

# Technical Bulletin - Marmoleum wall sheet installation guide

Marmoleum is available in rolls 2.00 metres wide and up to 34 lineal metres in length, and can be installed with the roll lengths aligned either vertically or horizontally. 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. Heat welding of the seams is not necessary; however external abutments can be covered with a contrasting cover strip or in such cases vertical heat welding may be required.



## Site Conditions

The area where Marmoleum is to be installed should be fully enclosed, weather-tight, and have the permanent HVAC system in operation at a minimum of 18°C. This environment should be established a minimum of 72 hours prior to the installation and maintained during the installation and for at least 72 hours after the installation is completed.

## Material Conditioning

Marmoleum should be stored in the area where it will be installed for a minimum of 48 hours before the installation begins in order to acclimatise the material to site conditions.

## Substrates

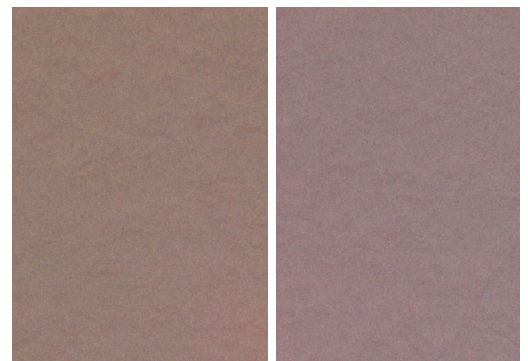
Marmoleum can be successfully installed over a variety of substrates provided the surface is sound, smooth, flat, clean, permanently dry, and secure. Regardless of the specific type of substrate that is being installed over, the final determination of suitability for that purpose is the responsibility of the installer and/or installation contractor.

## General Installation Guidelines

**Drying Room Yellowing:** During the curing process in the drying rooms, the natural oxidation of linseed oil in Marmoleum may cause a slight yellowing on the surface known as “drying room yellowing”. This phenomenon is temporary and is not a product defect. The yellowing will disappear once the product is exposed to either natural or artificial light. Depending on the type and intensity of the lighting, the yellowing may disappear in as little as a few hours, or it may take as long as several weeks.

· Inspect material for visual defects.

Do not install material with visual defects.



## Installation sequence

- Install cuts in order by roll sequence and cuts from each roll.
- Install all sheets in the same direction (do not reverse sheets).

## Adhesive application

Proper adhesive application is essential for achieving a secure bond.

- When using Forbo 414 Euroflex Lino plus the Marmoleum must be installed into “wet adhesive”.
- Place the material into the adhesive and roll while the adhesive is still wet enough to achieve a 95 to 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.

- When using Forbo Eurocol 650 Fastcol low VOC water based contact adhesive.
- Apply Eurocol 650 Fastcol adhesive should be applied to the back of the Marmoleum with the supplied foam roller leaving no lumps or ridges and let dry.

**Note:** The adhesive can be applied to one surface only in a dry and dust free environment for approximately 4 days before fixing. On the day of fixing apply the adhesive to the subfloor or wall with the supplied foam roller and let dry (the exact drying time will vary depending on the working environment) place the adhesive prepared Marmoleum sheets into the dried adhesive and roll. Work in small sections following accurately laid out guidelines. Immediately roll the sheet in all directions with a 3 section wall roller. Roll in all directions again after 30 minutes. Eurocol 650 adhesive is slightly heat reactive therefore giving the installer the opportunity to press out any bubbles when the adhesive has dried.

- Clean excess adhesive using a clean cloth dampened with water and dish-washing detergent while the adhesive is still wet. Dried adhesive can be removed with mineral turpentine, followed by wiping with a clean cloth dampened with water and dish-washing detergent.

## Horizontal Installation

1. For each wall, cut a piece of Marmoleum to the required length and width adding 30 mm to 50 mm in each direction to allow for final trimming.
2. Relax the “roll end curl” by back rolling the material (rolling with the face of the material to the inside of the roll).
3. Trim the sheet to fit the wall section “dry” (before applying adhesive). Traditional scribing methods generally produce the best results. Establish “set marks/key marks” on both the material and the wall to aid in positioning the sheet during installation.



## Adhering the sheet

When using Forbo 414 Euroflex Lino Plus or wet set adhesives.

- Where inside corners are involved, it is best to work away from corners where Marmoleum has already been installed on the adjacent wall.
- Begin spreading adhesive at one end of the wall, working away from the end. Depending on conditions, it may not be possible to spread adhesive on the entire wall without the adhesive becoming too dry before the material is placed. If necessary, only spread adhesive a short distance from the starting point and stop the adhesive spread along a straight vertical line. Do not spread more adhesive than can be covered while the adhesive is still sufficiently wet to achieve a 95 to 100% wet transfer to the material backing.
- Using the set marks established during fitting, position the Marmoleum on the wall, starting at the corner. Roll immediately with a three-section wall roller. Roll thoroughly in two directions, first across the width and then along the length, so that the material backing is firmly pressed into the wet adhesive and any trapped air bubbles are creating better environments expelled. Clean excess adhesive while it is still wet. When it is not possible to adhere the entire length of the wall 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 and being careful not to overlap the adhesive continue spreading adhesive along the remaining length of the wall, placing and rolling the material as you go, until the entire length of the wall has been adhered.

- Repeat this process for each wall.

### **Vertical Installation**

1. For each wall, cut pieces of Marmoleum to the required length, adding 30 to 50 mm to allow for final trimming.
2. Relax the “roll end curl” by back rolling the material (rolling with the face of the material to the inside of the roll).
3. Where inside corners are involved, it is best to work away from corners where Marmoleum has already been installed on the adjacent wall.
4. Plan the layout to allow for approximately 10 to 20 mm to be trimmed from each factory edge for seaming, and so that seams will fall at least 150 mm away from joints in the substrate.
5. Allowing for trimming, draw a plumb line on the wall where the seam for the first piece will fall.
6. Using a Forbo Seam and Strip Cutter, or a straight-edge and knife, trim 10 to 20 mm from the seam edge of the first piece. Angle the knife slightly to create an undercut.
7. Trim the first sheet to fit “dry” (before applying adhesive), making sure that the seam edge will align with the plumb line on the wall. Traditional scribing methods generally produce the best results. Establish “set marks/key marks” on both the material and the wall to aid in positioning the sheet during installation. Experience has shown that bonding half the sheet vertically will make the holding and handling of the sheet easier for the installer.

### **8. Adhering the sheet**

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. Depending on conditions, it may not be possible to spread adhesive in the entire area without the adhesive becoming too dry before the material is placed. If necessary, only spread adhesive a short distance from the starting point and stop the adhesive spread along a straight vertical line. Do not spread more adhesive than can be covered while the adhesive is still sufficiently wet to achieve a 95 to 100% wet transfer to the material backing.

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 two directions, first across the width and then along the length, so that the material backing is firmly pressed into the wet adhesive and any trapped air bubbles are expelled.

Clean excess adhesive while it is still wet. 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 and 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.

9. Trim the seam edge for the second piece in the same manner as for the first piece. Allowing for 10 mm 20 mm overlapping at the seams, drawing a plumb line on the wall where the second seam will fall.
10. Adhere the second piece in the same manner as the first piece, working away from the seam.
11. Immediately after adhering, use an under scribe (recess scribe) 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.
12. Repeat this process for each piece along the wall, completing the installation of each piece as you go.

### **Notes:**

1. Using a Primer will provide a uniform porosity over the entire surface of the wall, reduce the absorbency of more porous substrates, improve bond over dry, dusty surfaces, and improve the working characteristics of the adhesive. Always perform a bond test to evaluate the integrity of the “system”, and ensure that a secure bond can be achieved. When choosing a primer, always choose products of the highest quality and always follow the manufacturer’s recommendations for use and application. Any liability for the performance of primer rests solely with the user and/or manufacturer of the product, and not with Forbo.
2. Material determined by Forbo to be defective will be replaced under warranty; however labour costs for replacing material with visual defects is not covered. Refer to Forbo’s Product Warranty and Claims Policy for complete

information regarding warranty coverage and claims procedures.

3. The working characteristics (open time and working time) of adhesives are affected by temperature, humidity, air circulation, porosity of the substrate, type of adhesive, and trowel notch; and will vary. In some situations the adhesive will dry more slowly, necessitating an "open time" before placing the material to allow the adhesive to develop "body/legs". In other situations the adhesive will dry more rapidly and require that the adhesive be applied incrementally so that the material can be placed and rolled while the adhesive is still wet enough to achieve the transfer necessary for a secure bond. It is the installer's responsibility to recognise the working characteristics of the adhesive for a given situation and make any adjustments to technique that may be required to achieve a secure bond.
4. During storage in roll form, tension develops in Marmoleum that will cause the ends of pieces cut from the roll to "cup", or not lay flat. This is commonly called "roll end curl". This tension must be relaxed prior to installation so that the material will remain flat and in full contact with the adhesive while the adhesive dries. Back rolling pieces prior to installation will remove most of this tension. When short lengths of material are required, it is best to back roll longer pieces before cutting into shorter lengths. It is often necessary to further relax this tension from the very ends of cut pieces. This can be accomplished by folding the corner of the material at an angle to the end, and applying pressure where the fold intersects the end of the piece. Apply pressure firmly across the entire width of the material in a rolling motion until the end lays flat. Care must be taken not to apply too much pressure, which may damage the material.
5. Marmoleum will shrink slightly in the length (rule of the thumb 1 mm per metre of sheet length) when installed in wet adhesive. Back rolling the material will help minimise shrinkage, but compensation must be made for shrinkage in cuts longer than approximately 4 metres 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 1 to 1.5 metres 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.
6. Marmoleum may 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 "net" fit (no fullness) and that both seam edges are slightly undercut. It is best to install one sheet at a time to minimise lateral expansion in the width of the sheet which will have diminished to a considerable degree before the next sheet is adhered into position.

## Tools

The following is a list of tools required for installation. Additional tools may be required in varying circumstances.

- Forbo 414 Euroflex Lino Plus trowel = 2.4 x 2.4mm "V" notch trowel
- Forbo Eurocol 650 Fastcol low VOC water based contact adhesive = supplied foam roller in container
- 3 Section Wall Roller
- Forbo Seam and Strip Cutter
- Forbo Long Bar Scriber
- Steel Seam Roller
- Under Scriber (Recess Scriber, Under and Over Scribers)
- 1.200 mm or 2 metre Steel Straight-edge
- Carpenter's Square
- Dividers
- Utility Knife with Straight Blades
- Utility Knife with Hooked Blades
- Utility Knife with Concave Blade
- Tape Measure
- Spirit Level, Plumb Bob, Laser Level or Dumpy Level
- Hot Air Heat Gun

## If in any doubt contact us:

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## Additional reference documents and information:

Forbo Floor Coverings Installation Guide: [www.forbo-flooring.com.au/installation](http://www.forbo-flooring.com.au/installation)

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