

Installing Marmoleum Wainscot

- Always refer to and follow the recommendations in *Forbo's General Installation Guidelines* prior to installing Marmoleum Wainscot.
- Always refer to and follow the recommendations in *Forbo's Substrate Evaluation and Preparation Guidelines* prior to installing Marmoleum Wainscot.
- Beginning the installation is an implied acceptance of site conditions and liability for any failure directly related to inadequate site conditions becomes the responsibility of the installer and/or flooring contractor.
- Marmoleum can be successfully installed over a variety of substrates. **Regardless of the specific type of substrate that is being installed over, the final determination of suitability for that purpose is the responsibility of the installer and/or installation contractor.**
- Store Marmoleum rolls standing upright.
- Marmoleum is available in rolls 79" in width and up to 105 linear feet in length. It can be installed with the roll length aligned either vertically or horizontally for wainscot applications. Vertical seams can be avoided in most cases with horizontal alignment, but longer lengths may be challenging to install. Material waste is often reduced with vertical alignment.
- Use material from the same batch/dye lot.
- Install cuts in roll sequence.
- Do Not Reverse sheets for installation. The material should all run in the same direction.
- Use Forbo L 910W adhesive.
- Use a 1/16" x 1/16" x 1/16" square notch trowel to apply the adhesive. Replace the trowel when proper coverage is no longer attainable.
- Marmoleum Wainscot must be installed into wet adhesive. Do not spread adhesive in an area larger than can be installed while ensuring 100% wet transfer to the backing of the material.
- Remove fresh adhesive residue immediately with a clean white cloth. Dried adhesive can be removed with a clean white cloth and Forbo Adhesive Remover. If this is not available, a solution of properly diluted neutral pH cleaner may be used. The area should then be rinsed with clean, cool water to remove all residue from material.
- Edges can be finished by fitting a frame around the edge, beveling the edges, milling, or cutting the edge straight. For the best results, always use sharp tools or blades when cutting the material.
- Install protective outside corner guards over all outside corners. For inside corners, scribing the material will ensure a tight fit between the sheets.
- Take pride in your work and be Professional at all times.
- For additional information, contact Forbo's Product Support & Education Services at 1-800-842-7839 or www.forboflooringNA.com.

Installation

- For each wall, cut pieces of Marmoleum to the required length and width, adding 1" – 2" in each direction to allow for final trimming.
- In order to ensure continuous contact of the material and adhesive, the natural end curl at the end of each cut must be relaxed or massaged both before and during the installation process to remove the tension caused by being rolled. This can be accomplished by folding back the corner of the material at an angle towards the center of the sheet. While unrolling the folded corner apply a massaging downward pressure which will help to relax the natural end curl of the material. Caution to not over apply pressure should be observed. Over applying pressure during massaging of the corner can cause the material to crack or break. This massaging should be applied to the entire cut end of the roll and should be repeated as necessary until the end curl is gone with the material lying flat.
- Where inside corners are involved, it is best to work away from corners where Marmoleum has already been installed on the adjacent wall.
- Plan the layout to allow for approximately 1/2" – 3/4" to be trimmed from each factory edge for seaming, and so that seams will fall at least 6" away from joints in the substrate.
- Allowing for trimming, draw a plumb line on the wall where the seam for the first piece will fall.
- Using a Forbo Seam and Strip Cutter, or a straightedge and knife, trim 1/2" – 3/4" from the seam edge of the first piece. Angle the knife *slightly* to create an undercut.
- Trim the sheet and "dry" fit it to the wall section, making sure that the seam edge will align with the plumb line on the wall. Traditional scribing methods produce the best results. Establish "set marks" on both the material and the wall to aid in positioning the sheet during installation.

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Adhesive Application

- Proper adhesive application is essential for achieving a secure bond. Marmoleum must be installed into **wet** adhesive.
 - Apply the Forbo L910W adhesive using a 1/16" x 1/16" x 1/16" square notch trowel. Place the material into the adhesive and roll while the adhesive is still wet enough to achieve 100% wet transfer of adhesive to the material backing. Never allow the adhesive to dry to a point that **wet** transfer to the material backing does not occur.
 - Starting from the corner, spread adhesive in the area where the first piece will be installed. The plumb line is the boundary for the side opposite the corner. Do not spread more adhesive than can be covered achieving 100% **wet** transfer to the material backing. **100% wet transfer is a continuous film of adhesive when wet on both the backing of the material and the substrate, with no trace of trowel marks or ridges.**
 - Using the set marks and plumb line established during fitting, position the Marmoleum on the wall, starting at the corner. Roll immediately with a three-section wall roller. Roll thoroughly in all directions, first across the width and then along the length, so that the material backing is firmly pressed into the wet adhesive rolling out any trapped air bubbles. Additional rolling is required during adhesive set up to ensure that the material is flat and fully adhered.
 - When it is not possible to adhere the entire piece at one time, fold the un-adhered portion of the material back over the adhered portion up to the adhesive spread line. Starting at the spread line, being careful not to overlap the adhesive, continue spreading adhesive toward the plumb line, placing, and rolling the material as you go, until the entire piece has been adhered.
 - Clean excess adhesive while it is still wet.
 - Marmoleum shrinks slightly in the length when installed in wet adhesive. Back rolling the material will minimize shrinkage, but compensation must be made for shrinkage in cuts longer than approximately 20' in length to avoid fitting errors. For longer pieces, only trim to fit at the end where the installation will begin, leaving extra material at the opposite end. Begin adhering the piece at the fitted end and adhere the piece normally, stopping 4' – 5' from the unfitted end; shrinkage will occur as the piece is being installed. Once most of the piece has been adhered, fit the remaining end and adhere normally.
 - Marmoleum will expand slightly in the width when installed in wet adhesive. To compensate for any expansion, make sure the under scriber is adjusted to create a conventional fit seam (no fullness, no gaps) and that both seam edges are *slightly* undercut. This will allow the material to fall into place without force or pressure.
 - When installing large pieces of Marmoleum, it may be necessary to apply a quality contact adhesive or acrylic dispersion adhesive to the upper 10" – 12" of the material and wall. This can prevent the sheet from sliding down along the fresh adhesive. Apply the adhesive in strict accordance with the manufacturer's recommendations.
 - 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. A general indication of proper open time is when a light touch produces transfer of adhesive to the finger, but a firm touch will flatten and "smear" the adhesive. It is the installer's responsibility to make adjustments to specific conditions as may be necessary.
 - Check for adhesive transfer frequently. There must be **100% wet** transfer of adhesive to the material backing in order to achieve a secure bond. 100% wet transfer is a continuous film of adhesive, when wet, on both the backing of the material and the substrate with no trace of trowel marks or ridges.
 - The material **must remain in contact with the adhesive while the adhesive is drying and curing.**
 - Immediately roll the flooring in all directions using a three-section wall roller to ensure proper adhesive transfer. Additional rolling is required during adhesive setup to ensure that the material is flat and fully adhered.
 - Proper sheet placement and rolling will result in a complete "explosion" of the trowel ridges, creating a continuous flat film of adhesive. Complete transfer of the adhesive will appear as an equal film of wet adhesive on both the substrate and the backing of the material.
 - Trim the seam edge for the second piece in the same manner as for the first piece.
 - Allowing for 1/2" – 3/4" overlap at the seam, draw a plumb line on the wall where the second seam will fall.
 - Adhere the second piece in the same manner as the first piece, working away from the seam.
 - Immediately after adhering, use an under scriber to scribe the seam. Cut along the scribe line and roll the seam with a steel seam roller. Do not allow the adhesive in the seam area to dry before cutting and rolling the seam.
- NOTE:** The guide button on the bottom of most recessed under scribers must be filed down to avoid removing adhesive at the seam. Failure to do so may cause seam failure.
- Repeat this process for each piece along the wall.

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Stove Bar Marks

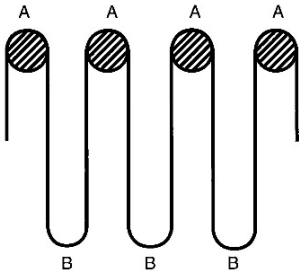


Figure 1

When Marmoleum products are in the curing process during manufacturing, the material is suspended in large loops in the “drying rooms.” The top of each loop (Figure 1A), known as a pole mark, is cut off and recycled. The bottom of each loop (Figure 1B) is called a “stove bar mark” and will appear approximately in the center of each roll (Figure 2). When installing material with a stove bar mark, simply spread the adhesive with the flat side of the trowel in the stove bar mark area on the backside of the sheet (Figure 3) and spread the adhesive on the wall following standard recommendations. Place the material directly into the wet adhesive. Be sure that when placing the stove bar mark into the wet adhesive to massage the material down and push the material flat. Roll the material in all directions with a three-section wall roller, starting across the width of the material. Be sure the stove bar mark is rolled first to avoid trapping the tension in the material. Additional rolling is required during adhesive setup to ensure that the material is flat and fully adhered.

NOTE: Stove bar marks are not a material defect. If a problem occurs, it is directly related to improper installation techniques.



Figure 2



Figure 3

What is Ambering?

Ambering is the slight yellow hue to Marmoleum when it is first removed from the packaging. This is a natural phenomenon that happens with Marmoleum and is completely normal. Linseed oil, a natural oil extracted from flax seeds and one of the main ingredients in Marmoleum is what causes this yellow hue. This very important ingredient in Marmoleum provides several unique characteristics:

- Linseed oil, along with wood flour, makes the floor naturally antistatic, repelling dust, making Marmoleum easy to clean.
- When exposed to air and light, the linseed oil oxidizes from within the Marmoleum and continues for the life of the product. This makes the material harden over time and become more durable.

As time passes, the ambering will fade as Marmoleum is exposed to light, but its unique characteristics will not. The process may take as little as a few hours in bright sunlight, but it can take longer with artificial light. Areas that are not exposed to any light will retain the yellow hue until they are exposed to light. If an area of Marmoleum is covered for an extended period, it's possible the yellow hue will re-appear. Don't be alarmed – it will fade once again when it's exposed to light.

Because this is a natural occurrence in the product, there is no set time frame for the yellow hue to fade. This is not a material defect. It's actually a sign that Marmoleum is revealing its unique and valuable characteristics! Performing floor care procedures will not inhibit the process. It just takes a little bit of time and understanding what great benefits this process brings to Marmoleum! All colors of Marmoleum are subject to ambering, however it can be more noticeable in certain colors. Light blues, greens, greys, and beiges will display a more visible yellow hue than darker colors. To discover the true color of Marmoleum, follow these few simple steps:

1. Take a piece of Marmoleum and cover one half with heavy paper, cardboard, or another piece of Marmoleum.
2. Place these pieces in direct sunlight for approximately 1 hour.
3. After the time has passed, remove the cardboard or heavy material and see the visual difference firsthand.

Shrinkage and Expansion

Marmoleum sheet products will shrink in the length and expand in the width when placed into wet adhesive. Cutting conventional fit seams with a slight undercut on both sides will accommodate this expansion. Techniques for minimizing shrinkage are back rolling, tubing and/or, for longer sheets, not immediately fitting to the end walls. Stop spreading the adhesive approximately 4' - 6' from the end walls to allow for final fitting after the center portion has been adhered. Not spreading adhesive approximately 4' - 6' at the end of each sheet allows any shrinkage of the material to occur within the center of the sheet. Final fitting after the shrinkage has occurred will ensure a conventional fit at the end walls.

Forbo's General Installation Guidelines contain additional information and are available for download at www.forboflooringNA.com. For additional information, contact Forbo's Product Support & Education Services at 1-800-842-7839.