Commercial Inlaid Flooring
Installation System

Product	Full-Spread/S-599 and Heat Welded Seams	Full-Spread/S-599 with S-761 at Seams	Concentrated Static & Dynamic Load Areas with S-240 Epoxy
POSSIBILITIES Petit Point	X	X	X
Connection CORLON	X	X	X

Suitable Substrates:

All substrates listed below must be properly prepared and meet the requirements discussed in Section IV, Subfloors and Underlayments. There may be other exceptions and special conditions for these substrates to be suitable for the Commercial Inlaid Installation System.

- Concrete (on all grade levels)
- Approved Suspended Wood
- Existing Resilient Floors
- Steel, Stainless Steel, Aluminum
- Ceramic Tile, Terrazzo, Marble
- Polymeric Poured (seamless) Floors

Job Conditions/Preparation:

- 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.
- The area to receive 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. **Note: 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 fall below 55°F (13°C). The performance of the flooring material and adhesives can be adversely affected below this minimum temperature.
- Conduct calcium chloride tests. Bond tests should also be conducted for compatibility with the substrate. Please refer to Section IV, 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.

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

Fitting:

Unroll material and lay flat to allow the roll curl to relax before fitting. Material must be adhered within 4 hours of cutting and fitting. Before installing the material, plan the layout so seams fall at least 6″ away from subfloor/underlayment joints. Do not install over expansion joints. When installing over an existing resilient floor, plan the layout so the new seams do not coincide with seams or joints of the existing installation. Recommended fitting procedures include freehand knifing, straight scribing or pattern scribing.

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″-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 Armstrong S-891 Trowel over nonporous substrates such as existing resilient flooring, and use the regular notching of the Armstrong S-891 Trowel over porous subfloors such as wood and concrete. Use Armstrong 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 Time and Trowel Notchings

Product and Adhesive	Open Time POROUS Subfloors	Open Time NONPOROUS Subfloors
POSSIBILITIES Petit Point Connection CORLON Sheet with S-599	**Set in Wet:** Approximately 10–20 minutes (paste-like consistency) **Dry to Touch:** Approximately 30 minutes (no transfer of adhesive to finger) **Fine Notch:** 1/32″ deep, 1/16″ wide, 5/64″ apart	**Dry to Touch:** Approximately 30 minutes (no transfer of adhesive to finger) **Fine Notch:** 1/32″ deep, 1/16″ wide, 5/64″ apart
POSSIBILITIES Petit Point Connection CORLON Sheet with S-240 with adhesive ridges back rolled with 3/16″ nap paint roller	**Set in Wet:** Approximately 10–20 minutes (do not allow to dry to the touch) **Fine Notch:** 1/32″ deep, 1/16″ wide, 5/64″ apart	**Set in Wet:** Approximately 10–20 minutes (do not allow to dry to the touch) **Fine Notch:** 1/32″ deep, 1/16″ wide, 5/64″ apart
POSSIBILITIES Petit Point Connection CORLON Sheet with S-580 (Flash cove areas only)	**Dry to Touch:** Approximately 30 minutes (no transfer of adhesive to finger) **Trowel Notching:** Brush-on	**Dry to Touch:** Approximately 30 minutes (no transfer of adhesive to finger) **Trowel Notching:** Brush-on

■ Full Spread with S-599 and HEAT WELDED SEAMS:

Apply adhesive with fine notching of the S-891 Trowel. When installing over nonporous substrates such as existing resilient flooring, allow enough open time for adhesive to dry until tacky with no transfer to the finger (dry-to-touch) before placing the material into it. When installing over porous subfloors such as concrete and wood, allow the adhesive to thicken to a paste-like consistency (set-in-wet) before placing the material into the adhesive. The adhesive should show good transfer to the finger before placement of the floor. Recess scribe seams. Use S-580 Adhesive in flash cove areas.

1. Before installing the material, plan the layout so seams fall at least 6″ away from underlayment joints, seams in existing resilient flooring and/or saw cuts in concrete. Do not install over expansion joints.
2. Cut pieces from the roll to the specified length, allowing enough material at each end to flash 1 1/2″ up the wall for fitting.
3. Recommended fitting procedures include free hand knifing, pattern scribing and straight scribing methods.
4. Fit piece #1 and position in the room.
5. Prepare the seam edge by trimming the factory seam edge using the Armstrong S-33 Edge Trimmer.
6. Draw a pencil line on the subfloor along the length of the trimmed factory edge.
7. Carefully lap the material back halfway to expose the subfloor.
8. Starting at the lap point and working toward the end wall, apply the Armstrong S-599 Adhesive up to the pencil line using the fine notching of the Armstrong S-891 trowel.
9. Allow the recommended open time before placing the material into the adhesive. Use extreme care when positioning the flooring over Armstrong S-599 Adhesive, which has a firm grab and does not allow repositioning.
10. Starting at the center and working toward the edges, roll the material in two directions using a 100-lb. roller staying 2″ away from the seam. Clean adhesive residue from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water.
11. Repeat steps #7 through #10.
12. Cut piece #2 allowing enough material at each end to flash 1 1/2″ up the wall for fitting.
13. **Install pieces as recommended, TM edge to TM edge or non-TM edge to non-TM edge.**
14. Overlap piece #2 onto piece #1 approximately 1/2″. Prepare the seam edge on the opposite side of the sheet by trimming the factory seam edge using the Armstrong S-33 Edge Trimmer.
15. Draw a pencil line on the subfloor along the length of the trimmed factory edge.
16. Carefully lap the material back halfway to expose the subfloor.

17. Starting at the lap point and working toward the end wall, apply the Armstrong S-599 Adhesive up to the pencil line using the fine notching of the Armstrong S-891 Trowel.
18. Allow the recommended open time before placing the material into the adhesive. Use extreme care when positioning the flooring over Armstrong S-599 Adhesive, which has a firm grab and does not allow repositioning.
19. Starting at the center and working toward the edges, roll the material in two directions using a 100-lb. roller staying 2″ away from the seam. Clean adhesive residue from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water.
20. Repeat steps #16 through #19 for the remaining half of piece #2.
21. Recess scribe the seam using an Armstrong S-83 Recess Scriber. When heat welding, seams may be recess scribed slightly open (1/64″) to make guiding the router easier, otherwise cut seams net.
22. Before cutting the seam, protect the floor by inserting a piece of scrap material beneath the scribe mark. With the scrap on the same side as the cutting hand, cut the seam holding a straight blade knife straight up and down.
23. Roll the seam into place using an Armstrong S-77 Hand Roller and roll again with a 100-lb. roller.
24. Follow the same procedures for the remaining pieces, completing one piece at a time until the job is finished.
25. Heat weld seams as recommended. Refer to Section VIII, Seams, Heat Welding.
26. Do not allow traffic on the flooring for 24 hours after installation.
27. 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.

■ **Full-Spread with Armstrong S-599 and Armstrong S-761 Seam Adhesive:**

1. Before installing, plan the layout so seams fall at least 6″ away from subfloor/underlayment joint and seams in existing resilient flooring. Do not install over expansion joints.
2. Cut pieces to the proper length, allowing enough material at each end to flash 1 1/2″ up the walls for fitting.
3. Fit piece #1 by pattern scribing or straight scribing methods.
4. Prepare the seam edge by trimming the factory seam edge using the S-33 Edge Trimmer.
5. Draw a pencil line on the subfloor along the trimmed factory edge.
6. Carefully lap the material back halfway to expose the subfloor.
7. Starting at the lap point and working toward the end wall, apply the Armstrong S-599 Adhesive up to the pencil line using the standard notching of the Armstrong S-891 Trowel.

8. Allow the recommended open time before placing the material into the adhesive.
9. Starting at the center and working toward the edges, roll the material in two directions using a 100-lb. roller. Clean any excess adhesive residue from the surface of the flooring using a clean white cloth dampened with water.
10. Repeat steps # 6 through #9 for the remaining half of piece #1.
11. Cut piece # 2 to the proper length.
12. **Install pieces as recommended, TM edge to TM edge or non-TM edge to non-TM edge**.
13. Overlap piece #2 to piece #1 approximately 1/2″ to 1″. Prepare the seam edge on the opposite side of the sheet by trimming the factory seam edge using the Armstrong S-33 Edge Trimmer.
14. Repeat steps #5 through #9 for the first half of piece #2.
15. Starting at the center and working toward the edges, roll the material in two directions using a 100-lb. roller (staying approximately 6″ to 12″ away from the seam area).
16. Clean adhesive residue from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water.
17. Repeat steps # 6 through #9 for adhering the remaining half of piece #2.
18. Using an Armstrong S-83 Recess Scriber, recess scribe all seams net (no fullness).
19. Insert a piece of scrap material beneath the scribe mark. With the excess material on the same side as your cutting hand, cut the seam holding a straight blade knife straight up and down.
20. Cut the tip of the Armstrong S-761 Seam Adhesive applicator bottle and apply a continuous 1/8″ bead of S-761 Seam Adhesive along the seam edge of piece #1.
21. Tuck the seam edge into place, forcing the Armstrong S-761 Seam Adhesive up through the seam.
22. Clean adhesive residue from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water.
23. Roll the seam into place using an Armstrong S-77 Hand Roller and roll again with a 100-lb. roller.
24. Remove the burr at the seam by carefully skiving with the back of the Armstrong S-92 Knife.
25. Follow the same procedures for the remaining pieces, completing one piece at a time until the job is finished.
26. Do not allow traffic on the flooring for 24 hours after installation.
27. 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.

■ Installing POSSIBILITIES Petit Point and Connection CORLON in Concentrated Static and Dynamic Load Areas With S-240 Epoxy Adhesive:

Armstrong Commercial Sheet 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 then distribute the load over the surface of the flooring. **Hospital patient beds** are one such example. 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 Armstrong S-240 Epoxy Adhesive, offer advantages and may help protect against damage, such as delamination, when used to install flooring underneath 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 underneath 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 one foot beyond the wheel base or footprint of the four casters (approximately 4 feet by 8 feet) may be sufficient.

1. Plan layout of the Armstrong S-240 Epoxy Adhesive so it extends approximately one foot beyond the load area. Use the recommended Armstrong full-spread Adhesive in all other areas.
2. Mix 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 Armstrong S-240 Epoxy Adhesive on the subfloor surface.
3. **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 Armstrong S-240 Epoxy Adhesive is approximately 15 minutes depending on temperature and humidity.
4. Apply Armstrong S-240 Epoxy Adhesive with the recommended trowel notching.
5. **Using the supplied 3/16″ paint roller, wet out the 3/16″ paint roller by rolling it in on a piece of scrap material that contains the Armstrong S-240 Epoxy Adhesive. This will prevent removal of already applied Armstrong S-240 Epoxy Adhesive when rolling**.
6. **Carefully roll out the Armstrong S-240 Epoxy Adhesive trowel ridges using the supplied 3/16″ nap paint roller, creating a uniform application of the Armstrong S-240 Epoxy Adhesive**.
7. After troweling and rolling of the Armstrong S-240 Epoxy Adhesive, allow 10–20 minutes open time before placing the flooring into the adhesive. **Do not allow the Armstrong S-240 Epoxy Adhesive to dry completely.**

8. When using Armstrong 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 Armstrong S-240 Epoxy Adhesive is 60 minutes.
9. After allowing the proper open time, carefully place the flooring into the Armstrong S-240 Epoxy Adhesive to ensure that air bubbles are not trapped beneath the flooring.
10. Within 30 minutes of the Armstrong S-240 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 (staying 2″ away from any seams). Do not work on newly adhered flooring except to roll; if necessary use a kneeling board.
11. Clean any adhesive residue from the surface of the flooring using a clean white cloth dampened with a neutral detergent and water. **Dried Armstrong S-240 Epoxy Adhesive cannot be removed.**
12. Repeat rolling procedure at 1 hour and 2 hours after the initial application of Armstrong S-240 Epoxy Adhesive.
13. **Seams must be heat-welded. Wait a minimum of 10 hours before heat welding.**
14. Do not allow traffic on the flooring for 24 hours after installation.
15. 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.

- Seams: Refer to Section VIII.
- Heat Welding: Refer to Section VIII.
- Flash Coving: See Section IX.