMMENDED LIMITS.**

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**Building Owners/Caretakers** should become aware of the flooring manufacturer's guidelines for climate control settings (temperature and humidity). These conditions must be monitored and kept constant to ensure the overall performance and long-term success of the installation.

## TEMPERATURE – RADIANT HEAT

- Radiant heated substrates must never exceed 85° F surface temperature.

Several days prior to installing resilient products over newly constructed radiant heated systems, make sure the radiant system has been on and operating at maximum temperature to reduce residual moisture within the concrete.

- Three days prior to installation, lower the temperature to 65° F. 24 hours after installation gradually increase the temperature in increments of 5° F.
- After continuous operation of the radiant system, ensure the surface of the floor does not exceed 85° F.

## MATERIAL AND HANDLING

- All material should be from the same run/lot number, which is found on each carton label. If material from more than one run is to be used, the job should be laid out so that different run numbers are not installed side by side.
- Flooring material and adhesive must be acclimated to the installation area for a minimum of 48 hours prior to installation.
- Store cartons of tile or plank products flat and squarely on top of one another. Preferably, locate material in the "center" of the installation area (i.e. away from vents, direct sunlight, etc.)
- Material should always be visually inspected prior to installation. Any material with visible defects should not be installed. Flooring installed with visible defects will not be considered a legitimate claim.

## DALTILE PROSERIES ADHESIVE

- Use of an approved adhesive such as DalTile ProSeries Adhesive is required for warranty to apply.

## UNIVERSAL PRESSURE-SENSITIVE ADHESIVE PROSERIES

- Universal Pressure-Sensitive Adhesive is a very aggressive, pressure-sensitive adhesive (acrylic latex) that is designed for the installation of a wide variety of flooring types. It has been specifically formulated to provide extended working time, develop strength quickly and perform well under rolling loads with good moisture resistance. ProSeries Universal Pressure-Sensitive Adhesive is approved for use with luxury vinyl tile in apartments, condominiums, homes and commercial areas such as airports, malls, office buildings, restaurants, hospitals, schools, universities and government buildings.

**Testing Requirements:** Slabs up to 95% RH and 11 pH or less.

## ADHESIVE APPLICATION

**Note:** Please follow DalTile ProSeries Adhesive guidelines for complete application instructions found at [daltil.com/LVF](http://daltil.com/LVF). Read all installation instructions thoroughly before installation. Refer to technical and safety data sheets for complete information regarding uses, application, limitations and safety.

1. Tools & Materials Needed: 100-lb. 3-section roller (roll both directions), chalk line, carpenter square, utility knife, tape measure, in-situ RH moisture meter, pH testing kit.
2. For full spread application, use ProSeries Universal Adhesives with a 1/16" x 1/32" x 1/32" U-Notch trowel for dry back LVP and 1/16" x 1/16" x 1/16" U-notch for Attached Pad LVP. Follow the directions on the adhesive label.

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3. Spread the adhesive evenly over the subfloor, keeping the trowel at a 45-degree angle to the subfloor.
4. On nonporous substrates, allow the adhesive to remain open until trowel valleys are clear. On porous substrates, flooring can be installed into wet-tacky adhesive. Protect the open adhesive from dust and debris, which will inhibit proper bond and decrease tack.
5. Install all planks/tiles with directional arrows pointing in the same direction. Install the field area first.
6. Once the flooring is installed, immediately roll it using a 100-lb. (45,4-kg) roller.
7. Clean adhesive smudges from the flooring surface and tools with water while the adhesive is fresh/wet. Use mineral spirits when the adhesive is dry.

**WARNING:** For installation over old resilient floor coverings or when considering removing existing resilient floors, please be advised that these products may possibly contain asbestos fibers or crystalline silica. Please follow all recommended Resilient Floor Covering Institute (RFCI) work practices at [www.rfci.com](http://www.rfci.com).

**Cutting:** Tiles and planks may be cut with a small tile cutter or scored with a utility knife and snapped.

## GLUE DOWN INSTALLATION

When using planks/tiles from two or more cartons, check to be sure all pattern and lot numbers are the same to ensure proper color match. On larger installations, open several cartons and mix them as they are installed to help blend any slight shade differences from one carton to the next.

Products with directional arrows on the back should be installed with the arrows all pointing in the same direction unless you are installing custom layouts.

Before installing the material, plan the layout so plank/tile joints fall at least 6 inches (15 cm) away from subfloor and underlayment joints. Find the center point in the room. Divide the room into equal quadrants by marking two perpendicular lines on the subfloor intersecting at the center point. Depending on your layout, you may also start your row along a wall. Since walls are not always straight, snap a chalk line. Do not install over expansion joints.

**Important:** When installing flooring with Attached Pad, no additional underlayment should be used.

Approved additional approved underpayments may be used with dry back LVP when necessary. All installation must follow underlayment installation instructions and limitations.

**Daltile** continuously makes technological advancements that improve product performance or installation techniques and methods. All instructions and recommendations are based on the most recent information available and should be followed for an ideal installation. Contact Daltile Technical Services at 800-933-TILE with questions about product installation or visit our website at [daltile.com](http://daltile.com) to ensure you have the most up to date version of our installation instructions.

## IMMEDIATELY AFTER INSTALLATION

Restrict to light traffic for the first 24 hours. Maintain climate settings (temperature and humidity) within installed area; do not expose to severe increases or decreases in climate. Install the base moldings. Seal all areas that may be exposed to surface spills (i.e. tubs, toilets, and showers) with silicone caulking.

## TRAFFIC

Restrict foot traffic for 12 hours after installation.

- Restrict heavy traffic, rolling loads, or furniture placement for 24 hours after installation. Additional time may be necessary if the installation is over a non-porous substrate.

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- Return appliances and furniture to the room by rolling or sliding them over strips of hardboard.
- Allow at least five days following the installation before conducting wet cleaning procedures or initial maintenance.

## CARE AND MAINTENANCE

Your DalTile LVF flooring will provide years of carefree use. You will find that it is not only beautiful, but durable. It is also much easier to maintain than most other flooring products, thanks to its tough protective finish and moisture resistance. It only takes a few simple care and maintenance steps to keep your DalTile floor looking beautiful for years to come.

## PREVENTATIVE MAINTENANCE

Prevent indentations and scratches with the use of non-staining floor protectors or felt pads on the legs of chairs, appliances and all heavy furniture. Floor protectors should be at least one inch in diameter.

- Do not flood floor or subject to standing water.
- Protect your floor from tracked-in dirt by using mats at all outside entrances. Mats should have a non-rubberized backing and be marked as non-staining.
- Avoid tracking in tar or asphalt from driveways.
- Avoid high heeled shoes on your floor, as they can cause permanent indentations.
- Protect your floors against burns. Burns from cigarettes, matches or other extremely hot items can cause permanent damage.
- Avoid exposure to direct sunlight for prolonged periods, as this can cause discoloration.

- Temperature within the room must be maintained between 0°F - 140°F (-18°C - 60°C). Extreme ranges between 0°F - 45°F (7°C - 46°C) and 115°F - 140°F (46°C - 60°C) apply to unoccupied environments only.

## CLEANING & MAINTENANCE

- Sweep the floor regularly with a soft bristle broom to remove loose dirt.
- Wash the floor with non-abrasive, neutral pH floor cleaner. • For every day maintenance, a mop moistened with warm water will suffice.
- Spills should be cleaned up immediately.

## DO NOT USE THE FOLLOWING ON YOUR DALTILE LVF FLOOR:

- Soap based detergents
- Abrasive or mop-and-shine products
- Floor wax
- Ammonia or bleaches; for spot treatment or stain removal, use a diluted 10:1 solution of water to liquid bleach
- Vacuum cleaner with a rotating beater bar

**Always read the cautionary information on all cleaners prior to use.**

**IMPORTANT:** Never push, pull or drag furniture, appliances or other items across the floor. Always place hardboards over flooring or lift and carry furniture and other heavy items.

## TREATING STAINS, SPILLS & SCUFFS

Follow the remedies in order. Unless instructed otherwise, use a clean, white cloth or towel with products recommended for DalTile LVF flooring.



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Always rinse the affected area with clean water after treatment.

**STAIN OR SPILLS OF THIS CATEGORY:** Acids, alkalis, blood, ketchup, mustard, food, fruit, fruit juices, candy, cleaners, strong soaps, dye, dye markings, urine and feces, grass, iodine, mercurochrome and rust

## Remedy

- If substance is dry, gently peel it from the floor. Avoid sharp instruments that could scratch floor.
- Scrub area with non-abrasive cleaner.
- Rub lightly with odorless mineral spirits or paint thinner. NOTE: Do not use acetone or nail polish remover.

## SUBSTANCES THAT WON'T WIPE UP:

Adhesives, chewing gum, oil, grease, candle wax and tar Remedy:

- First, remove as much solid material as possible.
- Carefully remove excess with a spoon or fingernail. Avoid sharp instruments that could scratch floor.
- Scrub area with non-abrasive cleaner.
- Rub lightly with odorless mineral spirits, isopropyl alcohol or lighter fluid.

## SCUFFS AND SMUDGES:

Rubber heel marks, shoe polish Remedy:

- Rub the scuff with fingertip. The friction will remove rubber.
- Scrub area with non-abrasive cleaner.
- Rub lightly with isopropyl alcohol or lighter fluid.

**CAUTION:** Isopropyl alcohol, lighter fluid, odorless

mineral spirits and paint thinner are flammable solvents. Carefully read and follow cautionary information on respective labels. Keep traffic off treated area for 30 minutes.

## FILING A CLAIM

If you find a defect or other matter covered by any of the limited warranties described previously, promptly notify the retailer who sold you the floor covering material. The retailer will review, and if necessary file a claim with DalTile, and help answer any questions you may have.

After a warranty claim is properly filed, DalTile's service coordinator will designate a representative to evaluate the warranty claim. This warranty is conditioned upon your reasonable cooperation with DalTile and its service coordinator and representative in the evaluation of your warranty claim and the implementation of any remedy.

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