



## **Installation Instructions**

AirStep Evolution®  
AirStep® Plus™

*Congoleum®*

# INSTALLATION INSTRUCTIONS for AIRSTEP EVOLUTION and AIRSTEP PLUS

*AirStep Evolution and AirStep Plus* are 12' (3.66m) wide flexible floors that feature UltraTec construction. This construction allows the flooring to be installed by the *Your Choice Plus Installation System* which includes the fully adhered, perimeter fastened and loose lay installation methods.

The best method for a particular job depends on the subfloor conditions. For example, the fully adhered method is recommended where the subfloor is smooth, structurally sound and free of movement, in a variety of applications including complex room layouts or where net fitting or coving is required.

The perimeter fastening and loose lay methods provide subfloor masking benefits to allow installation over a greater variety of surfaces that might otherwise be unsatisfactory for a fully adhered application.

The loose lay method is recommended for room layouts where trim can be installed around the entire perimeter.

The perimeter fastening method can be used for most all applications and it provides not only subfloor masking benefits, but it also provides the option to fit flooring net where it is not desirable to install trim. Plus AS-01 Adhesive provides a releasable bond, so in the event that it becomes necessary to get access to the subfloor, you can pull the sheet back without damaging it.

## General Information

### Recommended Installation Accessories

- AS-01 Adhesive (See Adhesive Coverage chart on page 3 for spread rate coverage.)
- SU106 Seam Sealer

### Recommended Use

- Residential applications on all grade levels
- Interior use in dry, heated areas
- Do not install over ramps, in showers or other wet areas

### Installation Temperature

Condition the room(s) and all flooring materials at a constant temperature between 65°F (18°C) and 85°F (29°C) for 48 hours before, during and 48 hours after installation. Thereafter maintain temperatures between 55°F (13°C) and 100°F (38°C).

### Handling and Storage

Always keep flooring rolled face out, wrapped tightly around a rigid core until ready for installation. Avoid distorting the flooring. Always store rolls on a continuous flat surface. Do not stack other rolls or heavy objects on flooring.

### Preparing the Area

- Remove all furniture and appliances from the room.
- Remove all trim and transition moldings.
- Undercut door trim to allow flooring to slide under freely.
- Prepare the subfloor and sweep or vacuum thoroughly to remove all loose dirt and debris.

### Flooring Layout

- Unroll the flooring using care to prevent distortions and position it squarely in the room to achieve the best design layout.
- Make relief cuts down to the floor/wall juncture at inside and outside corners.

- Allow the flooring to relax and flatten. If necessary use a soft bristle push broom to remove any distortions or air pockets.

## General Subfloor Information

All subfloor surfaces must be clean, dry, smooth and free of reagents or contaminants that can stain flooring or interfere with adhesion.

*Wood Floors* must be structurally sound and free of movement with at least 18" (46 cm) of well-ventilated air space below. Sand joints smooth and set fasteners 1/32" (.8 mm) below the surface. Rough, weathered or damaged subfloor panels must be sanded smooth or covered with a suitable underlayment panel. Fill underlayment joints wider than 1/32" (.8 mm).

Flooring installed directly over single layer wood subfloors present a higher risk for joint telegraphing, protruding nail heads or fasteners and bottom up staining from paint overspray, spills, subfloor construction adhesive, coated fasteners or other contaminants. The subfloor panel must be a Sturd-I-Floor rated panel with a sanded face and Exposure 1 or Exterior classification. Congoleum will not assume responsibility for claims related to the subfloor material regardless of the underlayment or subfloor material used.

*Concrete Floors* must be clean, dry and smooth. Level, rough or uneven surfaces, cracks and control joints with a portland cement-based patching compound. Do not install flooring over expansion joints. Moisture vapor emissions must not exceed 3-lbs./1000 ft.<sup>2</sup> (1.4kg/92.9m<sup>2</sup>)/24 hrs when tested with a calcium chloride test kit.

*Resilient Floors* must be single layer, fully adhered over an approved subfloor and securely bonded. Remove all wax, floor finish or polish prior to installation. Do not install AirStep Evolution or AirStep Plus over soft, heavily cushioned floors, floors with a cushioned backing, asphalt tile, self-adhered tile or tile installed below grade level.

**⚠ WARNING: EXISTING IN-PLACE RESILIENT FLOOR COVERING AND ASPHALTIC ADHESIVES. DO NOT SAND, DRY SCRAPE, DRY SWEEP, DRILL, SAW, BEADBLAST, OR MECHANICALLY CHIP OR PULVERIZE EXISTING RESILIENT FLOORING, BACKING, LINING FELT, ASPHALTIC "CUTBACK" ADHESIVE OR OTHER ADHESIVE.**

These **existing in-place** products may contain **asbestos fibers** and/or **crystalline silica**. Avoid creating dust. Inhalation of such 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 in-place 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 removal and disposal of material. See current addition of the Resilient Floor Covering Institute (RFCI) publication *Recommended Work Practices for the Removal of Resilient Floor Coverings* for instructions on removing all resilient floor covering structures or contact your retailer or Congoleum Corporation Installation and Technical Office (609) 584-3805.

## Subfloors and Preparation

Subfloor Construction Materials	Comments	Fully Adhered	Perimeter Fastened	Loose Laid	Notes
Wood	• Double layer plywood construction over joist or trusses	Yes	Yes	Yes	Subfloor must be smooth, solid and free of movement set fasteners below the surface.
	• Single layer Sturd-I-Floor 23/32" (18 mm) or heavier installed over joists or trusses, 16" (41 cm) or 19.2" (49.2 cm) OC	—	Yes	Yes	
	• Hardwood or Strip wood installed over wood subfloors	Install wood underlayment			
	• Hardwood floors installed over concrete	No	No	No	Remove hardwood and prepare concrete.
Underlayment	• APA underlayment grade plywood and other wood veneer underlayments that are recommended for resilient flooring	Yes	Yes	Yes	Weather damaged or rough surface materials must be sanded smooth or covered with a recommended underlayment. Fill gaps wider than 1/32" (.8 mm).
	• Oriented Strand Board (OSB)	Install wood underlayment	Yes	Yes	
	• NPA-rated Particleboard	Install wood underlayment	Yes	Yes	
Concrete	• On, above and below grade level	Yes	Yes	Yes	Moisture vapor emissions should not exceed 3 lbs. (1.4kg)
	• Radiant heat floors not to exceed 85°F (29.9°C)	Yes	Yes	Yes	
Gypsum Topping	• Minimum 2000 (907kg) PSI Compressive Strength	No	Yes	Yes	Fill depressions and cracks wider than 1/32" (.8 mm).
Lightweight Concrete	• Minimum 100-pound (45kg) density Minimum 3000 PSI (1361kg) Compressive Strength	Yes	Yes	Yes	
Resilient Floor	• Smooth surface resilient sheet and tile flooring	Yes	Yes	Yes	Must be single layer of flooring, fully adhered and well bonded.
	• Textured surface resilient sheet and tile	Prepare with embossing leveler or new underlayment			
	• Do not install over soft, heavy, cushioned floors, floors with a cushioned backing, asphalt tile or tile installed below grade level.	Remove or cover with new underlayment as appropriate			Follow Recommended Work Practices.
Ceramic and Stone	• Ceramic, marble and granite	Yes	Yes	Yes	Apply skim coat(s) to level the surface.

## Adhesive

AS-01 Adhesive is recommended for use with AirStep Evolution and AirStep Plus installed fully adhered and perimeter fastened and under seams in loose lay applications.

AS-01 provides a releasable bond when applied with a 1/4" (6.4mm) nap paint roller and allowed to dry to a tack or it can be applied with a trowel in a wet set application over porous surfaces for a permanent bond.

### Adhesive Application

Installation Method	Subfloor	Applicator	Condition	Performance
Fully Adhered	Porous surfaces	1/16" x 1/32" x 1/32" (1.6mm x .8mm x .8mm) Trowel	Wet set	Permanent Bond
Fully Adhered Perimeter Fasten Loose Lay Seams	Porous or non-porous surfaces	1/4" (6.4mm) nap paint roller	Tacky dry	Releasable Bond

### Adhesive Coverage

Installation Method	Location	Adhesive Applicator	Quart	Gallon
Fully Adhered	N/A	Trowel	50 - 65 sq. ft. (4.65m <sup>2</sup> - 6m <sup>2</sup> )	200 - 250 sq. ft. (18.6m <sup>2</sup> - 23.2m <sup>2</sup> )
Fully Adhered	N/A	Paint roller	75 - 85 sq. ft. (7m <sup>2</sup> - 7.9m <sup>2</sup> )	300 - 350 sq. ft. (27.9m <sup>2</sup> - 32.5m <sup>2</sup> )
Perimeter Adhered	4" (10.2cm) Band at the perimeter	Paint roller	200 - 225 lin. ft. (50.8m - 57m)	800 - 900 lin. ft. (203m - 228m)
Perimeter Adhered and Loose Lay	6" (15.4cm) Band at seams	Paint roller	125 - 150 lin. ft. (31.7m - 38m)	500 - 600 lin. ft. (127m - 152m)

## ONE PIECE INSTALLATION

### *Fully Adhered Method*

**Use Congoleum AS-01 Adhesive for all approved fully adhered installations.**

Follow recommendations listed under General Information. Unroll the flooring and trim it to fit walls and other vertical surfaces. Flooring can be fit net in areas where no finished trim will be installed. Do not fit the floor tight.

To adhere the floor, lap or tube back one-half of the sheet using care to avoid bending or creasing it. Spread or roll adhesive uniformly over the exposed subfloor in a straight line up to the edge of the sheet, with no voids, puddles or thin spots.

**On porous surfaces**, apply the adhesive with a 1/16" x 1/32" x 1/32" (1.6mm x .8mm x .8mm) notched trowel and lay the flooring into the wet adhesive immediately after spreading it for a permanent bond. For a releasable bond over porous surfaces apply adhesive with a 1/4" (6.4mm) nap paint roller and allow it to dry to a tack (will not transfer to finger when touched) before positioning the sheet.

**On nonporous surfaces** always apply the adhesive with a 1/4" (6.4mm) nap paint roller and allow it to dry to a tack before positioning the sheet. When using a paint roller, the adhesive should be applied to the subfloor in a light stippled pattern at a rate of 300-350 sq. ft. (27.9m<sup>2</sup> - 32.5m<sup>2</sup>)/gal.

**Note: It is important to use a paint roller to apply adhesive and allow it to tack up over nonporous surfaces, i.e. existing resilient flooring, embossing leveler and terrazzo. Excessive adhesive application or application with a trowel on non-porous surfaces can result in adhesive displacement and lead to permanent indentation.**

Carefully, push the flooring back into the adhesive without lifting it, to avoid trapping air under it. Immediately and prior to foot traffic, roll the flooring in both directions with a 100-pound (45kg) or heavier three-section roller starting from the center and working out toward the edges. Repeat the process on the other half of the sheet.

### *Perimeter Fasten Method*

Follow recommendations listed under General Information. Sweep or vacuum the floor thoroughly to remove all dirt and grit. Unroll flooring using care to avoid distortions. In long narrow areas or in more intricate room layouts, place a string over the grout line and check to make sure the floor is straight and not bowed. Adjust the flooring to remove bow if necessary. Where finished trim will be installed, fit the floor with a 1/16" (1.6mm) space between the edge of the sheet and the walls and other vertical surfaces. Where no finished trim will be used, fit the floor flush or net. Tight or compression fitting is not recommended.

After fitting the floor to the room and flattening all distortions, fasten the entire perimeter with adhesive or staples (on wood floors only). If using a combination of adhesive and staples, complete the adhered areas first.

Adhesive is required under all seams, at net fitted areas, in front of cabinet toe spaces, at fixtures and floor vents and over concrete and other hard surfaces.

To adhere the perimeter, carefully lay the edge of the floor back using care to avoid creasing it. Apply a 4" (10.2cm) band of adhesive along the perimeter using a 4" (10.2cm) x 1/4" (6.4mm) nap paint roller. Allow adhesive to set for 15 to 30 minutes or until tacky dry. Use a fan to accelerate drying if working in a cool or damp environment. Lay the floor into the adhesive immediately while pushing any roll distortions out toward the perimeter. Thoroughly roll the adhered area with a steel hand roller. Repeat the process to adhere the entire perimeter.

**Staples** can also be used in lieu of adhesive to fasten the perimeter in areas where trim will be installed on installations over wood subfloors. The minimum staple size is 1/2" (12.7mm) crown with a 3/8" ((9.5mm) leg. Use the longest staple length that can be seated tightly to the floor surface. Staple every 3" (7.6cm) along the wall, 1/4" (6.4mm) away from the edge of the sheet. After the floor has been fastened, install trim to cover staples.

### *Loose Lay Method*

Follow recommendations listed under General Information. Sweep or vacuum the floor thoroughly to remove all dirt and grit. Unroll flooring using care to avoid distortions. Position it squarely in the room and make relief cuts at inside and outside corners. Trim the floor allowing a 1/16" (1.6mm) space between the edge of the sheet and the walls and other vertical surfaces. Trim flooring long at door trim and slide it under to achieve a finished appearance.

All finish trim and transition moldings must cover the edge of the flooring by at least 3/8" (9.5mm) and must be installed so they do not bind or restrict the flooring. Shoe molding, quarter-round and other trim should be positioned lightly on the floor and fastened to the wall, not to the subfloor. Transition moldings should be installed allowing a 1/8" (3.2mm) space between the edge of the sheet and the fasteners.

To prevent forced air from "pillowing" the loose laid flooring, we recommend applying duct tape to the inside of the heat duct and about 1/2" (12.7mm) onto the flooring, making sure that the register flange covers the tape.

**Bathroom Installations** - The flooring should be secured to the subfloor in front of tubs, showers or other wet areas. Place a strip of thin, acrylic double-face tape at the base of a bath tub or shower. Secure the edge of the sheet in the tape and seal it with a silicone caulking. Bathrooms that require more extensive net fitting should be installed perimeter fastened or fully adhered.

## Seaming

### *Place seams:*

- In the least conspicuous and least traveled area in the room.
- A minimum of 6" (15.4 cm) away from parallel underlayment joints.
- At least 6" (15.4 cm) away from seams in existing sheet flooring or within the center of a row of tile.

### *Matching Designs*

Always install sheets in the order they were cut from the roll, starting with the first sheet.

## Seaming Specifications

Pattern Number	Pattern Name	Reverse Sheets	Economy Match		Actual Repeat Length	Actual Repeat Width
			Length	Width		
<b>AIRSTEP EVOLUTION®</b>						
<b>Adhesive:</b> AS-01 <b>Seam Sealer:</b> SU106						
72000 - 72004	Terrace™	No	18" (45.72cm)	36" (91.4cm)	54" (137.2cm)	108"(274.32cm)
72010 - 72012	Colonial Plank™	No	Random	36" (91.4cm)	54" (137.2cm)	72" (182.9cm)
72015 - 72018	Tuscan Paver™	No	6" (15.24cm)	6" (15.24cm)	54" (137.2cm)	108"(274.32cm)
72020 - 72025	Rapolano Tile™	No	13.5" (34.3cm)	13.09" (33.25cm)	54" (137.2cm)	144" (365.8cm)
<b>AIRSTEP PLUS</b>						
<b>Adhesive:</b> AS-01 <b>Seam Sealer:</b> SU106						
58000 - 58002	North Star™	No	18" (46.2cm)	36" (92.3cm)	18" (46.2cm)	36" (92.3cm)
58005 - 58006	Woodland™	No	9" (22.86cm)	9" (22.86cm)	54" (137.2cm)	72" (182.9cm)
58010 - 58011	Satin Cloud™	No	27" (69.2cm)	72" (1.83m)	54" (137.2cm)	72" (182.9cm)
58020 - 58025	Starlight™	No	27" (69.2cm)	26.18" (67cm)	54" (137.2cm)	26.18" (67cm)
58030 - 58034	Swirlstone™	No	13.5" (34.6cm)	39.3" (100cm)	54" (137.2cm)	144" (365.8cm)
58050 - 58052	Unity™	No	27" (69.2cm)	36" (92.3cm)	27" (69.2cm)	36" (92.3cm)
58060	Check™	No	18" (46.2cm)	18" (46.2cm)	18" (46.2cm)	18" (45.72cm)

### Seaming Specifications

**Reverse Sheets** - Rotate alternating sheets 180° to seam the same edges together.

**Do Not Reverse** - Seam opposite edges together.

When estimating flooring, add 3" (7.7cm) to the length of the room dimension for the first sheet and 3" (7.7cm) plus the design match for all other sheets.

An actual and economy design match has been listed to provide options for producing the best appearance. The economy match does not necessarily repeat exactly but it generally matches very well and it is great for fill pieces and less conspicuous areas, while an actual match may be more appropriate for a highly conspicuous area.

### Seaming Procedure

All seams in AirStep Evolution and AirStep Plus must be cut using the overlap and double cut method. The straightedge and butt and recess scribe method will not produce an acceptable seam.

Install the first sheet leaving 12" (30.8cm) unadhered along the entire length of the seam (fully adhered floors). Position the second sheet in the room, overlap the selvage edges and carefully match the design. Adhere the second sheet leaving 12" (30.8cm) unadhered at the seam for a total dry zone of 24" (61.5cm).

Place a 3" (7.7cm) wide strip of scrap flooring under the entire length of the seam.

Cut the seam in the center of the embossed line when seaming designs with grout lines that are wider than 5/32" (4mm).

Cut the seam up on the shoulder of the grout line in the land area when seaming designs with narrower grout lines.

Cut the seam with a sharp utility knife and steel straightedge. Hold the knife at a 90° angle from the floor and apply sufficient pressure to cut through both sheets in a single pass. Use caution to avoid cutting into the subfloor surface.

### Adhering the Seam

#### Fully Adhered Floors

Turn the seam edges back and apply AS-01 Adhesive over the entire dry zone. Adhesive can be applied with a 1/16" x 1/32" x 1/32" (1.6mm x .8mm x .8mm) notched trowel over porous surfaces in a wet set application or with a paint roller in a tacky dry application over all approved substrates. Remember to allow the adhesive to dry to a tack when using a paint roller.

**Note: Flooring should be laid into the adhesive as quickly as possible after adhesive dries to a tack. Use a fan to accelerate drying if working in a cool or damp environment.**

Lay the floor into the adhesive using extreme care to prevent scraping or squeezing adhesive into the seam cut. If this should occur, lift the edges of the sheet and clean any adhesive from the edge with a clean damp cloth and reposition the sheets. Roll the seam area with a 100-pound (45kg), three-section roller and level the seam edges with a steel hand roller.

#### Perimeter Fasten and Loose Lay Floors

Turn one seam edge back and mark the seam location on the subfloor with a pencil using care to avoid writing on the edge of the sheet. Use a 4" (10.2cm) wide, 1/4" (6.4mm) nap paint roller to apply a 6" (15.4cm) band of adhesive centered over the pencil line. Allow the adhesive to set up for 15 to 30 minutes or until tacky dry. **Note: Flooring should be laid into the adhesive as quickly as possible after adhesive dries to a tack. Use a fan to accelerate drying if working in a cool or damp environment.**

Lay the seam edges into the adhesive lightly and check to make sure the seam is properly aligned with no gaps. Adjust if necessary.

Roll the seam with a steel hand roller to level the edges and embed the backing into the adhesive.

#### Sealing Seams

Seal all seams by the end of the day using SU106 Seam Sealer. Remember to pre-treat the seam with the 3M® green

pad included in the SU106 kit prior to applying seam sealer. Refer to the seam sealer label for detailed instructions. Keep traffic off seams for a minimum of 16 hours or until fully cured.

### **Completing the Job**

- Install trim and transition moldings. Remember to follow special instructions for loose lay floors.
- A high quality silicone caulking must be used to seal the edge of the flooring at net fits, in wet areas, in front of tubs, showers, sinks and around drains.
- Return all furniture and appliances to the room. Always use strips of hard board to protect the floor when sliding or rolling appliances and furniture back into place.

### **Repair**

Surface cuts and punctures are easily repaired by applying the recommended seam sealer to the damaged spot.

More extensive damage can be repaired by replacing the damaged area with a patch.

Obtain a matching piece of flooring material. Cut a section of

the floor slightly larger than the damaged spot. Remove complete design units when possible.

Position the replacement piece directly over the damaged area and accurately match the design.

Secure the replacement piece with tape on all sides.

Use a sharp utility knife and steel straightedge to cut the seams on all sides of the repair piece.

Cut the seam in the center of a grout line or in a dark color of the floor if possible.

Hold the utility knife at a 90° angle to the floor and cut through both pieces in a single pass.

Remove the damaged area.

Install the repair piece using AS-01 Adhesive or double face acrylic tape to secure the repair piece.

Seal the seams with the recommended seam sealer following label instructions.

The logo for Congoleum, featuring the brand name in a bold, black, cursive script font. A registered trademark symbol (®) is located at the top right of the word.