

Commercial Luxury Vinyl Tile Installation System

Product	Gauge	Size	Adhesive
NATURAL CREATIONS	0.125" (3.2 mm)	Various Sizes and Shapes	S-288, S-543*, or S-240**

* It is necessary to smooth out the adhesive trowel ridges using a medium nap paint roller.

** It is necessary to smooth out the adhesive trowel ridges using a 3/16" (4.8 mm) nap paint roller.

The purpose of this is to create a uniform application of the adhesive.

Note: When installing Natural Creations in areas subject to direct sunlight, topical moisture, temperature fluctuations, Armstrong S-240 Epoxy Adhesive must be used.

Installation:

Location: All grade levels

Fitting: End Joints should be staggered a minimum of 6" (15 cm) apart

Suitable Substrates:

All substrates listed below must be properly prepared and meet the requirements discussed in Chapter III, Subfloors and Underlayments. There may be certain exceptions and special conditions for these substrates to be suitable for the Luxury Solid Vinyl Flooring Installation System.

- Concrete (all grade levels)
- Approved Suspended Wood
- Polymeric Poured (seamless) Floors
- Steel, Stainless Steel, Aluminum
- Ceramic Tile, Terrazzo, Marble
- Existing Resilient Sheet Flooring
- Existing Vinyl Composition Tile (VCT) On-grade or Suspended Only

Job Conditions/Preparation:

- Resilient flooring should only be installed in temperature-controlled environments. It is necessary to maintain a constant temperature before, during, and after the installation. Therefore, the permanent or temporary HVAC system must be in operation before the installation of resilient flooring. Portable heaters are not recommended as they may not heat the room and subfloor sufficiently. Kerosene heaters should never be used.
- Substrates must be dry, clean, smooth and free from paint, varnish, wax, oils, solvents and other foreign matter.
- In renovation or remodel work, remove any existing adhesive residue* so that 100% of the overall area of the original substrate is exposed.
- Allow all flooring materials and adhesives to condition to the room temperature for a minimum of 48 hours before starting the installation.

* Some previously manufactured asphaltic "cutback" adhesives contained asbestos (see warning statement on page x). For removal instructions, refer to the Resilient Floor Covering Institute's publication Recommended Work Practices for Removal of Resilient Floor Coverings.

- The area to receive the resilient flooring should be maintained at a minimum of 65°F (18°C) and a maximum of 100°F (38°C) for 48 hours before, during, and for 48 hours after completion. **When using S-240 Epoxy Adhesive the maximum room temperature should not exceed 85°F (29°C).**
- During the service life of the floor, the temperature should never rise above 100°F (38°C) nor fall below 55°F (13°C). The performance of the flooring material and adhesives can be adversely affected outside this temperature range.
- Conduct calcium chloride tests or percent relative humidity tests. Bond tests should also be conducted for compatibility with the substrate. Please refer to Chapter III, Subfloors and Underlayments.
- Radiant-heated substrates must not exceed a maximum surface temperature of 85°F (29°C).
- Concrete floors should be tested for alkalinity. The allowable readings for the installation of Armstrong flooring are 5 to 9 on the pH scale.
- Use S-240 Epoxy Adhesive in areas where the product will be subjected to direct sunlight, topical moisture, concentrated static and dynamic loads or temperature fluctuations.

Fitting:

Before installing the material, plan the layout so tile joints fall at least 6" (15.2 cm) away from subfloor/underlayment joints. Do not install over expansion joints.

The end joints should be staggered a minimum of 6" (15.2 cm) apart.

Recommended fitting procedures include straight scribing, pattern scribing, or cutting with a tile cutter.

Abutting Different Gauges of Resilient Flooring: When installing thinner gauge material next to thicker gauge material, install thicker material first and then butt a 12" (30.5 cm) wide piece of S-153 Scribing Felt against the thicker material. Adhere the Scribing Felt to the subfloor with S-235 Adhesive. Use the fine notching of the S-891 Trowel over nonporous substrates such as existing resilient flooring, and use the regular notching of the S-891 Trowel over porous subfloors such as wood and concrete. Use S-184 Fast-Setting Cement-Based Patch and Skim Coat or S-194 Patch, Underlayment and Embossing Leveler to feather the edge of the S-153 Scribing Felt to the level of the substrate. Allow the patch to dry completely before installing the flooring. Scribing Felt is not recommended to be used under the entire installation.

Adhesive Open Times and Trowel Notchings

Adhesive	Set-in-Wet for POROUS Subfloors	Dry-to-Touch for NONPOROUS Subfloors
S-288 or S-543*	<p>Open Time: Approximately 10 minutes</p> <p>Fine Notch: 1/32" (0.8 mm) deep, 1/16" (1.6 mm) wide, 5/64" (2 mm) apart</p>	<p>Open Time: 30 minutes or more</p> <p>Fine Notch: 1/32" (0.8 mm) deep, 1/16" (1.6 mm) wide, 5/64" (2 mm) apart</p>
S-240**	<p>Open Time: Approximately 10-20 minutes</p> <p>Fine Notch: 1/32" (0.8 mm) deep, 1/16" (1.6 mm) wide, 5/64" (2 mm) apart</p>	<p>Open Time: Approximately 10-20 minutes</p> <p>Fine Notch: 1/32" (0.8 mm) deep, 1/16" (1.6 mm) wide, 5/64" (2 mm) apart</p>

* It is necessary to smooth out the adhesive trowel ridges using a medium nap paint roller.

** It is necessary to smooth out the adhesive trowel ridges using a 3/16" (4.8 mm) nap paint roller. The purpose of this is to create a uniform application of the adhesive.

NOTE: Allowing the proper open time will help to minimize tile shifting. The amount of open time will vary according to job conditions, temperature, humidity, air flow, and type of substrate.

Procedure:

See Adhesive Open Times and Trowel Notchings above.

• S-288 or S-543 – Porous Substrates:

Move the chalk lines to the corner or end of the room farthest from the doorway. These lines should be 2' or 3' from the wall depending on your reach (Fig. 4).

1. Apply the S-288 or S-543 Adhesive in 2' or 3' bands (Fig. 5), being careful not to cover the chalk lines. Do not apply more adhesive than you can cover within 20 minutes. Allowing a 10-minute open time and fitting the border tile tightly will reduce tile shifting and adhesive oozing. **DO NOT** allow the adhesive to dry completely.

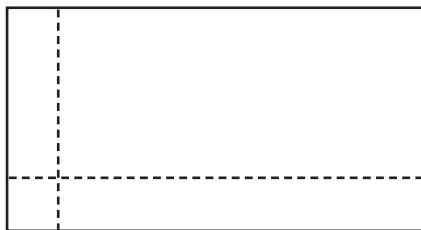


Fig. 4

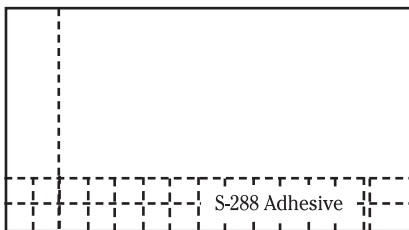


Fig. 5

2. Install the tile along the chalk lines. Wood plank visuals must be installed with the arrows pointing in the same direction. Square and rectangle tiles may be installed with arrows pointing in the same direction, quarter turned, or randomly installed for customized visuals. Install the field area first and then fit in the border tile.

3. Immediately remove any adhesive from the surface of the flooring using a clean, white cloth dampened with a neutral detergent and water. Roll the tile in both directions within 30 minutes after installation using a 100-lb. roller.
4. Do not work on newly installed tile except to roll tile. If unavoidable, use a kneeling board.
5. Repeat Steps 1 through 4 until the installation has been completed.
6. Do not allow traffic for 24 hours after installation. Newly installed flooring should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.

- **S-288 or S-543 – Nonporous Substrates:**

Line off entire area to be installed.

1. Apply the S-288 or S-543 Adhesive over the area, being careful not to cover the chalk lines.
2. You may prefer to install one quarter of the room at a time by starting in the center of the room (Refer to Chapter VI, Layout and Fitting, Section B for layout instructions).
3. Allow the adhesive to set until dry-to-touch (except S-240), following the recommended open time. To test, press your thumb lightly on the surface of the adhesive in several places. If the surface feels slightly tacky as your thumb is drawn away and does not stick to your thumb, the adhesive is ready for installation.
4. Install the tile along the chalk lines. Wood plank visuals must be installed with the arrows pointing in the same direction. Square and rectangle tiles may be installed with arrows pointing in the same direction, quarter turned or randomly installed for customized visuals. Install the field area first and then fit in the border tile.
5. Immediately remove any adhesive from the surface of the flooring using a clean, white cloth dampened with a neutral detergent and water. Roll the tile in both directions within 30 minutes after installation, using a 100-lb. roller.
6. Do not allow traffic for 24 hours after installation. Tile should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.

- **LVT installed over an existing single layer of resilient flooring:**

NOTE: The responsibility for determining if the old resilient flooring is well-bonded to the subfloor and will not show through the final installation rests with the contractor and the installer.

1. Confirm that the existing flooring is completely and firmly bonded.
2. Existing flooring must have been properly installed over underlayments and subfloors recommended as suitable for resilient flooring.
3. They may not show evidence of moisture or alkaline.

4. Waxes, polishes and other finishes must be removed with a commercially available stripper. We would recommend using a 3M Black Pad for stripping purposes only. Do not allow the stripping solution to dry at any time. Thoroughly rinse the existing flooring with clean water after removing the stripping solution. Do not flood with water or stripping solution at any time.
5. Indentations or damaged areas should be replaced or repaired.
6. Allow all flooring materials and adhesives to condition to the room temperature for a minimum of 48 hours before starting the installation.
7. Line off the entire area to be installed.
8. Apply the S-288 or S-543 Adhesive over the area, being careful not to cover the chalk lines. You may prefer to spread and install one quarter of the room at a time.
9. Allow the adhesive to set until dry-to-touch (except S-240), allowing the recommended open time. To test, press your thumb lightly on the surface of the adhesive in several places. If the adhesive feels slightly tacky and does not stick to your thumb, the adhesive is ready for the installation.
10. Install the tile along the chalk lines. Wood plank visuals must be installed with the arrows pointing in the same direction. Square and rectangle tiles may be installed with arrows pointing in the same direction, quarter turned, or randomly installed for customized visuals. Install the field area first and then fit in the border tile.
11. Immediately remove any adhesive from the surface of the flooring using a clean, white cloth dampened with a neutral detergent and water. Roll the tile in both directions within 30 minutes after installation using a 100-lb. roller.
12. Do not allow traffic for 24 hours after installation. Tile should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.

NOTE: Installations over existing resilient flooring may be more susceptible to indentations.

• **Custom LVT Installations:**

Custom LVT installations will use the same layout procedures as standard LVT installations; however, they may require some adjustments once the initial layout is completed. Additional lines may be needed depending on the design of the floor. Once the final layout is determined, the starting point may not necessarily be in the corner or the center of the room. The starting point may be adjusted so that the installation of the design is more easily completed. An example would be to install an inset first and then install the field around the inset, which would insure proper placement of the inset. It is important that when using this procedure, enough time is allowed for the adhesive to set, whereby any pressure will not cause slipping or shifting of the tile.

• **Concentrated Static and Dynamic Loads with NATURAL CREATIONS
Luxury Solid Vinyl Flooring using S-240 Epoxy Adhesive:**

Product Performance under Concentrated Static and Dynamic Loads

Armstrong Luxury Solid Vinyl Flooring is used in many applications where it is subjected to heavy static and dynamic loads. Some furnishings, appliances, and equipment in certain environments may be equipped with wheels, casters, rests, or other floor contact devices, which concentrate rather than distribute the load over the surface of the flooring. Hospital patient beds and operating room tables are typical examples. With respect to portable furnishings and equipment, while concentrated wheel/caster loadings provide for easier mobility, they can be particularly damaging to resilient flooring installations. Armstrong recommends that any furnishings or equipment be fitted with floor contact devices, which avoid concentrating weight loads.

Our experience has shown that the use of hard-setting reactive adhesives, like our S-240 Epoxy Adhesive, offer advantages and may help protect against damage (such as delamination) when used to install flooring under such furnishings and equipment. Depending on the application, the epoxy may only be necessary in limited areas of any particular installation such as an area immediately beneath and adjacent to the primary areas of contact with the flooring. In the case of certain heavy hospital beds, the application of the epoxy adhesive in an area that extends a minimum of 1' beyond the wheel base or footprint of the four casters [approximately 4' x 8' (1.2 m x 2.4 m)] may be sufficient.

Move the chalk lines to the corner or end of the room farthest from the doorway. These lines should be 2' or 3' from the wall, depending on your reach (Fig. 4).

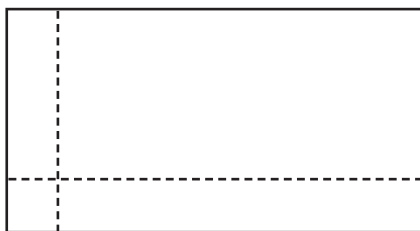


Fig. 4

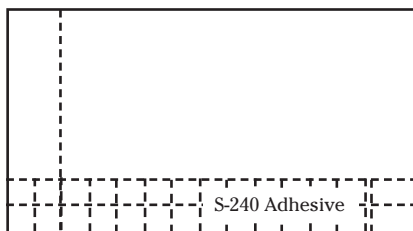


Fig. 5

1. Mix the entire contents of Part A and Part B together with a stirring motion while at the same time lifting from the bottom. Mix thoroughly for 3 to 5 minutes to a uniform color. **Do not over mix.** Never mix S-240 Epoxy Adhesive on the subfloor surface.
2. **Immediately pour the entire unit of mixed adhesive onto the substrate. Do not leave mixed adhesive in cans as it shortens pot life and working time, and may generate excessive heat.** Maximum pot life of S-240 Epoxy Adhesive is approximately 15 minutes, depending on temperature and humidity.

3. Apply the S-240 Epoxy Adhesive in 2' or 3' bands (Fig. 5), being careful not to cover the chalk lines. Do not apply more adhesive than you can cover within 20 minutes. Immediately back roll the S-240 Epoxy Adhesive with the supplied paint roller. Allowing a 10-minute open time and fitting the border tile tightly will reduce tile shifting and adhesive oozing. **DO NOT** allow the adhesive to dry completely.
4. When using S-240 Epoxy Adhesive in conjunction with the recommended Armstrong Full Spread Adhesive, plan out the open times so that the flooring may be placed into both adhesives at the same time. Working time of S-240 Epoxy Adhesive is 60 minutes.
5. After allowing the proper open time, carefully place the tile flooring into the S-240 Epoxy Adhesive to ensure that air is not trapped beneath the flooring.
6. Install the tile along the chalk lines. Wood plank visuals must be installed with the arrows pointing in the same direction. Square and rectangle tiles may be installed with arrows pointing in the same direction, quarter turned or randomly installed for customized visuals. Install the field area first and then fit in the border tile.
7. Clean any adhesive residue from the surface of the flooring using a clean, white cloth dampened with a neutral detergent and water. **Dried S-240 Epoxy Adhesive cannot be removed.**
8. Within 30 minutes of the S-240 Epoxy Adhesive application, roll the material using a 100-lb. roller. Starting at the center and working toward the edges, roll the material in the direction of the trowel notches and then again in the opposite direction. Do not work on newly adhered flooring except to roll. If unavoidable, use a kneeling board.
9. Repeat rolling procedure at 1 hour and 2 hours after the initial application of S-240 Epoxy Adhesive.
10. Do not allow traffic on the flooring for 24 hours after installation.
11. Newly installed flooring should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.