

Adhesives

General Adhesive Guidelines

Adhesives are formulated for specific products and applications. Use **ONLY** Forbo adhesives for the installation of Forbo products. The adhesive should be conditioned to the jobsite in the same manner as the material. For additional information, refer to the **General Installation Guidelines section** of the Forbo Installation Guide.

- Substrates to receive Forbo products must be structurally sound, rigid, smooth, flat, clean, and permanently dry. The substrates must be free of all foreign materials including, but not limited to, dust, solvent, paint, wax, oils, grease, residual adhesive, adhesive removers, film-forming curing compounds, silicate penetrating curing compounds, sealing, hardening or parting compounds, alkaline salts, excessive carbonation or laitance, mold, mildew, and other foreign materials that might affect the rate of moisture dissipation from the concrete, the adhesion of flooring to the concrete or cause a discoloration of the flooring from below.
- Always conduct moisture tests on **all** concrete substrates, regardless of age or grade level, pH tests and adhesive mat bond tests. For additional information, refer to the **Substrate Evaluation and Preparation section** of the Forbo Installation Guide.
- Always carefully read and follow the instructions on the adhesive label regarding the use and application of the adhesive, and always review and follow safety and health warnings included on the label and Safety Data Sheet.
- Remove fresh adhesive residue immediately with a clean white damp cloth. Dried adhesive can be removed with a clean white cloth and a properly diluted solution of neutral pH cleaner or with Forbo Adhesive Remover. The area must then be rinsed with clean, cool water to remove all residue from the floor. For additional information, refer to the **Forbo Commercial Floor Care Guide**.
- **NOTE:** Forbo 660 polyurethane adhesive is impossible to remove from the surface once cured.

Third Party Adhesives

Forbo Flooring will not honor any claims regarding bonding issues when an adhesive not supplied by Forbo is used. The performance and compatibility of such adhesives manufactured by a third party are beyond Forbo's control. Forbo does not test or evaluate products manufactured by others for performance, compatibility or any other quality.

For additional information, contact Forbo's Product Support & Education Services at 1-800-842-7839 or www.forboflooringNA.com.

Adhesive Application

A trowel is a precision metering device that regulates the amount of adhesive being applied. Always apply the adhesive with the trowel notch recommended by Forbo for the product being installed. Properly using the recommended trowel notch ensures that the proper amount of adhesive is applied. The use of an improperly notched trowel will apply too much or too little adhesive, and can cause bonding problems, telegraphing, indentations, and inadequate working time, all of which may result in an installation failure. Clean the trowel frequently in order to maintain the recommended trowel notch.

When spreading adhesive, keep the trowel at a consistent angle with uniform pressure and smooth trowel strokes to ensure a uniform application. This will allow for a consistent working time which will allow proper wet transfer throughout the entire installation. Replace trowel when proper coverage is no longer attainable.

Open Time/Working Time

- **Open time** is the amount of time that the adhesive must remain exposed to the air before the material can be installed into it.
- **Working time** is the amount of time that remains following the appropriate open time to successfully complete the installation while ensuring 100% wet transfer is achieved.
- 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, air circulation and the type of adhesive and trowel notch being used.
- Adjustments to the open and working times will be necessary as site conditions vary. 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.

Wet Set Installation

For all "wet set" installations of Forbo products inadequate adhesive transfer due to dry or "flashed" adhesive or insufficient adhesive is the major cause of installation failures. Always use the recommended trowel notch and pay close attention to the open and working times of the adhesive. 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.** Immediately roll the flooring in all directions using a 100 lb. roller to ensure proper adhesive transfer. Additional rolling is required during adhesive setup to ensure that the material is flat and fully adhered. The use of a three-section wall roller or steel seam roller is required at walls, under toe kicks or anywhere the full weight of a 100 lb. roller cannot access or be applied.

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Installations in Wet Areas

- For installations where the edges of the flooring material and the adhesive may be subjected to excessive topical moisture (NOT substrate moisture), Forbo 660 polyurethane adhesive is recommended.
- Polyurethane adhesives have little or no initial tack, are sensitive to substrate porosity, and the set up and curing is directly affected by temperature and humidity. The skill and professionalism of the installer is important when working with this type of adhesive.
- **For additional information, contact Forbo's Product Support & Education Services at 1-800-842-7839 or www.forboflooringNA.com.**

Adhesive Descriptions

(L 885, T 940, Sustain 885m, Sustain 1195, FRS 885, FRT 950, V 885, C 930, L 910W, 660)

Forbo L 885 Adhesive

- A solvent free acrylic polymer adhesive recommended for use with Marmoleum® Sheet, Walton, Marmoleum® Composition Sheet (MCS), Marmoleum® Decibel, Marmoleum® Sport and Corkment Underlayment installed on all grade levels of concrete and approved suspended wood floors.
- Contains MicroSept™ anti-microbial protection
- Available in one gallon and four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 8.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 85%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo T 940 Adhesive

- A solvent free modified acrylic polymer adhesive recommended for use with Marmoleum® Modular, Marmoleum® Composition Tile (MCT), Allura, Flotex® Modular and Allura Flex (for permanent applications) and Colorex® SD/EC Tile (for **Non-ESD** applications) installed on all grade levels of concrete and approved suspended wood floors.
- Contains MicroSept™ anti-microbial protection
- Available in one gallon and four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 5.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 75%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo Sustain 885m Adhesive

- A solvent free dual acrylic polymer adhesive recommended for use with Marmoleum® Sheet, Walton, Marmoleum® Composition Sheet (MCS), Marmoleum® Decibel, Marmoleum® Sport, Corkment Underlayment, Marmoleum® Modular, Marmoleum® Composition Tile (MCT), Flotex® Sheet, Allura, Flotex® Tile, Allura Flex (for permanent installations) and Colorex® SD/EC Tile (for **Non-ESD** applications) installed on all grade levels of concrete and approved suspended wood floors.
- Contains SCS-Certified 25% post-consumer recycled content
- Cradle to Cradle Certified™ at the Gold level
- Packaged in biodegradable plastic pails
- Contains MicroSept™ anti-microbial protection
- Available in one gallon and four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 8.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 85%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

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Forbo Sustain 1195 Adhesive

- A solvent free dual acrylic polymer adhesive recommended for use with Marmoleum® Sheet, Walton, Marmoleum® Composition Sheet (MCS), Marmoleum® Decibel, Marmoleum® Sport, Corkment Underlayment, Marmoleum® Modular, Marmoleum® Composition Tile (MCT), Flotex® Sheet, Allura, Flotex® Tile and Allura Flex (for permanent installations) installed on all grade levels of concrete and approved suspended wood floors.
- Contains SCS-Certified 25% post-consumer recycled content
- Cradle to Cradle Certified™ at the Gold level
- Packaged in biodegradable plastic pails
- Contains MicroSept™ anti-microbial protection
- Available in four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 10.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 95%. Concrete pH range is 7.0 – 11.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo FRS 885 Adhesive

- A solvent free acrylic polymer adhesive recommended for use with Flotex® Sheet or Flotex® Modular (for permanent installations) installed on all grade levels of concrete and approved suspended wood floors.
- Contains MicroSept™ anti-microbial protection
- Available in four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 8.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 85%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo FRT 950 Adhesive

- A releasable, solvent free high quality acrylic emulsion adhesive recommended for use with Flotex® Modular, Allura Flex and Coral® Tile on all grade levels of concrete and approved suspended wood floors.
- Contains MicroSept™ anti-microbial protection
- Available in four gallon pails
- Apply with a 3/8" nap roller
- Spread rate: Approximately 300 square feet per gallon
- Maximum concrete moisture vapor emission is 5.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 75%. Concrete pH range is 7.0 – 10.0.
- Allow the adhesive to turn clear and dry to the touch. The flooring **MUST** be placed into the adhesive within four hours. Open and working times vary depending on site conditions.

Forbo V 885 Adhesive

- A solvent free acrylic polymer adhesive recommended for use with Eternal (Material, Wood), Eternal Step (Original, SR, Wood) and Eternal Decibel installed on all grade levels of concrete and approved suspended wood floors.
- Contains MicroSept™ anti-microbial protection
- Available in four gallon pails
- Trowel recommendation: 1/32" x 1/16" x 1/32" fine notch
- Spread rate: Approximately 175 square feet per gallon
- Maximum concrete moisture vapor emission is 8.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 85%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into semi-wet adhesive. Open and working times will vary depending on site conditions.

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Forbo C 930 Adhesive

- A solvent free modified acrylic polymer adhesive recommended for ESD control installations of Colorex® SD/EC Tile and Marmoleum® Ohmex on all grade levels of concrete and approved suspended wood floors.
- Contains fibers that are an integral component of the ESD system. Clean trowel frequently to ensure proper coverage.
- Contains MicroSept™ anti-microbial protection
- Available in four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch
- Spread rate: Approximately 125 square feet per gallon
- Maximum concrete moisture vapor emission is 8.0 lbs. per 1,000 square feet in 24 hours. Maximum concrete internal relative humidity is 85%. Concrete pH range is 7.0 – 10.0.
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo L 910W Adhesive

- A solvent free modified acrylic polymer adhesive recommended for use with Bulletin Board, Marmoleum® Sheet (wall and countertop applications) and flash coving all Forbo Flooring products.
- Contains MicroSept™ anti-microbial protection
- Available in one gallon and four gallon pails
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch for Marmoleum®
1/8" x 1/8" x 1/16" V notch trowel for Bulletin Board
- Spread rate: Approx. 125 square feet per gallon when using a 1/16" x 1/16" x 1/16" square notch trowel
Approx. 90 square feet per gallon when using a 1/8" x 1/8" x 1/16" V notch trowel
- Material must be installed into wet adhesive. Open and working times will vary depending on site conditions.

Forbo 660 Polyurethane Adhesive

- A solvent free, two component adhesive for use with any Forbo floor covering in areas subjected to topical moisture, high traffic, or heavy rolling loads. Forbo 660 adhesive can be used on all grade levels of concrete, metal, and approved suspended wood floors.
- Available in 1/2 gallon, one gallon, and two gallon units
- Trowel recommendation: 1/16" x 1/16" x 1/16" square notch for Marmoleum® and linoleum products and Coral® Sheet products
1/32" x 1/16" x 1/32" fine notch for vinyl products
- Spread rate: Approx. 110 - 120 square feet per gallon when using a 1/16" x 1/16" x 1/16" square notch trowel
Approx. 150 - 160 square feet per gallon when using a 1/32" x 1/16" x 1/32" fine notch trowel
- Maximum concrete moisture vapor emission is 5.0 lbs. per 1,000 square feet (100 square meters) in 24 hours. Maximum concrete internal relative humidity is 75%. Concrete pH range is 7.0 – 9.0.
- Add entire contents of Part B to Part A. Do not mix partial units.
- Marmoleum® must be installed into wet adhesive. Forbo vinyl and Coral® products must be installed into semi-wet adhesive. Open and working times will vary depending on site conditions.

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Forbo Adhesive	Adhesive Type	Packaging	Max MVE (per 1,000 ft ²)	Max RH	Max pH ¹	Approximate Spread Rate (ft ² / gallon)	Adhesive Color	Trowel Notch	Freeze/Thaw Stability	Shelf Life (Unopened)
L 885	Acrylic Polymer	1 Gallon 4 Gallon	8	85%	10	125	Light tan	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
T 940	Acrylic Polymer	1 Gallon 4 Gallon	5	75%	10	125	White	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
Sustain 885m	Dual Acrylic Polymer	1 Gallon 4 Gallon	8	85%	10	125	Grey	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
Sustain 1195	Dual Acrylic Polymer	4 Gallon	10	95%	11	125	Green	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
V 885	Acrylic Polymer	4 Gallon	8	85%	10	175	Light tan	1/32" x 1/16" x 1/32" fine notch	1 Cycle at 20°F (-6° C)	2 Years
FRS 885	Acrylic Polymer	4 Gallon	8	85%	10	125	Light tan	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
FRT 950	Pressure Sensitive	4 Gallon	5	75%	10	300	White; Dries Clear	3/8" nap roller	1 Cycle at 20°F (-6° C)	2 Years
C 930	Acrylic Polymer	4 Gallon	8	85%	10	125	White with grey conductive fibers	1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
L 910W	Acrylic Polymer	1 Gallon 4 Gallon	n/a	n/a	n/a	Varies ²	Light tan	1/8" x 1/8" x 1/16" V notch OR 1/16" x 1/16" x 1/16" square notch	1 Cycle at 20°F (-6° C)	2 Years
660 (2-Part)	Polyurethane	1/2 Gallon 1 Gallon 2 Gallon	6	80%	9	Varies ³	Grey	1/16" x 1/16" x 1/16" square notch OR 1/32" x 1/16" x 1/32" fine notch	Do NOT Freeze	1 Year



1: Concrete substrates with pH readings lower than 7.0 pH or in excess of the numbers listed above will require remediation prior to installation.


































2: Spread rate is approx. 90 ft²/gallon when using a 1/8" x 1/8" x 1/16" V notch trowel OR approx. 125 ft²/gallon when using a 1/16" x 1/16" x 1/16" square notch trowel.

3: Spread rate is approx. 110-120 ft²/gallon when using a 1/16" x 1/16" x 1/16" square notch trowel **OR** approx. 150-160 ft²/gallon when using a 1/32" x 1/16" x 1/32" fine notch trowel.

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Adhesives

-  Designates the **Standard Adhesive** to be used for each product.
-  Designates any alternate adhesive that may be used for each product.

Product	L 885	T 940	Sustain 885m	Sustain 1195	FRS 885	FRT 950	V 885	C 930	L 910W	660
Marmoleum® Sheet, Walton, MCS, Marmoleum® Decibel, Marmoleum® Sport, Corkment Underlayment										
Marmoleum® Modular, MCT										
Flotex® Sheet										
Flotex® Tile										
Project Vinyl (Eternal Material, Wood, Decibel; Eternal Step Original, SR, Wood)										
Eternal Step Aqua										
Allura										
Allura Flex, Coral® Tile										
Marmoleum® Ohmex										
ColoRex® SD/EC Tile ESD Applications										
ColoRex® SD/EC Tile Non-ESD Applications										
Coral® Entrance Flooring										
Bulletin Board, Marmoleum® Sheet (wall & countertop applications)										

Forbo's Installation Guide contains additional information and is available for download at www.forboflooringNA.com. For a hard copy, or for additional information, contact Forbo's Product Support & Education Services at 1-800-842-7839.