

Installation Guidelines: Vinyl Sheet

General Installation Guidelines

- Forbo vinyl sheet flooring may be installed on approved substrates on all grade levels.
- Areas to receive flooring should be clean, fully enclosed and weathertight. The permanent HVAC must be fully operational, controlled and set at a minimum of 68° F (20° C) for a minimum of seven days prior to, during, and seven days after the installation. The material and adhesive should be conditioned in the same manner for at least 48 hours prior to the installation. Areas to receive flooring shall be adequately lighted to allow for proper inspection of the substrate, installation and seaming of the flooring, and for final inspection.
- Store Forbo vinyl rolls standing upright.
- The substrate must be sound, smooth, flat, permanently dry, clean, and free of all foreign materials including, but not limited to, dust, paint, grease, oils, solvents, curing and hardening compounds, sealers, asphalt and old adhesive residue.
- Always conduct moisture tests on all concrete substrates, regardless of age or grade level.
- Determine the moisture vapor emission rate (MVER) of the concrete by testing conducted in accordance with ASTM F 1869. The MVER of the concrete must not exceed 8.0 lbs. per 1,000 square feet in 24 hours when using Forbo V 885 adhesive. When moisture vapor emissions exceed these requirements, refer to the Moisture Limitor section of Forbo's Installation Guide for additional information.
- Determine the internal relative humidity of the concrete by testing conducted in accordance with ASTM F 2170.
 The internal relative humidity of the concrete must not exceed 85% when using Forbo V 885 adhesive. When the internal relative humidity exceeds these requirements, refer to the Moisture Limitor section of Forbo's Installation Guide for additional information.
- The concrete surface pH must be tested and must not exceed a pH of 11 when using Forbo V 885 adhesive.
- Always conduct adhesive mat bond tests before beginning the installation. Bond testing will aid in identifying both
 the working characteristics of the adhesive (open time and working time) for the site conditions, and also any
 potential bonding problems.
- Material should always be visually inspected prior to installation. If there are any questions regarding the quality
 of material, contact your local Forbo representative or Forbo Technical Services PRIOR to installation.
 Any costs (including labor) associated with the replacement of material that was installed with visual
 defects that could have been seen prior to installation are not covered under warranty.
- Ensure that all recommendations for substrate and jobsite conditions are met prior to beginning the installation.
 Beginning the installation is an implied acceptance of site conditions by the parties involved and liability for any failure directly related to inadequate site conditions becomes the responsibility of the installer and/or flooring contractor.
- Use Forbo V 885 adhesive.
- Use a 1/32" x 1/16" x 1/32" fine notch trowel to apply the adhesive.
- Use material from the same batch/dve lot.
- Install rolls in sequence by roll number and cuts from each individual roll in consecutive order.
- Do Not Reverse sheets for seaming when installing Eternal Wood and Eternal Wood decibel. Reverse sheets for seaming when installing all other Eternal products.
- Install one sheet at a time, making sure to place the material into wet adhesive.
- Roll immediately with a 100 pound roller and always check for proper adhesive transfer. In order to achieve a secure bond there must be complete transfer of adhesive to the material backing.
- Remove fresh adhesive residue immediately with a clean white damp cloth. Dried adhesive residue can be removed with a clean white cloth and mineral spirits.
- Forbo sheet vinyl flooring products have a glass fiber interlayer which gives them their dimensional stability. These materials will not shrink or compress. If cut too full or back rolled, it will result in a bubble.
- Take pride in your work and be Professional at all times.
- For additional information, contact Forbo Technical Services.



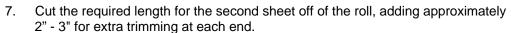
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Cutting and Fitting the Sheets

Forbo recommends that vinyl sheet flooring be cut and fit one sheet at a time. Forbo vinyl sheet products are flexible and easy to handle. In most cases, a qualified installer will be able to hand fit the material in areas where base or trim moldings will be installed after the installation is completed. Following these recommendations will give the installer the best opportunity to manage the open time and working time of the adhesive and ensure that the flooring material is placed into semi-wet adhesive.

Note: Because of the abrasive qualities of the metalized carborundum chips in the Eternal Step SR, knife blades will have a very short life.

- 1. Measure the area to be installed and determine the direction in which the material will be installed and seam placement. Seams must be a minimum of 6" away from underlayment and concrete joints, saw cuts, etc.
- 2. Cut the required length off of the roll, adding approximately 2" 3" for extra trimming at each end.
- 3. Push the length of the sheet as close to the starting wall as possible, letting the extra length run up the wall at each end.
- 4. Starting at the main (long) wall, set the scribes to a minimum of 3/8" more than the greatest distance between the wall and the flooring material. Scribe the shape of the wall onto the flooring material. Cut the material along the scribe line using a hooked blade knife (Figure A).
- 5. Position the fitted sheet in place against the main wall.
- 6. The factory edge must be trimmed in order to produce a clean edge suitable for seaming. The Forbo Seam & Strip Cutter has been developed to efficiently and effectively trim the factory edge (Figure B). In lieu of the Forbo Seam & Strip Cutter, a straight edge, utility knife and hooked blade may also be used. Position the straight edge approximately 1/2" 3/4" from the factory edge and score the material using the utility knife along the straight edge. After scoring, complete the cut using a hooked blade knife following the score line. Hold the blade at a slight angle to the surface of the material so the seam edge will have a slight undercut.



Note: Do Not Reverse sheets for seaming when installing Eternal Wood and Eternal Wood decibel. Reverse sheets for seaming when installing all other Eternal products.



Figure A



Figure B

- 8. Position the second sheet with a 1/2" 1" overlap over the first sheet at the seam.
- 9. Repeat these steps for as many sheets necessary to complete the job or as many sheets that can be installed that day.
- 10. Lap half way back all overlapped sheets as one. DO NOT BACK ROLL VINYL BACKED FLOOR COVERINGS.
- 11. Draw a pencil line along the area where the adhesive will be spread to assure an even and straight line of adhesive. Spread the adhesive over the entire area. Be careful not to leave any adhesive ridges or puddles. For porous substrates, a short open time may be necessary before placing the flooring material into the adhesive. For non-porous substrates, a longer open time will be necessary in order to allow the adhesive to develop body before placing the flooring material into the adhesive, but <u>DO NOT ALLOW THE ADHESIVE TO DRY</u>. The flooring material <u>MUST</u> always be placed into the adhesive and rolled immediately. Check for adhesive transfer frequently. There must be <u>transfer</u> of adhesive to the material backing in order to achieve a secure bond.

Note: The open time and working time of adhesives will vary depending on site conditions such as ambient temperature and humidity, the porosity of the substrate and air circulation. It is the installer's responsibility to make adjustments to specific conditions as may be necessary. Refer to the Adhesives section of Forbo's Installation Guide for additional information regarding adhesive open time and working time. If Forbo vinyl sheet flooring is placed into over-wet adhesive on a non-porous substrate, there is a risk that sustainable bubbling may occur due to off-gassing of the adhesive.

12. Push the lapped flooring from the fold into the adhesive one sheet at a time, working towards the wall. DO NOT FLOP THE MATERIAL INTO THE ADHESIVE. This will trap air under the material causing bubbles.



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- 13. After adhering, immediately roll the flooring in both directions using a 100 pound roller. Roll first across the width and then along the length so that any trapped air pockets will be removed.
 Note: To ensure proper transfer of adhesive to the material backing at walls and fixtures, Forbo recommends rolling the edges of the material with a steel seam roller.
- 14. After the material has been laid into the adhesive, underscribe the seams using the short scribes with either the scribe blade or scribe pin (Figure C).
 Note: Set the scribes so that the seam will have a slight gap, about half the thickness of a razor blade. If the material is cut too full, it will result in bubbles or ridges.



- 15. Cut the material along the scribe line with a hooked blade knife.
- 16. Roll the seam with a hand roller.
- 17. Repeat the same procedure on the other half of the sheet until the job is completed. Take caution not to overlap adhesive lines or leave ridges of adhesive, as it may telegraph through the material.

Figure C

18. The seams should be heat welded no sooner than the day following installation. Refer to the Heat Welding section of Forbo's Installation Guide for complete instructions.

Forbo's Installation Guide contains additional information on substrate evaluation and preparation, and is available for download at www.forboflooringna.com. For a hard copy, or for additional information, contact Forbo Technical Services at +800 842 7839.