Fiberglass-Reinforced Sheet Flooring

RESIDENTIAL USE ONLY

Product	Gauge	Adhesive	Comment
Home Images	0.050 (1.27mm)	Modified loose lay method: Acrylic double-faced tape at seams or 2"–3" (5.08 cm –7.62 cm) band of S-295 or S-299 Flooring Adhesive at the seams Conventional Full Spread method: S-295 or S-299 Flooring Adhesive S-580 Flash Cove Adhesive (when using the Full Spread method only)	Seams: Double cut Seam treatment: Apply S-500 Seam Coating or S-761 Seam Adhesive
Home Images Pro Home Reflections	0.055" (1.mm)		
Home Reflections Pro	0.065" (1.65mm)		

Installation: All Grade Levels

Pattern Match: Yes; do not reverse pieces

Seam Method: Double-cut

Seam Treatment: Apply S-500 Seam Coating or Armstrong Flooring S-761 Seam Adhesive

Fitting: All Methods

General Information

Fiberglass flooring in residential applications can be installed by three installation methods. The flooring can be installed by the modified loose lay installation method using acrylic double-faced tape under seams, or it can be installed by a full spread option using S-295 or S-299 Flooring Adhesive. Fiberglass-reinforced flooring should not be installed by perimeter fastening methods.

In certain areas of the country, where seasonal moisture and humidity changes are severe, the movement in wood subfloors can cause a raised area of a buckle in the flooring near a perimeter pinch point. Typically, if this happens, it will occur during prolonged periods of cold weather when interior conditions become very dry and the wood subfloor/underlayment components dry out and shrink. Should this happen and a buckle occurs, the flooring should be gently lifted or pulled back from the pinch point and re-trimmed.

Summary of Residential Fiberglass-Reinforced Installation Options

	Modified Loose Lay	S-295 or S-299 Flooring Adhesive	
Spacing (gap) at vertical surfaces (walls, pipes, etc.)	1/4" (6.35 mm)	None	
Base cabinets on top of flooring	No	Yes	
Island cabinets on flooring	No	Yes	
Bathrooms	Yes	Yes	
Stairs, landings or rooms with floor drains	No	Yes	
Seams on suspended wood underlayments	Only 1	Multiple OK	

Subfloors & Substrates

All substrates listed below must be properly prepared and meet certain requirements. There may be other exceptions and special conditions for these substrates to be suitable for the flooring installation.

- Concrete - on all grade levels
- Ceramic tile, Terrazzo, Marble
- Approved suspended wood underlayments
- Polymeric poured (seamless) floors
- Single-layer, fully-adhered, existing resilient floors
- Existing resilient tile floors that are on grade or suspended

NOTE: **For wood subfloors and underlayments, the moisture content must be 13% or less.**

DO NOT INSTALL OVER

- Particleboard, waferboard, OSB, or single-layer Sturd-I-Floor panels
- Carpet
- Hardwood flooring that has been installed directly over concrete
- Existing cushion-backed vinyl flooring below grade

Job Conditions/Preparation (for all installation options)

- 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 sound, dry, clean, smooth and free from excessive moisture or alkali.
- 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.

- Do not use products containing petroleum solvents or citrus oils to prepare substrates as they can cause staining and expansion of the new flooring.
- In renovation or remodel work, remove any existing adhesive residue* so that 100% of the overall area of the original substrate is exposed.
- When installing over an existing resilient floor, use S-194 Patch, Underlayment & Embossing Leveler/S-195 Underlayment Additive to fill and smooth any embossing in the old floor.
- The area to receive resilient flooring and the flooring materials and adhesives should be maintained at a minimum of 65° F (18° C) and a maximum of 100° F (38° C) for 48 hours before installation, during installation, and 48 hours after completion. Maintain a minimum temperature of 55° F (13° C) thereafter.
- 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 Chapter 3, Subfloors and Underlayments.

As with many flooring products, the full spread adhesive methods generally require somewhat more attention to the condition of the substrate so that it will not telegraph irregularities through the finished floor. If flash coving is done with fiberglass-reinforced sheet flooring, S-295 or S-299 adhesive must be used in a full spread application with S-580 used on the coved areas.

Modified Loose Lay Method

Keys to Successful Modified Loose Lay Installation

- Proper conditioning of both the jobsite and the flooring is necessary. The flooring should not be exposed to wide ranges in temperature and moisture/humidity levels in the home.
- Store, transport and handle flooring so as to prevent any sharp creases or other distortions in the sheet. Always roll face-out on a cardboard tube. Distortions will generally not disappear or shrink on their own. Sheet mustbe lying flat at time of installation.
- Just prior to installation, lay flooring out flat to acclimate to conditions and allow the roll-up stresses to relax.
- Seams must be double cut, net, with no fullness. Do not straight edge and butt seams. Do not stretch or compress at seams as this will lead to small buckles.
- Do not compress the edges of the sheet in any way when installing other flooring materials next to the flooring. Installation of carpet, metal strips and other transition moldings should not push fullness into the flooring.
- Always protect from rolling loads from other trades and replacement and/or movement of appliances.

The modified loose lay method requires that the flooring be cut 1/4″ (6.4 mm) away from all vertical surfaces such as walls, cabinets, pipes, etc. This gap will then be covered with molding or wall base. With this method the flooring should be allowed to “float” freely over the subfloor. This is particularly important over wood subfloors as the wood can grow and shrink with the changes in moisture content. The flooring will be bonded at seams, however, with an acrylic double-faced tape designed for use with vinyl flooring. Only one seam is permitted when using this method over suspended wood subfloors and underlayments. Multiple seams are allowed when this method is used over concrete subfloors. Tape may also be used at doorways if needed, however the preferred method is to use transition strips, similar to a “T” molding, that cover the edge of the flooring while at the same time allowing for some movement of the flooring beneath the molding. **Do not use the tape around the entire perimeter of the room and do not install base cabinets on top of the flooring.**

Planning and Layout

- Plan the layout so seams in the new flooring fall at least 6″ (15.2 cm) away from seams and joints in existing flooring and underlayments.
- Remove wall base and quarter-round moldings.

- The decorative trim and jamb moldings at doorways should be under-cut to allow flooring to slip underneath as you can't hide perimeter gap with wall base in these areas.
- After preparation work is completed, be sure to sweep and vacuum entire work area taking extra care to remove all dirt and debris.

Fitting

- Unroll material and lay flat to allow the roll curl to relax before fitting.
- Do not cut full or net. Maintain a 1/4″ (6.4 mm) gap at all vertical surfaces.
- Recommended fitting procedures include pattern scribing, straight scribing or freehand knifing.

Procedure

If more than one piece of flooring is used, the pieces should be pattern matched and double-cut prior to placing the acrylic double-faced tape under the seam. The edges where the seam will be cut should be overlapped with a piece of scrap material underneath to protect the substrate while cutting through both pieces of flooring. It is important that the seam be cut in a straight line using a straight edge as a guide. The knife should be held completely vertical to put a clean 90-degree edge at the seam. Seams should be cut net, not full or snug as it can result in buckles.

Do not straightedge and butt seams as this can lead to loose and tight areas along the seam resulting in buckles or distortion. Also, do not try to stretch or compress material at the seam to obtain pattern match. This too can result in buckles or distortion.

Armstrong recommends an acrylic double-faced tape designed for use with vinyl flooring. Carpet tapes may read through and impact the final appearance of your floor. Ordinary carpet tapes may also cause discoloration of the flooring.

After the flooring has been properly fit and positioned in the room, gently fold back the seam edges and apply the acrylic double-faced tape, centered under the seam. Before removing the release liner from the top of the tape, use a clean cloth and hand pressure to thoroughly bond the tape to the subfloor. Then, remove the release liner from the tape and carefully reposition the seam for a net fit. Thoroughly roll the seam with a hand roller to complete the bond.

CAUTION

Do not stand or walk on the release liner, as it is extremely slippery. Place it in a wastebasket immediately upon removal from the tape. Tape may also be needed under relief cuts that were made to slip around pipes, etc. and at some doorways where transition moldings cannot be used. Do not overuse tape and do not tape around the entire perimeter of the room.

Replace or install wall base and quarter-round moldings to cover the gap around the perimeter of the room. Do not pinch the molding down on top of the flooring. Leave a slight clearance between the molding and flooring so any effects of seasonal movement in the home due to temperature or humidity changes will be minimized.

Armstrong S-500 Seam Coating Kit for low gloss floors must be used to coat any seams at the completion of the installation or S-761 seam adhesive must be used during the installation. The freshly applied S-500 seam coating must be protected for several hours from dirt, dust and traffic. Follow instructions on package.

S-761 SEAM ADHESIVE PROCEDURE

S-761 Seam Adhesive helps reduce installation time significantly compared to traditional seaming methods.

Modified Loose Lay Installation

a. Double-cut the seam before applying the vinyl tape or adhesive.
b. After seam is cut, fold back both edges and apply the tape or adhesive.
c. After applying the tape or after proper open time with the adhesive place one side back down.
d. Using the applicator bottle, apply a 1/8" bead of S-761 Seam Adhesive along the seam edge.
e. Tuck the seam edge into place, forcing the S-761 Seam Adhesive up through the seam.
f. Clean adhesive residue from the surface of the flooring using a clean, white cloth dampened with neutral detergent and water.
g. Roll the seam using a hand roller.
h. Allow 2 hours before foot traffic and 4 to 6 hours to fully dry for rolling loads.

Full Spread Method with S-295 or S-299 Flooring Adhesive

Planning and Layout

- Plan the layout so seams in the new flooring fall at least 6″ (15.2 cm) away from seams and joints in existing flooring and underlayments.
- Do not install over expansion joints.
- Remove wall base and quarter-round moldings if appropriate. (fiberglass reinforced sheet flooring may be fit net when installed full spread using S-295 or S-299 adhesive.)

Fitting

- Unroll material and lay flat to allow roll curl to relax before fitting.
- Fiberglass-reinforced sheet flooring products are dimensionally stable. They should be cut net to vertical surfaces or slightly loose where they will be covered with molding or wall base. Do not cut full or compression fit.
- Recommended fitting procedures include pattern scribing, straight scribing or freehand knifing.

Procedure

If seams are involved, they should be double-cut dry prior to spreading adhesive in the seam area. Use a piece of scrap material underneath the seam when cutting. Do not straightedge and butt seams as this can lead to loose and tight areas along the seam resulting in buckles or distortion. Also, do not try to stretch or compress material at the seam to obtain pattern match. This too can result in buckles or distortion.

Use Full Spread adhesive method with S-295 or S-299 Flooring Adhesive. Apply adhesive with a trowel [notching is 1/32″ (0.8 mm) deep, 1/16″ (1.6 mm) wide and 1/32″ (0.8 mm) apart]. It is important to use the correct trowel notching. Inspect and replace worn trowels frequently. Follow adhesive open time and working time recommendations on the adhesive label.

Allow enough time for the adhesive to dry until tacky with no transfer to the finger (dry-to-touch) before placing the material into it. This normally takes 30 minutes or more, depending on temperature and humidity. After the adhesive has reached this condition, there is at least one hour working time in which to install and roll the flooring.

Adhesive (Modified Loose Lay Installation)	Dry-to-Touch

S-295 or S-299 Adhesive 2" (5.08 cm) to 3" (7.62 cm) wide band under the seams	Open Time: 30 minutes or more Fine Notch: 1/32" (0.8 mm) deep, 1/16" (1.6 mm) wide, 1/32" (2 mm) apart

NOTE: Allowing proper open time will help to minimize knee marks, roller marks and trapped blisters. The amount of open time will vary according to job conditions—temperature, humidity, air flow and type of substrate.
Roll Thoroughly. Starting at the center and working toward the edges, roll in two directions using 100-lb roller. Seams must be hand rolled, then rolled again with a 100-lb roller. Give special attention to cleaning adhesive residue from the seam areas as they must be clean and dry in order to proceed with seam treatments. Clean excess adhesive from the surface of the flooring using a clean, white cloth dampened with detergent and water. Mineral spirits will remove dried adhesive residue.

Replace or install wall base and quarter-round moldings as needed. Fasten molding to the vertical surface. Do not nail through the new floor.

Armstrong S-500 Seam Coating Kit for low gloss floors must be used to coat any seams at the completion of the installation or S-761 seam adhesive must be used during the installation. The freshly applied S-500 seam coating must be protected for several hours from dirt, dust and traffic. Follow instructions on package.

S-761 SEAM ADHESIVE PROCEDURE
S-761 Seam Adhesive helps reduce installation time significantly compared to traditional seaming methods.

S-295 or S-299 Flooring Adhesive

a. Double-cut the seam dry before applying the adhesive.
b. After seam is cut, fold back both edges and apply the adhesive.
c. After proper open time (dry-to-touch) place one side back down.
d. Using the applicator bottle, apply a 1/8" bead of S-761 Seam Adhesive along the seam edge.
e. Tuck the seam edge into place, forcing the S-761 Seam Adhesive up through the seam.
f. Clean adhesive residue from the surface of the flooring using a clean, white cloth dampened with neutral detergent and water.
g. Roll the seam using a hand roller.
h. Roll immediately in both directions with a 100-lb. roller.
i. Allow 2 hours drying before foot traffic and 4 to 6 hours to fully dry for rolling loads.

Precautions for All Installation Methods

- When moving appliances or heavy furniture, lay a plywood panel on the floor and “walk” the item across it. This protects the floor from scuffing and tears.
- Use floor protectors, such as Armstrong Floor Protectors, on furniture to reduce indentation. The heavier the item, the wider the floor protector needed.

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