StatPro ESD Rubber Flooring Installation Guide

Contents

General

The StatPro Rubber ESD Flooring Installation Guide covers the requirements for concrete subfloors where StatPro ESD Rubber Flooring is to be installed. If you need assistance on other substrates or require a project specification, please contact the StatPro at 888-903-0333. The procedures and recommendations described in this installation guide are developed to offer the best opportunity for a proper and successful StatPro flooring installation. Any deviation from these guidelines may result in an installation failure.

All StatPro products are intended for indoor use only, by professional floor installers, in high stressing commercial and industrial sectors, e.g., hospitals, schools, labs, rail, radiant heating and castor chair traffic, etc. Note: StatPro Rubber ESD Flooring should not be used under any other manufacturer's flooring. Moisture and pH testing is not required. StatPro Rubber ESD Flooring is not suitable for areas where:

- concrete slabs have or are suspected of having ASR (Alkali Silica Reaction) present
- hydrostatic pressure can occur

Do not proceed and contact the StatPro Technical Department.

For new construction, the general contractor must provide a structurally sound concrete subfloor that conforms to ASTM C33/C33M Standard Specification for Concrete Aggregates, and all on or below grade concrete subfloors should have a vapor retarder that meets the requirements of ASTM E1745 Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs. The area to receive flooring should be fully enclosed, weather tight and climate controlled at the normal service ambient temperature and humidity. If that is not possible, the area must be climate controlled at 68°F ± 5°F and 50% ± 10% ambient relative humidity (RH) for 48 hours before, during and 8 hours after the installation. The flooring and all accessories must be acclimated within this climate controlled area for at least 48 hours prior and during the installation. Areas subject to direct sunlight (through windows, etc.) should be covered for at least 48 hours prior, during and 8 hours after the installation. Where appropriate, check the date and shelf life of the product being used. If expired, do not use. All relevant SDS should be read, understood and followed.

Concrete Preparation

The concrete subfloor should not be subject to shrinking, curling, cracking or moving in any way prior to the application of any StatPro products. StatPro accepts no liability for failure or complaint due to slab movement of any kind. Do not install over expansion joints; use a purpose built expansion joint covering system.

Clean out all dormant saw cuts and cracks to remove all laitance, dirt, debris, sealers and any visible moisture. To achieve this, use a suitable dustless concrete saw with a diamond blade or similar. If you are not sure they are dormant, contact the StatPro Technical Department for specific recommendations.

Any specific requirements for levelness should be pre-defined by the general contractor/end user. Should self-leveler or deep applications of a patch/repair mortar (>1/4 inch) be required, contact the StatPro Technical Department for specific product recommendations.

WARNING

Always use a proper dust mask and take all necessary safety precautions required by OSHA and the tool manufacturers. The Diamabrush™ Concrete Prep Plus Tool may be used dry with an effective dust shroud and a shop-vacuum with a HEPA filter. Also recommended is the use of an attached Dust Deputy (www.oneida-air.com) or similar.

Do not sand, dry sweep, dry scrape, drill, saw, shot-blast, or mechanically chip or pulverize existing resilient flooring, backing, lining felt, asphalt "cutback" adhesive or other adhesive. These products may contain asbestos fibers and/or crystalline silica. Avoid creating dust. Inhalation of such dust is a cancer and respiratory tract hazard. Unless positively certain that the 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. Various local, state and federal government agencies have regulations governing the removal of in-place asbestos-containing material. If you contemplate the removal of a resilient floor covering structure that contains (or is presumed to contain) asbestos, you must review and comply with all applicable local, state and federal regulations.

NEW CONSTRUCTION

The concrete surface must be clean, absorptive (porous) and smooth enough to prevent any roughness or substrate defects from telegraphing through the flooring. Any sealer or curing agent on the surface of the concrete must be removed by mechanical means. Use a Diamabrush™ Concrete Prep Plus Tool 100 grit or 25 grit on a rotary sanding machine or for large areas a light shot-blasting or brush-blasting may be the preferred method to remove it. Perform the Water Droplet Test in a sufficient number of places throughout the project to be certain of its removal.

Water Droplet Test

To perform the water droplet test, simply place a dime sized droplet of water on clean concrete (without any patch or leveler). Using a clean straw is helpful but not required for the water droplet application. The water must begin to absorb into the concrete within one minute or further preparation is required.

REFURBISHMENT

The concrete surface must be free of any adhesive, adhesive residue, curing compound, sealer or any contaminate that could be considered a bond breaker. It must be clean, absorptive and smooth enough to prevent any roughness or substrate defects from telegraphing through the flooring.

Shot-blasting or brush-blasting is the recommended method to prepare the concrete surface; however, Scrape-Away cutter blades on a rotary sanding machine may be required first to remove old adhesives. The use of a Diamabrush™ Concrete Prep Plus Tool to prepare the concrete surface is acceptable; however, it is a slower and time-consuming method. Perform the Water Droplet Test in a sufficient number of places throughout the project to be certain of its proper removal.

Water Droplet Test

To perform the water droplet test, simply place a dime sized droplet of water on clean concrete (without any patch or leveler). Using a clean straw is helpful in its placement, but not required. The water must begin to absorb into the concrete within one minute or further preparation is required.

StatPro Smoothing Floor Prep 010

An advanced hydraulic cement-based mortar, developed to work in high-moisture areas. StatPro Smoothing Floor Prep 010 is for use on properly prepared concrete subfloors to smooth out any small imperfections (<1/4 inch) of the concrete surface prior to the installation of StatPro Glue-Free Adhesive Enhancer 020 and Rubber ESD flooring. Priming is not required. Do not re-temper or use on frozen surfaces.

MIXING

Using a suitable drill, paddle and bucket mix the pre-measured powder into the pre-measured cold water to achieve a lump-free and uniform consistency. Do not mix large amounts at once as the working time is around 30 minutes (at 70°F/21°C).

RATIO

The mixing ratio is three parts powder to one part water, or 1 gallon per 40 lbs. unit.

APPLICATION

Important Note:

With StatPro Smoothing Floor Prep 010, it is better and faster to slightly over apply the product and sand it down to an acceptable smooth finish, rather than trying to obtain a smooth finish with the trowel. This is due to the unique properties of the product and its requirement to use larger granules.

Place workable amounts of StatPro Smoothing Floor Prep 010 from your mixture on the prepared concrete surface at a time.
Using a steel finishing trowel held at approximately a 45° angle, work the StatPro Smoothing Floor Prep 010 into the concrete surface filling all cracks and depressions in the concrete. “Key in” but do not over-trowel to achieve a slightly high surface. Before proceeding, allow it to dry (light gray) without the use of fans.

SANDING

When dry, all lumps or ridges must be sanded smooth using a rotary sanding machine with a 36 grit disc; more aggressive grit will be required if left overnight. If required, another layer of StatPro Smoothing Floor Prep 010 may be applied on top.

COVERAGE

Coverage depends upon the CSP and applied thickness; the following is based on a smooth CSP 1. We do not recommend running out of StatPro Smoothing Floor Prep 010 as this product is not readily available nationwide.
Skim coat < 200 sqft/40 lbs. or 1/8" ~ 40 sqft/40 lbs.

StatPro Glue-Free Adhesive Enhancer 020

StatPro Glue-Free Adhesive Enhancer 020 is a required surface bond enhancer for use with StatPro Rubber ESD Flooring only.

APPLICATION

The prepared surface (StatPro Smoothing Floor Prep 010) must be visually dry. Use an 18" wide microfiber roller suitable for smooth surfaces (available at home improvement stores). Apply a very thin, even layer of StatPro Glue-Free Adhesive Enhancer 020. Avoid thick applications, puddling, dry spots and roller lines. Note: Thick applications will need to be removed.

SANDING

When fully dried to a tack-free state (approximately 90 minutes), lightly grind the surface smooth using a 25–100 grit Diamabrush™ Concrete Prep Plus Tool on a rotary sanding machine and vacuum clean.

REPAIRING

If you grind through the StatPro Glue-Free Adhesive Enhancer 020, then an additional layer of StatPro Glue-Free Adhesive Enhancer 020 should be applied. If patching is required, use StatPro Smoothing Floor Prep 010 over the surface and damaged area of StatPro Glue-Free Adhesive Enhancer 020. When dry, sand any residual StatPro Smoothing Floor Prep 010 off the surface of the StatPro Glue-Free Adhesive Enhancer 020. Apply another coat of StatPro Glue-Free Adhesive Enhancer 020 over the repair area.

SECOND COAT

For all on/below grade concrete subfloors without a confirmed effective vapor retarder that meets the requirements of ASTM E1745 *Standard Specification for Water Vapor Retarders Used in Contact with Soil or Granular Fill under Concrete Slabs,* apply a second coat of StatPro Glue-Free Adhesive Enhancer 020, and ensure complete coverage. Sanding or grinding is not required between applications unless there is more than 24 hours between them.

COVERAGE

~350 sqft/gallon
~875 sqft/unit

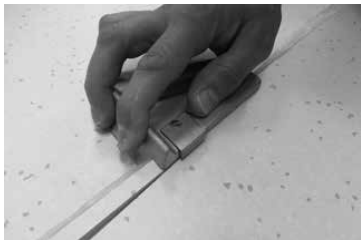
Installing StatPro Rubber ESD Flooring

Vacuum the entire installation area.

LAYOUT

The arrows printed on the back of the flooring should all point in the same direction. Following the design plans, layout the sheets (slightly longer than required) overlapping the seams by one (1) inch. Make relief cuts to avoid tears at all corners.

INSTALLATION


If the seam is not going to be welded or if the factory edge is damaged, use a Crain 340 selvage trimmer or similar to trim off ~0.5 inches (image 1).

Scribe, trim or "cut-in" the wall side of the first sheet. Pull half of the sheet back over itself and remove the exposed protective film. Carefully vacuum the exposed substrate just prior to replacing the flooring into its correct position (snug with the wall). Repeat this for the second half of the sheet.

Note: Do not allow exposed adhesive to bond to other exposed adhesive as it cannot be separated and will need to be replaced.



Next, or for welded seams, use a knife with the blade set at just under the thickness of the flooring, carefully trace cut the entire seam (images 2 and 3). A utility knife (used vertically) with the same type of straight blade is needed to finish the cut at each end.


Finish cutting the seam using a utility knife with a hook blade to provide a slight undercut (image 4). Do not damage the StatPro Glue-Free Adhesive Enhancer 020.
Carefully remove the excess material.

Pull half of the second/next sheet back over itself and remove the exposed protective film. Carefully vacuum the exposed substrate prior to replacing the flooring. Ensure it fits snug with the last sheet; unless the seam is going to be welded in which case leave a hair line gap. Repeat this process for the second half of the sheet.

Continue this process one sheet at a time until the area is completed. Trim or “cut-in” to a snug fit all of the perimeter to complete the installation. Welding can be performed immediately, if required.

FLASH COVING (BOOT METHOD)

Installation

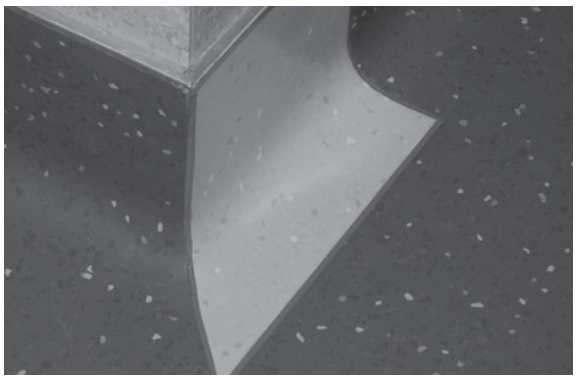
Install any required cove capping strip following the manufacturer’s written instructions. Ensure that the opening is sufficient to accommodate the thickness of the flooring material.

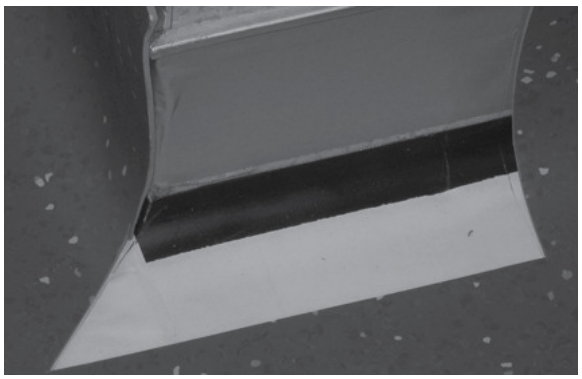
At the intersection of the wall and subfloor, no gap should be so wide that the cove strip cannot be installed correctly. If a wide gap exists, before installation, the gap should be filled and smoothed using a suitable product. Ensure that the wall is smooth and clean. During the application of Eclipse-GF 020 to the substrate, also apply a thin and even coat of StatPro Glue-Free Adhesive Enhancer 020 to the wall beneath the capping strip. Use a small roller and dry to a tack free state (approximately 40 - 70 minutes).

Install the appropriate StatPro cove stick and miter all corners, either using 1 inch wide double sided contact tape or staple to the walls (no need to adhere to the substrate).

Dry-lay the flooring as detailed above and make relief cuts at all corners to avoid any rips. Push the flooring into the internal corner as far as possible without damaging the flooring. Cut a straight line starting at the base of the cove stick up through to the top edge of the flooring at approximately a 45° angle (middle) (image 1). Do not trim the perimeter or internal corners until the field flooring is adhered.

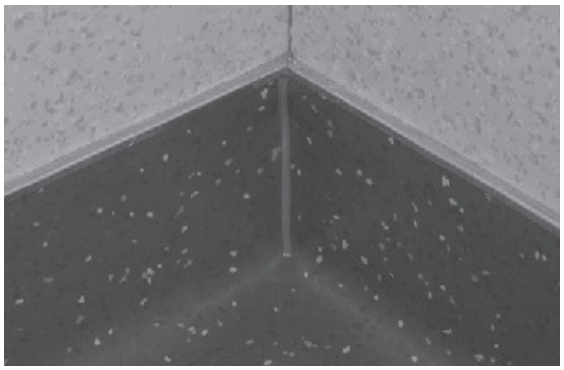
External Corners





For the external corners use a pencil and small straight edge to mark out where the cuts are required for each boot. Begin at the outside corner of the wall and draw a line towards the toe of the boot (45°), then approximately 2 inches perpendicular to the wall and complete the boot up the vertical (image 2). Using a small straight edge and a suitable utility knife following your pencil marks accurately cut out the excess flooring (in one piece) and save it (image 3).

Internal Corners



For all internal corners, place one side into position and trim off the excess material, resulting in a straight cut down the center of the corner and through to the base of the Staticworx cove stick. Repeat the process with the second side. A slight gap is acceptable as all internal seams should be cold welded (image 3).

When ready to install the flash coving, trim to fit the capping strip, remove the release film and insert. When sure of correct positioning, press the flooring firmly into place.

Boot

For the outside corners (boot) carefully remove the release film from the boot and accurately place into the correct position and press firmly into place. Trim the boot to fit the cap strip and insert. Trim the external seam using a small straight edge, resulting in a straight 1/8 inch gap. Note: All external seams must be cold welded.

Wall base

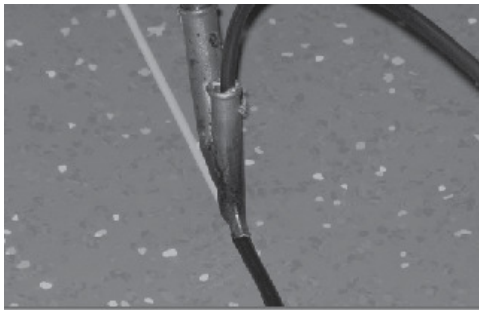
At the intersection between the wall and subfloor, any gap cannot be more than approximately 1/2 inch. If greater, the gap should be filled and smoothed using a suitable product before installation. Ensure that the wall is dry, smooth and clean.

Wall base can be adhered using a suitable cove base adhesive (follow manufacturer's written instructions). After cutting to fit and preparing the corners (as below), adhere it to the wall, positioning it carefully using your chosen adhesive. Do not stretch the wall base during installation or it may shrink back later. Internal corners can be cut and tightly butted or completed in one piece by heating with a heat weld gun and creasing. Hold it firm in the creased position and allow it to cool. Miter the foot (in situ). External corners should be heated using a heat weld gun, held in the creased position, then allowed to cool. Staticworx does not recommend shaving the back as this will weaken the corners.

StatPro Heat Welding

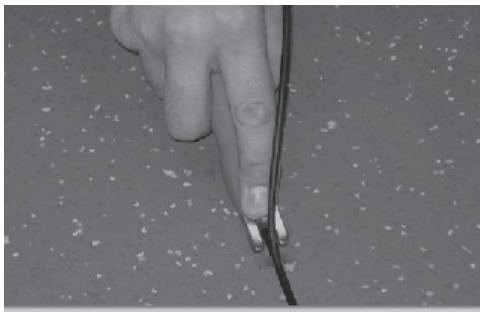
Welding may be performed immediately after flooring installation. Note: All vertical seams must be cold welded (not heat welded).

Groove the required seam with either a mechanical joint cutter or hand-grooving tool and ensure all grooves are clean. The depth of the groove should be controlled at approximately 2/3 the thickness of the flooring, or for acoustic products, 2/3 of the top layer. The width of the groove should be approximately 1/8 inch. Preheat the welding gun to 662°F – 752°F (350°C – 400°C). It is recommended to practice welding on a piece of scrap flooring material first to determine the heat setting and speed. Different heat guns and cable length will affect the temperature. Note: If the weld rod comes out during trimming, then either you welded too fast or the gun was not hot enough.



Cut a length of heat weld rod sufficient to weld the entire length of the seam plus approximately 6 inches extra. Proceed to weld the seam starting at the wall and apply slight pressure to the gun nozzle (nose) to force the melting rod into the groove. Properly applied, the heat weld rod will have a slightly flattened portion on either side (image 1). Allow the rod to cool to the touch and begin the trimming process to remove the excess weld. To help prevent scratching or scuffing of the flooring surface during trimming, wet the weld rod about 2 inches on each side using liquid soap and water mixed to approximately 1:10 ratio.

Make the first cut of the weld rod using a Mozart trimming knife with the 0.7 mm spacer claw. Allow the weld rod to cool to room temperature.



Next, using a Mozart (without the spacer claw), finish trimming the remainder of the weld (image 2). The finished weld should be smooth and on the same plane as the floor covering.

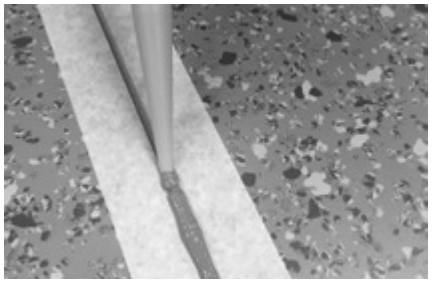
StatPro cold welding (masking tape method)

Welding may be performed immediately after the installation of the flooring. To prevent bonding of the cold weld outside of the required seam, use masking tape (not painters tape). Completely cover the seam with the tape, approximately centered. Use a hand roller to firmly press the tape down and ensure a good bond.

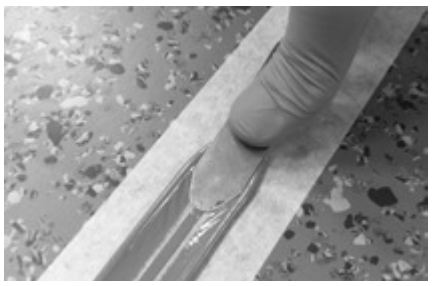
Groove the required seam with either a mechanical joint cutter or hand-grooving tool and ensure all grooves are clean. The depth of the groove should be controlled at approximately 2/3 the thickness of the flooring, or for acoustic products, 2/3 of the top layer. The width of the groove should be approximately 1/8 inch.

For vertical seams, use a small straight edge to trim or groove the seam or sanitary base back, approximately 1/8 inch.
The use of gloves is recommended when using cold weld. Cut off the tip of the cartridge at the first thread, screw on the nozzle and place the cold weld cartridge into a cartridge gun. Cut off the nozzle tip at an angle.

APPLICATION



Inject the cold weld into the groove without gaps until a small bulb develops above the seam (about the size of heat weld rod) (image 1). At the end of the seam, release the gun to prevent leaks. Any cold weld tracked or spilled on the flooring must be removed immediately using 70% Isopropyl alcohol or liquid soap and a clean cloth, as cleaning at a later stage may not be possible.



Press the cold weld into the seam using a smoothing spatula, held nearly flat (~22° angle), resulting in a surface flush and on the same plane as the surface of the tape (image 2). Excess cold weld must be pressed away on each side of the seam. It is important to develop a slight gap between the excess weld and the weld within the seam for easy removal.

For vertical internal and external corners, use a flat paint scraper or smoothing spatula to remove the excess cold weld and smooth the surface to approximately the required finish. Wait for approximately 10 minutes for the weld to skin over. Spray 70% Isopropyl alcohol or water, and then finish smoothing the weld by lightly manipulating with gloved fingers to a slightly rounded acceptable finish. All excessive cold weld must be removed prior to curing.

EXCESS REMOVAL

The masking tape may be removed carefully now or after it has fully cured. This can be done by simply peeling it off with your fingertips.

Prevent any traffic including heavy rolling loads (chair castors, etc.) on the welded seams until the masking tape has been removed and for at least 3 hours. Cold weld develops a skin after approximately 20 – 30 minutes at 68°F (20°C) and an ambient humidity of 50%. The curing is accelerated by higher temperatures and humidity, and slowed correspondingly by lower values.

CLEAN UP

Wet mop cleaning/disinfecting is permitted 3 hours after the application of cold weld. Mechanical scrubbing should not be performed for at least 48 hours. High speed burnishing is not permitted for five days to allow the cold weld to fully cure.