

Installation Guide for Resilient Flooring

Vinyl Composition Tile

Products	Gauge	Size	Adhesive / Full Spread	Adhesive / Tile-On
Chromaspin Companion Square Crown Texture Feature Tile/Strips Imperial Texture Stonetex	0.125 in. (3.18 mm)	Feature Strips: 1 in. (25 mm), 2 in. (50 mm) 6 in. x 24 in. (152 mmx 610 mm)	S-515, S-525, S-700, or S-750	S-515, S-525, S-750 or Flip
Raffia Stream		All others 12 in. x 12 in. (305 mm x 305 mm)		
Safety Zone		12 in. x 24 in. (305 mm x 610 mm)	S-515, S-525, S-700, S-750, Flip or S-240	

Installation:

Location: All grade levels

Suitable Substrates:

All substrates listed below must be properly prepared and meet the requirements discussed in Chapter 3, Subfloors and Underlayments. There may be certain exceptions and special conditions for these substrates to be suitable for the Vinyl Composition Tile Installation System.

Full Spread:

- Concrete
- Ceramic Tile, Terrazzo, Marble
- Steel, stainless steel, aluminum, lead, copper, brass, bronze
- Polymeric poured (seamless) floors
- Approved Suspended Wood

Tile-On:

- Existing Resilient Sheet Floors
- Vinyl Composition, Vinyl Asbestos, Asphalt, Rubber and Vinyl Tile (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.
- The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the substrate or cause a discoloration of the flooring from below. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate, they must be mechanically removed prior to the installation of the flooring material.

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- When using S-240, remove any existing adhesive residue* so that 80% of the overall area of the original substrate is exposed. If these requirements are not followed, curled and/or loose tile could result. For Tile-On, remove wax or other finishes with a commercially available liquid wax stripper. Replace or repair indented or otherwise damaged areas.
- Allow all flooring materials and adhesives to condition to the room temperature for a minimum of 48 hours before starting the installation.
- 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.
- For concrete substrates, conduct moisture testing (moisture vapor emission rate [MVER]) and/or percent relative humidity (in-situ probe). Bond tests must also be conducted for compatibility with the substrate. Please refer to Chapter 3, 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.

Precautions:

- S-240 Epoxy Adhesive is recommended for Safety Zone in areas that may be exposed to frequent surface moisture and/or cooler temperatures.
- S-240 Epoxy Adhesive may also be used to install the first 3 to 5 rows of Safety Zone when used in areas that will be affected by surface moisture and/or cooler temperatures.
- Tiles are to be heated from the back only, never the face.
- Do not wash tile for at least 4 days after installation. This will allow the tile to become well seated in the adhesive and prevent excess moisture and cleaning agents from interfering with the adhesive bond.
- Products installed using the Tile-On System may have less resistance to indentation. We strongly recommend the use of Armstrong Floor Protectors.

Fitting:

- See Chapter 6, Layout and Fitting for room layout.
- Before installing the material, plan the layout so tile joints fall at least 6 in. (152 mm) away from subfloor/underlayment joints. Do not install over expansion joints.
- When installing over an existing resilient floor, plan the layout so the new joints are a minimum of 6 in. (152 mm) away from the original seams. When installing over tile floors, joints should fall in the center of the tile.
- When installing 12 in. x 12 in. (305 mm x 305 cm) tiles, avoid having border pieces less than 6 in. (152 mm) wide.

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Abutting Different Gauges of Resilient Flooring:

When installing thinner gauge material next to thicker gauge materials, install thicker material first and then butt a 12 in. (305 mm) wide piece of 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 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 Notchings

Adhesive	Open Time	Working Time
S-515	Approximately 30 minutes or more	24 hours
S-525	Approximately 20 minutes or more	24 hours
S-700	Approximately 30 minutes or more	18 hours
S-750	Approximately 30 minutes or more	6 hours
S-240	Minimum 20 minutes	1 hour
Flip Spray	Until dry-to-touch: approximately 30 minutes or more	4 hours

NOTE: All adhesives except S-240 should be dry-to-touch before installing tile. The amount of open time will vary according to job conditions, temperature, humidity, air flow and type of substrate. All adhesives are applied with fine notching [1/32 in. (0.8 mm) deep, 1/16 in. (1.6 mm) wide, 5/64 in. (2 mm) apart].

Procedure:

- See Chapter 5, Adhesives, Trowel Notchings, Seam Treatments and Grout.
- When using tile 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.
- Tile products with directional arrows on the back should be installed with the arrows all pointing in the same direction.

Tile Installed Using S-515, S-525, S-700 or S-750:

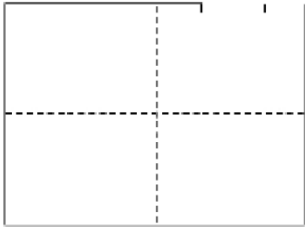
1. Line off entire area to be installed.
2. Apply the adhesive over the area not covering the chalk lines and using the fine notching of the S-891 Trowel. You may prefer to spread and install one quarter of the room at a time.
3. Allow the adhesive to set until dry-to-touch (except S-240) following the 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 the installation.
4. Install the tile along the chalk lines, laying the field area first and then fitting in the border tile.
5. Roll Vinyl Composition Tile with Diamond 10 Technology Coating, Residential Tile and Safety Zone in both directions within the adhesive working time using a 100-lb. roller.
6. Clean adhesive from the surface of the tile using a clean white cloth dampened with a neutral detergent and water.
7. Tile should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.

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For installation with Flip Spray Adhesive see the Flip Installation Method.

Safety Zone in Specialty Areas:

1. Line off entire area to be installed like figure below.



2. Move chalk lines to one corner or end of the area farthest from the doorway. These lines should be 2 ft. or 3 ft. from the wall depending on your reach – like figure below.



3. 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– 5 minutes to a uniform color. Do not over mix. Never mix S-240 Adhesive on the subfloor surface.
4. Immediately pour the entire unit of mixed adhesive onto the subfloor. Do not leave mixed adhesive in cans because it shortens pot life and working time and may generate excessive heat. Maximum pot life of the S-240 Adhesive is approximately 10 minutes depending on temperature and atmospheric conditions.
5. Apply S-240 Adhesive for only two or three rows of tile. Working time of S-240 is approximately 1 hour.
6. Tile may be placed into the adhesive immediately but allowing a 15–20-minute open time and fitting border tile tightly will reduce tile shifting and adhesive oozing. Do not allow the adhesive to dry completely.
7. Install tile with the arrows on the back of the tile pointing in the same direction.
8. Roll tile in both directions within 1 hour of spreading S-240 Adhesive using a 100-lb. roller. Re-roll 1 hour later in both directions. Remove adhesive residue from the surface of all the tile immediately using a clean, white cloth dampened with neutral detergent and water. Dried S-240 Adhesive cannot be removed.
9. Do not work on newly adhered tile except to roll tile. Use a kneeling board if necessary.
10. Repeat steps 4 through 9 until entire area is completed.
11. Do not allow traffic on tile for 24 hours after installation.
12. Flooring should not be exposed to rolling load traffic for at least 72 hours after installation to allow setting and drying of the adhesive.

For installation with Flip Spray Adhesive see the Flip Installation Method.